

# **Lower Thames Crossing**

## **Thurrock Council's Comments on Selected Applicant's Submissions at Deadline 4 (D4) and Localised Traffic Modelling Key Issues**

**03 October 2023**

**Thurrock Council**

 **thurrock.gov.uk**

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## Document Control Sheet

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## Executive Summary

### Section 1 – Introduction

1. This submission provides an initial response to the applicant's Deadline 4 (D4) submission documents that were uploaded to the PINS website on 22 September 2023. The number and size of the 282 documents submitted by the applicant at D4 means that a complete response is not possible in the seven working days between the upload of the documents and D5 (3 October 2023). Eleven documents have been identified for a response at D5 and further details of the contents of this submission are provided below. A full response to the D4 documents will be provided at Deadline 6 (31 October 2023).
2. This submission also contains details of further discussions held with the applicant concerning the A13/A1089/Orsett Cock junction.
3. The Council notes that in many instances within the applicant's documents covered by this submission, there is no further analysis, evidence, documentation or response that addresses the Council's points made in its previous submissions. The applicant has in most cases has just referred to previous documentation, reiterated its previous position and/or stressed that it has been both 'reasonable and proportionate', without actually being so. Also, the Council contends that this is not reasonable, particularly if a major stakeholder is making substantive technical points, then it is incumbent on the applicant to respond with further analysis, evidence, documentation or argument that addresses the Council's points.

### Section 2 – Response to Applicant's D4 Submissions

#### Draft Development Consent Order Changes

4. The Council has reviewed the amendments made to the DCO and the responses to specific queries raised. The Council has responded to these, however, still considers that there remain fundamental issues that have not been adequately addressed by the applicant. The Council sets out its most critical concerns on the DCO in [REP4-352](#) – page 321 onwards. The Council considers that these would benefit from being discussed either in an Issues Specific Hearing or through written questions issued by the Examining Authority.

#### Transport Assessment Changes

5. There are several minor changes to the Transport Assessment and appendices. The Council has no substantive comments on these changes but highlights its ongoing concerns about the approach to the modelling of the local road network and the general concerns with the approach to mitigating effects.

#### Statement of Reasons Changes

6. There are several corrections required to be made in Annex B to Deadline 4 Submission - 4.1 Statement of Reasons v5.0 (Tracked changes) ([REP4-101](#)).

### Section 106 Agreement Heads of Terms

7. The process to achieve no agreement on the S106 has taken almost two years, despite five meetings and much evidence produced by the Council to the applicant. The applicant has sought to disguise its lack of progress in a recent submission by only providing a high level update. There are several significant areas of concern to the Council that remain outstanding and await positive responses from the applicant, as set out above. The applicant's proposed programme for

achieving an agreed S106 Agreement is already delayed by two weeks and unlikely to be achieved to the significant detriment of the Council, in the Council's opinion.

### Section 3 – Localised Traffic Modelling – Key issues

#### Orsett Cock Roundabout: Council Introduction, Context and Programme

8. The modelling has demonstrated that mitigation is required at Orsett Cock. However, the applicant has not put forward any design options to mitigate the known impacts at this critical junction. Indeed, within the Joint Paper on Orsett Cock, the applicant has stated that there is no need for any further work beyond the modelling steps agreed within the Joint Paper. The modelling is not an end in itself and is required to be used to understand impacts and design mitigation. **The Council contend that the Examination will be defective, and open to legal challenge, if the applicant fails to undertake the agreed modelling steps within a reasonable timeframe, or does so in a way which gives rise to procedural prejudice to the Council and other stakeholders, or if the modelling is not used to inform the design and provision of mitigation measures, which can be shown to address the modelled deficiencies**
9. It is highly improbable that the alternative approach for resolving the conflict between the two models, and the serious ramifications from attempting to do so, could be satisfactorily achieved within the remaining period of the Examination. The only practicable alternative is therefore to proceed with the approach to help establish whether there is a resolution to the serious issues with Orsett Cock junction that have been identified.
10. The applicant is to issue a revised version of its forecast models (version 3) by 6 October 2023. The specialist traffic modellers from the Council, Essex CC, Port of Tilbury and DP World London Gateway are in broad agreement that this VISSIM model (version 3), expected imminently from the applicant for Orsett Cock, would now be broadly sufficient for purposes of developing and testing forecast years and for developing design mitigation options.
11. Whilst the applicant's forecast VISSIM models have not been agreed with the Council or any other stakeholder, to expedite the work required, the Council proposes to use this updated model in the absence of an agreed model as is normal practice. The Council will then proceed with junction mitigation design work on the basis of that VISSIM model to try to establish suitable design options for Orsett Cock for the purposes of the Examination. The aspiration will be to contain those designs within the Order Limits unless found not practicable.

#### Orsett Cock Joint Paper

12. This is set out in full in Appendix A and the full transcript of the Workshop is set out in Appendix C.

#### Asda Roundabout: Council Introduction and Context

13. It is crucial that VISSIM modelling for Asda Roundabout is completed and the construction traffic impacts are appropriately evaluated. Following this modelling exercise, it is highly likely that mitigation measures will be necessary at Asda Roundabout. The LHA has also raised concerns about the safe routing of cyclists and pedestrians across the junctions during construction and this must be addressed by the applicant as part of any mitigation. It should be noted that the Asda Roundabout currently falls outside the Order Limits of the DCO application and therefore the applicant will need to clearly set out how it intends to secure mitigation for the Asda Roundabout and provide a separate agreement prior to the conclusion of the DCO Examination. In the absence of a signed legal agreement any proposed mitigation for Asda Roundabout cannot be considered as part of this DCO Examination. Given the time needed to complete the modelling and agree the mitigation required, it appears highly unlikely that the serious issues identified at

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Asda Roundabout can be satisfactorily addressed within the remaining period of the DCO Examination.

#### **Asda Roundabout Joint Paper**

14. This is set out in full in Appendix B.

#### **Section 4 – Dartford Crossing**

15. The applicant's response to ExQ(1) Q4.1.1 on Modelled Traffic: Dartford Crossing is of fundamental importance to the Council. The applicant's response confirms that they do not expect LTC to provide north-south free-flowing capacity at Dartford Crossing from 2037 in most modelled periods. This means that the key benefits of LTC in delivering congestion improvements at Dartford Crossing as articulated by the applicant in the 'Need for the Project' ([APP-494](#)) and key conclusions in 'Traffic Forecasts Non-Technical Summary' ([APP-528](#)) are not achieved.
16. In practice, the lack of benefit for the Dartford Crossing is to be expected given the applicant's own analysis of the impact of providing additional traffic capacity at Dartford Crossing, i.e. additional traffic capacity leads to additional demand. The applicant's traffic models show that for residents of Thurrock, LTC would not reduce traffic flows or journey times across Dartford Crossing. LTC is also not an alternative to Dartford Crossing for many Thurrock residents because of the limited access to LTC (only possible via the congested A13/A1089/Orsett Cock junction). Several other alternative options exist to improve cross-river travel at a fraction of the cost of LTC, as was set out in detail in the Council's LIR ([REP1-281](#)), Section 8.
17. The LTC scheme is forecast to cost £8bn - £9bn and is predicated on providing congestion relief at Dartford Crossing. The applicant's analysis shows that despite this huge cost and the significant impacts on the residents of Thurrock (from six years of construction, removal of 10% of land, 11% of Green Belt and many other negative impacts), LTC does not provide the key benefits stated by the applicant, which underpin the rationale for the scheme.



## 1 Introduction

- 1.1.1 This submission provides an initial response to the applicant's Deadline 4 (D4) submission documents that were uploaded to the PINS website on 22 September 2023. The number and size of the 282 documents submitted by the applicant at D4 means that a complete response is not possible in the seven working days between the upload of the documents and D5 (3 October 2023). Further details of the contents of this submission are provided below. A full response to the D4 documents will be provided at Deadline 6 (31 October 2023).
- 1.1.2 This submission also contains details of further discussions held with the applicant concerning the A13/A1089/Orsett Cock junction.

### 1.2 Context

- 1.2.1 There were 410 submissions at D4 and of that total the applicant made 282 submissions. Following a sift of these submissions, 11 documents were identified for a response at D5.

### 1.3 Structure of this Submission

- 1.3.1 This document provides comments on the D4 submissions in the following areas:
- a. Draft Development Consent Order (v6)
  - b. Transport Assessment Changes (v2 and v3)
  - c. Statement of Reasons Changes (v5)
  - d. Section 106 Heads of Terms (v2)
- 1.3.2 Further commentary and analysis is provided on:
- a. Localised traffic modelling, including the Council's context for and the Joint Paper prepared with the applicant on Orsett Cock Roundabout and the Council's context for and the Joint Paper on the Asda Roundabout, prepared in collaboration with the Port Of Tilbury London Limited (PoTLL)
  - b. Dartford Crossing

### 1.4 Commentary

- 1.4.1 The Council notes that in many instances within the applicant's documents covered by this submission, there is no further analysis, evidence, documentation or response that addresses the Council's points made in its previous submissions in its Local Impact Report ([REP1-281](#)) and its Appendices or its D3 and D4 Submissions ([REP3-211](#) and ([REP4-352](#), [REP4-353](#) and [REP4-354](#)) and their included Appendices.
- 1.4.2 The applicant has in most cases has referred to previous documentation, reiterated its previous position and/or stressed that it has been both 'reasonable and proportionate', without actually being so. The Council contends that this is not reasonable, particularly if a major stakeholder is making substantive technical points, then it is incumbent on the applicant to respond with further analysis, evidence, documentation or argument that addresses the Council's points.

## 2 Response to Applicant's D4 Submissions

### 2.1 Introduction

- 2.1.1 As usual, the applicant's 282 submission at D4 comprise a range of documentation, including updated documents in both clean and track changed versions – the Council has or will only comment on the track changed versions. These documents include updated plans, ES Addendum, updated draft DCO, updated Statement of Reasons (SoR), updated TA, a number of updated environmental documents, various updated SoCG documents, updated 'Control documents'. The applicant has included its responses to ExQ1, responses to Post Event Submissions from the previous Hearings and has now included a 'Mitigation Route Map'. In addition, the applicant has submitted some 68 documents relating to the Hole Farm planning application, which the Council has not reviewed and does not intend to review as the development is located in Brentwood BC area.
- 2.1.2 The Council therefore has focussed on key documents in its review in D5 – the draft DCO, the updated Transport Assessment (TA), the updated SoR and updates to the S106 Agreement HoT and the draft Agreement, given the short time available before the D5 deadline, as outlined above. All remaining documents will be reviewed during October and the Council will provide its considered response within its D6 submission on 31 October 2023.

### 2.2 Draft Development Consent Order (v6) Changes

- 2.2.1 The Council has multiple concerns regarding the draft DCO, as recorded in our [SoCG \(REP3-092\)](#), LIR ([REP1-281](#) and [REP1-290](#)) and most recently the table included in ([REP3-210](#)), which sets out its comments on the dDCO and submission following ISH7 on the DCO ([REP4-352](#)). The Council has been working hard to narrow the differences between it and the applicant, and whilst progress has been made on certain issues, there remain a number of key concerns for the Council. Although the applicant has responded to the Council, it raises largely the same arguments as previously put forward.
- 2.2.2 The Council has set out its key concerns in the previous submissions referred to above. In response to the applicant's Deadline 4 submission ([REP4-212](#)), taking account of the amendments made to the dDCO at ([REP4-095](#) and [REP4-170](#)) and in the Explanatory Memorandum ([REP4-097](#)), the Council still has a significant amount of concerns. The Council's comments are set out in **Table 2.1** below.
- 2.2.3 The applicant's comments on the use of precedent in ([REP4-212](#)). However, the purpose of the Examination is to consider what is appropriate in specific circumstances. No two DCOs are identical. It should be noted that there are no longer model provisions, and this allows for divergence between DCOs to best fit the specific circumstances.
- 2.2.4 The applicant has offered examples of when specific approaches have been taken. However, often this is not the only approach taken. For example, in relation to time periods in Article 27, commuted sums for the maintenance of news structures and the start date in Article 27). In the Council's opinion, it is not valid for the applicant to state that it has an 'in principle' objection to an issue, only because it has been accepted by the Secretary of State previously, without providing evidence, reasoning or justification. The Council's objections are based on the proposed DCO, in connection with the current project. Even if a provision has been accepted previously, the rationale for including it in this DCO should still be justified if the Council considers another provision is more appropriate. This is a key purpose for the Examination process.

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**Wider Concerns on the dDCO Drafting**

2.2.5 In order to most efficiently progress matters, the Council believes that the submissions made following ISH7 in relation to the DCO ([REP4-352](#) – page 321 onwards) would benefit from being discussed either in an Issues Specific Hearing or through written questions issued by the Examining Authority. The Council has a number of other concerns which would benefit from further discussion, however, the areas of greatest concern are set out within ([REP4-352](#)) and can be summarised below in **Table 2.1**.

**Table 2.1: Key Thurrock Council outstanding concerns on draft DCO**

Item	Article / issue	Subject
1.	Article 6: Limits of Deviation	<p>This remains a key concern for the Council, notwithstanding the Applicant's responses on this matter, as noted in its <a href="#">submissions relating to ISH7</a> (p327) for the following reasons:</p> <ul style="list-style-type: none"> <li>• The potential that residents/organisations are not taking part in this Examination process as they are outside of the Order Limits, only to find they are later impacted, but not consulted.</li> <li>• The Council needs clarity over what is included within 'environmental effects'. Is that everything in the environmental statement or just certain aspects? When considering things like business impact, how are new business treated? How do we know what the impacts are considering the limited publication/consultation requirements?</li> </ul> <p><u>The Council suggests that Article 6(3) is amended, so that the flexibility to limited to within the Order Limits, if no new materially new or materially different environmental (when compared with ES) effects as agreed by the SoS.</u></p> <p>This means that there is significant flexibility for the applicant, but also adequate certainty for those potentially impacted. This is because it is clear that if you are within the Order Limits you may be impacted and can take part in this Examination. Outside the Order Limits the usual statutory procedure for non-material amendments should be followed, which means that those potentially impacted are adequacy consulted.</p>
2.	Article 9: Application of NRSWA & Article 12: Temporary closure, alteration diversion and restriction of use of streets	<p>The Council remains concerned that a project of this size, without following the unmodified permitting scheme, is going to have a significant negative effect on the operation of the local highway network. However, it is in the process of reviewing the draft Protective Provisions for Local Highway Authorities and will respond to the applicant's draft document separately at D6 together with other LHAs.</p> <p>As stated in its submissions relating to ISH7 (<a href="#">REP4-352</a>), the Council's primary concern is:</p> <ul style="list-style-type: none"> <li>• What happens in event of conflict between what has already been authorised by the Council in terms of works to the local road network, and the desired works by the applicant?</li> </ul>

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Item	Article / issue	Subject
		<ul style="list-style-type: none"> <li>This has still not been addressed by the applicant, despite being referenced as one of their reasons why the disapplication of the NRSWA provisions are appropriate.</li> </ul> <p>The Council accepts that some modifications may be required to ensure the provisions of the permitting scheme are not expressly conflicting with the provisions of the DCO (for example, the provisions of Article 9(9)). However, before complete comments can be provided on this matter, the Council requires sufficient details to be provided on the Traffic Management Forum and how it is intended to operate, its governance and its dispute resolution system. The Council would welcome further details on this as a matter of urgency.</p>
3.	Article 10: Construction and maintenance of new, altered or diverted streets and other structures	<p>The Council is in the process of reviewing the draft Protective Provisions for Local Highway Authorities and will respond to the applicant's draft document separately at D6.</p> <p>Further, the Council also notes for completeness its submissions relating to ISH7 (p329) (<a href="#">REP4-352</a>) that identified the following key issues:</p> <ul style="list-style-type: none"> <li>Article 10(4) – bridges not included in the 'constructed to our reasonable satisfaction provisions'; and,</li> <li>Article 10(5) – why private roads to be maintained by street authority.</li> </ul> <p>Article 10(2) sets out that the Council does not have to take reasonability for a piece of infrastructure unless it has been completed to its reasonable satisfaction. However, this does not apply in relation to certain bridges (Article 10(4)) – this needs to be addressed. In relation to Article 10(5) there appears to be a drafting error – streets which are not intended to be a public highway should not be maintained by the street authority.</p> <p>The submissions relating to ISH7 (<a href="#">REP4-352</a>) also included a response to the Action Point set out by the ExA in relation to Commuted Sums, and for ease of reference, the Council notes two examples of where the Applicant has paid a local authority a commuted sum for the maintenance of a new structure are:</p> <ol style="list-style-type: none"> <li><a href="#">A303 Sparkford to Ilchester project</a> (National Highways) – Schedule 8, Part 4, Section 50(4)</li> <li><a href="#">M25 Junction 28 project (National Highway)</a> – Schedule 9, Part 7, Section 73</li> </ol> <p>These DCOs expressly required the payment of commuted sums by the undertaker to the relevant authority.</p> <p>Three further examples of where the applicant has been responsible for the payment of maintenance costs include:</p>

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Item	Article / issue	Subject
		<p>a. <a href="#">Port of Tilbury DCO, 2019</a> [Developer – Port of Tilbury London Ltd]: places responsibility on the undertaker/company to maintain the streets for 12 months following completion, and the bridges for 24 months following completion before maintenance becomes the responsibility of the street authority. Article 10.</p> <p>b. <a href="#">Silvertown Tunnel DCO, 2018</a> [Developer – Transport for London]: places responsibility on TfL to maintain the streets for 12 months following completion before maintenance becomes the responsibility of the street authority. Article 8.</p> <p>c. <a href="#">Thames Tideway Tunnel DCO, 2014</a> [Developer – Tideway]: places responsibility of the undertaker to maintain the streets for 12-months following completion, and the bridges for 24 months following completion before maintenance becomes the responsibility of the street authority. Article 12.</p>
4.	Article 27: Time limit for exercise of authority to acquire land compulsorily	<p><u>Time periods</u></p> <p>Whilst the applicant can cite examples where the time limit for use of powers has been accepted at 8-years, the time limit in the vast majority of DCOs is 5 years. Any attempt to seek a longer period needs to be justified and, in this situation, it has not been.</p> <p>Matters arising:</p> <ol style="list-style-type: none"> <li>1. Having regard to the fact that the applicant is already benefiting from a 2-year delay, affected parties will, if 5 years were accepted, be blighted for 7 years. The revised proposal is for an 8-year window running from the end of the legal challenge period/determination of any challenge – rather than the DCO Order date. This provision differs from other DCOs, yet those DCOs face the same potential for challenge. Whilst the applicant has now cited a recent DCO from 2022 in their most recent response (<a href="#">REP4-212</a>), there remains multiple others that do not take this approach;</li> <li>2. Given the need to undertake detailed design before construction commences there can be no justification for this extended period;</li> <li>3. The above ground, linear nature of this project means that a significant amount of land to be acquired will be acquired at commencement. The applicant is in control of its own programme and will know which areas might not be required until later in the project and has the ability to ensure acquisition on a timescale that strikes a fairer balance between the project and those affected by it; and,</li> <li>4. The Council's position is that, insofar as an extended period could be justified on a plot per plot basis, that this approach would satisfy its concerns. The applicant has previously rejected this on the basis that there are no precedents for this approach, but, of course, until a precedent is set there is no precedent. This, of itself, is not a</li> </ol>

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Item	Article / issue	Subject
		<p>reason to not adopt the extended time limit on a plot-by-plot basis, nor is the wording to achieve this complicated.</p> <p>The Council therefore seeks justification from the applicant on a plot-by-plot basis as to why 8-years is considered reasonable and/or for the drafting to revert to a five-year period to minimise uncertainty for residents. It is the Council's considered opinion that in general the time period should be reduced to 5-years.</p> <p>The Council notes the applicant's most recent response in <a href="#">REP4-212</a>, but the <u>combined effect</u> of the 8 years, plus the legal start date, appears to have been completely missed. The combined effect of these two periods is the Council's key concern and, therefore, the suggestion proposed in relation to plot-by-plot justifications would mean that only where justified would plots be subject to this maximum time limit.</p> <p>It is not for the Council to put forward potential plots that may benefit from a short time period – it is for the applicant to design their construction timetable in a manner that has minimal impact on members of the public.</p> <p>These timescales remain a key concern for the Council and one that it would welcome the opportunity to explore further with the ExA.</p>
5.	Article: 35: Temporary use of land for carrying out the authorised development	<p>The Council notes the removal of the word 'potential'. However, this fails to address the core concern with Article 35(3). The Council's position is that this provision can be interpreted very widely, is not in other DCOs granted and the applicant has failed to provide adequate justification for why this is necessary and justified.</p> <p>The Council accepts in principle that where there is an immediate risk, a notice period of 28 days may not be feasible. However, no examples, context or scale of the risk has been provided. It remains the Council's position that wording be provided in either the DCO or the EM to explain what these safety concerns might be, to ensure that the definition is not to broadly interpreted.</p> <p>For completeness, the Council also draws attention to its comments raised in its submissions relating to ISH7 (p331) (<a href="#">REP4-352</a>) on Article 35 more widely.</p>
6.	Schedule 2 Requirement 6 (Contaminated Land and Groundwater)	<p>Notwithstanding the applicant's response in in <a href="#">REP4-212</a>, the Council remains of the view that the applicant has not engaged with the suggestion of a new Requirement. Requirement 6 is to address unidentified contamination encountered during construction. The Council require more ground investigation in advance of construction to ensure that the control methods employed will adequately manage the exposure to third parties and environment. Whilst the current wording of GS001 (within the latest version of the REAC – <a href="#">REP4-139</a>) does commit the applicant to doing more ground investigations on their identified medium and high-risk sites (Section 6.1 of the Remediation Options Appraisal (ROA), which is the ES Appendix 10.11 – <a href="#">APP-434</a>), the wording could be taken to mean a method statement on what technique</p>

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Item	Article / issue	Subject
	<p>Requirement 4 (Construction and Handover EMPs)</p> <p>Requirement 3 (Detailed Design)</p>	<p>to prevent creating pollution pathways. This will not tell us how much and the nature of the data to be collected. Also, as a hang up from the previous wording it could be taken to only address release to controlled waters and the Council require atmospheric release controlled. Accordingly, the Council either require the new Requirement (as previously proposed), or GS001, GS003, GS006 and GS027 needs to be worded so the Council see the additional ground investigations and agree the identification of what is unacceptable risk.</p> <p>The Council notes, and appreciates, the applicant's response, but remains of the view that this is a key issue to be discussed and satisfactorily resolved.</p> <p>In addition, the Council remains concerned regarding the use of the word 'begin' and the relevance of the Swansea Bay judgement (see pages 335-336 of <a href="#">submissions relating to ISH7</a>) (<a href="#">REP4-352</a>). The Council is concerned about the concept of 'begin' rather than 'commence' and the introduction of preliminary works. As has been agreed by the applicant, the purpose of this is to preserve the DCO with minimal works. This provides greater uncertainty, as if consented, the longer it takes the applicant to develop the scheme, the greater the time the uncertainty created by the Order will impact residents.</p> <p>The Council maintains that the applicant needs to fully justify the current position reflected in the DCO and how they have assessed the impacts of it; both in terms of ongoing uncertainty and how the proposed outcome would work alongside CPO provisions and timescales.</p> <p>The Council's key concerns about the introduction of a 'tailpiece' into this Requirement remain (submission relating to ISH7 (see pages 333-334) (<a href="#">REP4-352</a>):</p> <ul style="list-style-type: none"> <li>• There needs to be clarity over what is included within 'environmental effects'. Is that everything in the Environmental Statement, or just certain things? When considering things like business impact, how are new business treated? How do we know what the impacts are considering the limited publication/consultation requirements?</li> <li>• Is this provision appropriate, considering the fact that there is a procedure in the Planning Act, 2008.</li> </ul> <p>It is the Council's position that there needs to be further analysis of why this is needed. The exclusion of the procedure in the Planning Act, 2008 seems to be to just remove the need to consult and publicise changes. This reduces transparency and the ability of those impacted to comment on the proposals (so that the impact upon them can be better understood). Furthermore, there needs to be clarity and transparency around what is meant by 'environmental effects' to ensure that the provision itself is not unlawful as a result of the amount of variation that flow from an agreed change that has not been properly assessed to considered as part of this process.</p>

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Item	Article / issue	Subject
7.	Article 66 and Schedule 16	<p>The Council remains concerned about which drawings are approved and therefore must be complied with. The key issue is that not all 'certified documents' (as listed in Schedule 16 of the DCO and which is in accordance with Paragraph 11 of the PINS Advice Note 15 (AN15)) appear to be control documents, as they are not secured within the DCO. The Council would like further explanation for not having as control documents or other mechanism for securing of the following, or a signposting of the explicit securing mechanism of these following documents:</p> <ul style="list-style-type: none"> <li>• Structures plans</li> <li>• Works and Temporary Works Plans</li> <li>• Drainage Plans</li> <li>• All Transport-related Plans</li> <li>• Hedgerows and Trees Preservation Order Plans</li> <li>• Crown Land Plans</li> </ul> <p>Whilst the Council appreciates the applicant's response, simply stating that the approach reflects the approach taken on other DCOs does not address the specific concerns articulated above.</p> <p>It is acknowledged that the following plans are secured within the DCO, as follows:</p> <ul style="list-style-type: none"> <li>• Land Plans (secured as part of Article 2 relating to the Order Land))</li> <li>• Special Category Land Plans (secured by Article 40)</li> <li>• Engineering Drawings and Sections (secured as part of Article 6 relating to the LoD)</li> </ul>

## 2.3 Transport Assessment (v2 and v3) Changes

- 2.3.1 The Council notes the inclusion of journey time information for a range of additional routes provided and that there are several minor additions to the Transport Assessment Appendix B - Journey Time Changes 2030 v2.0 ([REP4-155](#)) and Appendix C - Journey Time Changes 2045 v2.0 ([REP4-157](#)) on which the Council has no substantive comments, but highlights its ongoing concerns about the approach to the modelling of the local road network. It maintains its stance on the general absence of strategic viability of LTC as set out in its LIR at Sections 7 and 8 in its LIR ([REP1-281](#)) and its views on the local harm as indicated at Section 9 and Section 10 in its LIR ([REP1-281](#)).
- 2.3.2 Changes made to the Transport Assessment Parts 1 to 3 ([REP4-149](#), [REP4-151](#), and [REP4-153](#)) are inconsequential formatting changes and do not affect the Council's position with regards to LTC.
- 2.3.3 **Summary: there are several minor changes to the Transport Assessment and appendices. The Council has no substantive comments on these changes but highlights its ongoing concerns about the approach to the modelling of the local road network and the general concerns with the approach to mitigating effects.**

## 2.4 Statement of Reasons (v5) Changes

- 2.4.1 This Section provides the Council's comments on changes to the Deadline 4 Submission - 4.1 Statement of Reasons v5.0 (Tracked changes) ([REP4-101](#)).



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- 2.4.2 The Council notes in Annex A that 11 plots which the Council has an interest in have been deleted. The Council does not own or lease these plots; their interest relates to Public Rights of Way and the impact of the removal of these plots is not considered material.
- 2.4.3 The Council notes in Annex B that the applicant has failed to address any of the points raised in Section 18.13 of the Council's submission at D3 – 'Thurrock Council Comments on applicant's Submissions at Deadline 1 and 2 (D1 and D2)' ([REP3-211](#)). There are, as highlighted previously, several points which required correcting, and which still need to be corrected.
- 2.4.4 **Summary: there are several corrections required to be made in Annex B to Deadline 4 Submission - 4.1 Statement of Reasons v5.0 (Tracked changes) ([REP4-101](#)).**

## 2.5 S106 Agreement Heads of Terms Changes (v2)

### Introduction

- 2.5.1 The applicant has submitted further changes to the S106 Agreement Heads of Terms (HoT) at D4 ([REP4-145](#)) and these are reviewed below.
- 2.5.2 In addition, the Council offers below an update on discussions with the applicant and progress on developing the draft S106 Agreement.

### S106 Agreement: Amended HoT (v2)

- 2.5.3 There are a number of drafting additions, updates and changes which the Council is comfortable with and has no further comments. However, the Council does have a number of more substantive comments as set out below, which are largely reiterations of previous comments as the applicant has refused to either engage or accommodate these reasonable requests and no accommodation has been made in the applicant's D4 submission ([REP4-145](#)).

**Skills, Education and Employment: Council Resourcing** – the outstanding issues relating to this vital matters were set out in detail in the Council's LIR ([REP1-281](#)) in Section 13.4 and then updated in its D3 submission ([REP3-211](#)) in Section 18.12. The Council has received no satisfactory responses from the applicant, and it has refused to accommodate the Council's 'reasonable and proportionate' requests for any officer support.

**Community Funds** – the applicant has refused to change its definition of 'local'; will not increase the value of the proposed Community Fund; will not change the LAs proposed distributions of the Fund; and will not consider the Community Capacity funding. This is in spite of detailed evidence and previous best practice benchmarking from the Council and a joint request from four directed impacted local authorities.

**Officer Support Contributions** – a further meeting with the applicant on 28 September 2023 has required further input from the Council to supply further information, which will be sent to the applicant immediately after D5 for their further consideration. Outstanding issues remaining relate to the payment of 15% on-costs for officers, the details of the responsibilities of each officer role, national insurance contributions and the inclusion of administrative and apprenticeship roles. These matters remain outstanding despite some two years of the Council requesting these matters.

**Pedestrian Crossing Improvements: Severance (Brennan Road, Tilbury)** – at a further meeting with the applicant on 28 September 2023, the Council set out a description of its largely completed cycleway/pedestrian scheme on Brennan Road. As a result, it was clear

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that the applicant will need to amend their proposed offer on this issue. The Council set out its requirements to the applicant in an email dated 28 September 2023 and awaits the applicant's response.

**Traffic Impacts at Orsett Village and Horndon** – at a further meeting with the applicant on 28 September 2023, this issue was discussed further, and the applicant confirmed it would no longer be offering any mitigation or funding towards impacts of construction or operational traffic 'rat-running' through these villages. This is completely unacceptable to the Council, and it will provide further evidence of the need for such mitigation/funding within its D6 submission.

### **Progress Update on S106 Agreement between Applicant and the Council**

- 2.5.4 The applicant has provided the Council with its draft full S106 Agreement for comment on 29 September 2023 – this is despite it stating it would be supplied by mid-September in its previous draft programme (as outlined in Section 12.3.8 of the Council's D4 submission ([REP4-354](#))). The Council will consider this full draft and provide comments to the applicant in due course.
- 2.5.5 However, the Council has now agreed with the applicant that its period of review of the draft S106 Agreement has been extended until 25 October 2023. This is because the S106 involves funding the governance processes for reviewing/agreeing any draft S106 are different and involve more governance within the Council to assure there are no implications, further funding required or other legal implications.
- 2.5.6 **Summary: notwithstanding the above, the process to achieve no agreement on the S106 has taken almost two years, despite five meetings and much evidence produced by the Council to the applicant. The applicant has sought to disguise its lack of progress in a recent submission by only providing a high level update. There are several significant areas of concern to the Council that remain outstanding and await positive responses from the applicant, as set out above. However, the applicant's proposed programme for achieving an acceptable draft S106 Agreement has now been largely agreed with the Council, following Council representations on deadlines.**

## 3 Localised Traffic Modelling – Key Issues

### 3.1 Orsett Cock Roundabout: Council Introduction, Context and Programme

#### Introduction

- 3.1.1 At Issue Specific Hearing (ISH7) the ExA directed the applicant and local authorities to hold a workshop for Orsett Cock and submit a joint paper to the ExA at Deadline 5 that focussed on *'narrowing the areas of disagreement and reconcile the differences between LTAM and VISSIM modelling'* (Action Point 6 of [EV-046e](#)). The workshop was held on 25 September 2023 between the applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG) and a Joint Paper has been prepared and submitted as part of this D5 submission within Appendix A. This introduction has been prepared by the Council to provide further detail of the Council's position in response to the Orsett Cock workshop beyond that provided in the joint paper
- 3.1.2 The applicant continues to maintain a position that its LTAM modelling alone remains sufficient for the determination of the LTC DCO. The applicant has, however, also submitted to the Examination VISSIM microsimulation modelling. Using the output flows from the LTAM models, the VISSIM modelling shows levels of delays and queuing on the approaches to Orsett Cock junction and traffic congestion on local roads as a result of LTC that is untenable to Thurrock Council as Local Highway Authority (LHA).
- 3.1.3 The issues identified by the VISSIM modelling differ significantly when the same issues are judged within LTAM. When considering the same issues through the lens of LTAM the severity of the issues is reduced, particularly with regards to traffic queuing. There is considerable divergence between the results provided by these models, and this makes an analysis of the impact of LTC on the local highway network very difficult. The applicant maintains a position that it is not necessary to resolve forecast impacts on the local road network (LRN), because it contends that it is only necessary to view the impacts through the lens of LTAM.
- 3.1.4 It is accepted by the applicant that the VISSIM model provides the ability to gain a much better understanding of traffic behaviour through a local area in comparison to LTAM, thus addressing a limitation of the strategic model; and has accepted that it is modelling practice to use microsimulation modelling to validate and iterate the LTAM model. However, it is important that similar judgements on impacts can be made on both types of models, which is currently not possible. LTAM has been used to determine journey time benefits and disbenefits across the local highway network in Thurrock. If LTAM is underestimating impacts at critical junctions (as reported by VISSIM) then it will overestimate benefits and underestimate disbenefits. This is why model iteration is required between VISSIM and LTAM, so that the models and therefore judgements on impacts, are reasonably well aligned.
- 3.1.5 Indeed, the applicant states that it did undertake such iteration earlier on in the scheme design process phase, although this was using basic models as set out below in Section 3.1.12. At the modelling workshop the applicant held with the LHA and the Interested Parties on the 16 August 2023, the applicant agreed to provide a clearer explanation of the iterative approach adopted ([REP4-354](#), Section 10, Table 10.2, Action No. 7), including details of the purpose of the model, the date that they were completed and the geographical area that their models covered. Some of this information has only just been provided, but is not entirely clear, but may be of some use. At the recent 'Orsett Cock Modelling Workshop' with the applicant, the LHA and Interested Parties reiterated again their repeated request for greater transparency by the applicant on the iterative modelling process adopted. The applicant simply signposted its response in its Deadline 1 submission referring back to Table 3.1 in Appendix H of the

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Localised Traffic Modelling Appraisal reports (*National Highways, Lower Thames Crossing – 9.15 Localised Traffic Modelling Appendix H - Traffic Operational Appraisal - VISSIM Forecasting report, Table 3.1*) ([REP1-194](#)).

- 3.1.6 The aforementioned Table 3.1 is confusing and lacks the transparency that would help interested parties to better understand the process deployed. The headings are ambiguous and do not make it clear which models are being referred to. The timespans cover differing periods of 1, 2 and 3 years and overlap, obscuring the early stage in the process that the overall design configuration was fixed, i.e. before the modelling iterations had been completed as would normally be expected. The issues with the applicant's approach appear to arise because the iteration between LTAM and a combination of other basic models (as set out below in Section 3.1.12) was undertaken some time ago, between 2018-2020, without the input or knowledge of the LHA. The LHA has never seen an older version of the VISSIM model and so cannot vouch for its accuracy or appropriateness for validating LTAM at Orsett Cock.
- 3.1.7 In response to Council concerns about the performance of Orsett Cock, the applicant decided it was necessary to build a new VISSIM model. The fact that this was considered necessary demonstrates the inadequacy of previous microsimulation modelling. Despite having significant opportunity to do so prior to submission, the applicant chose not to expedite the VISSIM model development for Orsett Cock, nor to use the Orsett Cock VISSIM model to address known issues of model divergence with LTAM.

### **Divergence Between VISSIM and LTAM Models**

- 3.1.8 Put simply, the VISSIM model shows that the current Orsett Cock junction configuration, including its recently constructed signal controls and additional lanes, does not work; whereas the analysis of the LTAM modelling is used by the applicant to claim that the junction does work. The LTAM model uses an old version of the junction, which has fewer lanes and does not have signal controls, this should mean that there is reduced ability for LTAM to cope with forecast traffic; whereas counter-intuitively the applicant claims that the old version of the Orsett Cock junction works within LTAM. This discrepancy between the models is of serious concern and cannot be left unresolved. This is a matter that specialist consultants representing the LHA, Essex County Council and the two National Ports (Port of Tilbury and DP World London Gateway) are all in broad agreement.
- 3.1.9 It is also important to emphasise that whilst the modelled output divergence is most obvious at Orsett Cock because the necessary work has progressed further, such disparities between the models are also apparent at other junctions of concern in Thurrock and require further analysis.

### **Assessment of Impacts at Orsett Cock**

- 3.1.10 The Orsett Cock junction is, and will remain, part of the Local Road Network (LRN) for which the LHA is responsible. To be very clear, the serious traffic issues that the VISSIM modelling forecasts LTC will create at Orsett Cock are totally unacceptable to the Council.
- 3.1.11 The Council's specific concerns regarding traffic congestion have now been the topic of discussions with the applicant for over two years and the issues are well known to the applicant. The applicant has had ample opportunity to advance the microsimulation modelling and design to resolve these known traffic issues but has chosen not to. In deciding not to engage effectively and appropriately with the LHA, it has knowingly put its application at risk.
- 3.1.12 The design configuration for the interchange of A13/A1089/LTC was established prior to its LTC Statutory Consultation in late-2018. The applicant clearly states in Table 3.1 in Appendix H of the Localised Traffic Modelling Appraisal reports (*National Highways, Lower Thames*

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*Crossing – 9.15 Localised Traffic Modelling Appendix H - Traffic Operational Appraisal - VISSIM Forecasting report, Table 3.1* ([REP1-194](#)) that the Orsett Cock junction was only assessed using a combination of basic Arcady and Excel spreadsheet assessment and through the use of Saturn. The primary modelling on Orsett Cock that informed the scheme design was undertaken sometime in the period 2017-2018. This was a long time, some three to four years, before the applicant had started its essential VISSIM modelling to examine the operation of the Orsett Cock junction and the connection of LTC to the circulation at Orsett Cock.

- 3.1.13 This means that before commencing with the as yet incomplete Orsett Cock VISSIM modelling (i.e. since the applicant's Statutory Consultation in late-2018), the applicant had already invested considerable sums to undertake the work required for its application based on this previously prepared configuration, which showed no designed interface to the Orsett Cock junction, merely an assumption that the scheme would abut the local road network at this locale. Put simply, before the late-2018 Statutory Consultation the applicant undertook some rudimentary junction assessment of Orsett Cock junction, as set out above. This assessment informed the design of the A13/A1089/LTC configuration and link to Orsett Cock. At this stage the design was locked in and the LTC design work progressed at pace. This early lock in on design has severely limited the ability of any subsequent more detailed modelling analysis to influence design beyond relatively minor modifications. The initial scheme configuration was based on inadequate assessment and this effectively locked-in design flaws in the initial scheme configurations which now appear impossible to remedy without considerable re-working of the scheme design.
- 3.1.14 The problems arise because the A13/A1089/LTC interchange configuration established prior to late-2018 had not been tested by the applicant using a validated VISSIM model in collaboration with the LHA, as would normally be expected. This meant that when the applicant started its VISSIM modelling work, at the insistence of the Council as LHA, the applicant found itself in a position where it had no option but to replicate a fixed layout of the Orsett Cock junction. In fact, it had very little scope for design modification, if any, without serious and complex ramifications for other elements of its DCO Application.
- 3.1.15 This perhaps explains the reluctance of the applicant to engage with the LHA with a focus on resolving issues prior to the submission of the DCO. This predicament also explains the stance of the applicant throughout the Examination, refusing to accept that the results of the VISSIM modelling challenge the validity of the LTAM modelling it has put forward in support of its DCO application. This is despite the overwhelming balance of independent specialist modelling opinion representing affected local highway authorities and the two National Ports. All have expressed that LTAM is not valid for assessment of local road impacts at Orsett Cock. The contention being that if LTAM is not valid at this locale, the Council contends that it gives further weight to concerns expressed by these parties and other LHA that LTAM is also not valid at other locales of critical importance for the integrity of the scheme assessment.
- 3.1.16 In the Council's view, the applicant now finds itself in a very difficult situation.
- 3.1.17 If the applicant does address the identified model divergence at the Orsett Cock junction (and potentially other junctions being assessed with VISSIM) by accurately replicating queuing and delays, then the LTAM modelling will change across the network. The applicant will be keen to avoid this because of the knock-on effects of updating LTAM. The overall scheme (dis)benefits and the economic appraisal will change and there will be a need to introduce design changes at the Orsett Cock junction at a late stage of the Examination.
- 3.1.18 If the applicant accepts that there is a valid VISSIM model for the A13/A1089/LTC interchange and the Orsett Cock junction, then a contrary position will be established, i.e. the VISSIM model will question the integrity of the LTAM model on which the DCO application is completely predicated. In this context it is unsurprising that the applicant continues to adopt

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tactics intended to delay the production of the VISSIM model for the Orsett Cock junction and indeed for a number of other critical junctions. The longer it takes the applicant to produce the VISSIM modelling the less time there is for scrutiny and examination of the issues that this will invariably spotlight.

### **Premature Focus on Monitoring and Mitigation**

- 3.1.19 To avoid potentially prolonged engagement about the inadequacies of modelling, the applicant in the recent Orsett Cock Workshop emphasised its willingness to focus on monitoring and mitigation. The applicant has previously acknowledged that the Orsett Cock junction should not be considered part of the 'wider traffic network', but instead it now recognises that it is an integral part of the LTC scheme. In this regard, the junction must not therefore be treated simply as a network impact, which could be monitored with mitigation agreed at a later date. The junction must be proved to work, for the LTC scheme to be considered to work.
- 3.1.20 The applicant does recognise that the VISSIM model shows that there are significant traffic delays at Orsett Cock, but it is evident that it would prefer to now move the discussion onto monitoring of effects during the operation phase and potential mitigation should those effects arise, rather than making changes to the design now to mitigate the known impacts shown in the VISSIM modelling; thereby not resolving the issue of modelling divergence, which it contends is unnecessary or to address forecast impacts.
- 3.1.21 The applicant, whilst refusing to formally recognise any issue with the performance of Orsett Cock junction, appears to suggest it now wishes instead to monitor the performance of this junction and then mitigate it only, if necessary, but without any mitigation funding, threshold, triggers, or agreement to implement anything.
- 3.1.22 The applicant has, however, not presented any proposals for consideration or set out any details of a monitoring and mitigation approach and it continues to maintain a formal position that it is not obliged to mitigate traffic impacts of its scheme or to design a resolution to the operation of the Orsett Cock junction as part of the DCO application proposals. The applicant merely suggests it is willing to have 'further and ongoing discussions'. Aside from delaying the outcome of any mitigation and adding significant uncertainty, the approach adopted by the applicant does not secure any funding for the mitigation.
- 3.1.23 The Council requires that the applicant should accept the VISSIM modelling has identified issues that must be addressed. Until the modelling issues are resolved it remains impossible to determine what mitigation might be appropriate at Orsett Cock. Furthermore, the applicant should formally recognise the traffic impacts that it would create at Orsett Cock junction as a result of the LTC and must accept that it is required to address these known impacts through mitigation designed and agreed and as part of the Examination and secured through the DCO, before its scheme can be considered acceptable in terms of traffic impact.

### **Modelling Programming Difficulties**

- 3.1.24 The Council set out its concerns about achieving the modelling programme being very challenging within the remaining Examination Period in its D4 Submission 'Post Event Submission relating to ISH4', in particular Sections 3 a) i) and Table 1 ([REP4-352](#)). The Council still maintains this position but is working with the applicant to set timetables to develop the modelling further. In recognising these challenging timescales it sets out below a potential way forward in order to offer a position solution, notwithstanding modelling programme concerns.

## Potential Way Forward

- 3.1.25 The LTAM model currently assumes lower levels of delay to traffic at Orsett Cock than has been shown to be the case in VISSIM. The applicant does not have sufficient time within the Examination to undertake industry best practice of model iteration to better align the models. A simplistic approach to feeding the delays predicted in the VISSIM forecast model into the LTAM model has been discussed and agreed as part of the workshop on 25 September 2023. However, this process needs to be done not just for Orsett Cock but should also be undertaken for the other critical junctions identified in Thurrock that are being modelled using VISSIM. Those models are not as well progressed as Orsett Cock and therefore there may be insufficient time left in the Examination for this process to be completed.
- 3.1.26 The LTAM model is a variable demand model (VDM). This means that increasing the delays at Orsett Cock, and the other critical junctions identified in Thurrock if required, will reduce the flow of traffic through those junctions and instead the model will re-allocate the traffic elsewhere on the highway network. Traffic will divert to other local roads in Thurrock and Essex, in order to meet the requirements of the VDM modelling process.
- 3.1.27 Crucially, reallocating traffic flows away from Orsett Cock would put additional pressure on many other critical junctions on both the Strategic and Local Road Networks, which LTAM has already predicted to be at or very close to capacity in a number of locations. Consequently, other junctions would fail to operate to an acceptable level. Additional VISSIM modelling would then be crucial to appropriately understand mitigation necessary and achievable at these other junctions. LHAs have been restricted to LTAM cordon models for their respective administrative boundaries (or only four districts in the case of Essex CC) and would not be able to appropriately understand the impacts of traffic reassignment from the LTAM VDM, without being given access to the full LTAM model. This transparency is crucial, however, to date the applicant has resolutely refused to allow any party access to its full LTAM model.
- 3.1.28 The Council is concerned that this reallocation of traffic within LTAM would have serious ramifications for the LTC Outline Business Case (OBC), which would need to be revised. Given the already fragile position of the value for money assessment, which shows a low BCR for the scheme, the applicant is likely to continue to remain highly resistant to agree any amendment to its ComMA report ([APP-518](#) and Appendices thereof).
- 3.1.29 Given the time constraints to undertaking all of the above process, an alternative approach would be for VISSIM to be updated to align with the level of capacity shown in LTAM. This would still require a significant programme of work to be completed by the applicant in agreement with the LHA, the two National Ports and other stakeholders, within a very challenging time constraint, if it to be completed before the end of the Examination. In the Council's view, it is highly unlikely that the necessary design modifications to the Orsett Cock junction could be achievable within the Rochdale envelope. In 2021-2022, the applicant undertook some modelled theoretical modification testing within the Order Limits, seeking to address the delays and problems within the wider interchange and found this to be insufficient.
- 3.1.30 In conclusion, the modelling has demonstrated that mitigation is required at Orsett Cock. However, the applicant has not put forward any design options to mitigate the known impacts at this critical junction. Indeed, within the Joint Paper on Orsett Cock, the applicant has stated that there is no need for any further work beyond the modelling steps agreed within the Joint Paper. The modelling is not an end in itself and is required to be used to understand impacts and design mitigation. **The Council contend that the Examination will be defective, and open to legal challenge, if the applicant fails to undertake the agreed modelling steps within a reasonable timeframe, or does so in a way which gives rise to procedural prejudice to the Council and other stakeholders, or if the modelling is not used to inform the design and provision of mitigation measures, which can be shown to address the modelled deficiencies.**

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- 3.1.31 It is highly improbable that the alternative approach for resolving the conflict between the two models, and the serious ramifications from attempting to do so, could be satisfactorily achieved within the remaining period of the Examination. The only practicable alternative is therefore to proceed with the approach to help establish whether there is a resolution to the serious issues with Orsett Cock junction that have been identified.
- 3.1.32 The applicant is to issue a revised version of its forecast models (version 3) by 6 October 2023. The specialist traffic modellers from the Council, Essex CC, Port of Tilbury and DP World London Gateway are in broad agreement that this VISSIM model (version 3), expected imminently from the applicant for Orsett Cock, would now be broadly sufficient for purposes of developing and testing forecast years and for developing design mitigation options.
- 3.1.33 Whilst the applicant's forecast VISSIM models have not been agreed with the Council or any other stakeholder, to expedite the work required, the Council proposes to use this updated model in the absence of an agreed model as is normal practice. The Council will then proceed with junction mitigation design work on the basis of that VISSIM model to try to establish suitable design options for Orsett Cock for the purposes of the Examination. The aspiration will be to contain those designs within the Order Limits unless found not practicable.
- 3.1.34 **As required by Action Point 6 of ISH7, the agreed Joint Paper between the applicant, the Council, Essex CC, Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG) is set out in Appendix A below and a transcript of the stakeholder workshop required by Action Point 6 of ISH7 is set out in Appendix C below.**

### 3.2 Asda Roundabout: Council Introduction and Context

- 3.2.1 The construction period modelling challenges at Asda Roundabout are different to those associated with the Orsett Cock junction as the issues are with regards to the concentration of construction traffic at this location, rather than the effects of construction works themselves.
- 3.2.2 The LHA and the Port of Tilbury London Limited (PoTLL) have repeatedly expressed serious concerns about the inadequacy of analysis by the applicant to assess the impact of construction traffic on the Asda Roundabout. Initial modelling was provided during the Examination at Deadline 3 and the Council has provided its response on the inadequacies of that modelling at its Deadline 4 Response Appendix A ([REP4-354](#)), which concluded that the base micro-simulation modelling was not approved and as such the construction forecast modelling was not accurate for review.
- 3.2.3 Traffic data used by the applicant as the basis of its modelling has been shown by PoTLL to be significantly below typical traffic flow through the Asda Roundabout, illustrating that the applicant has underestimated the effects of LTC on the safe and efficient operation of the roundabout and adjoining network both during construction and in operation.
- 3.2.4 The applicant had asserted that its workers would be required to adhere to agreed routes so as to minimise the impacts on the Local Road Network and local communities. For access to the North Tunnel Portal compound and the Station Road compound that access route was focused on A1089 and St Andrews Road. Inspection of the assignment within LTAM during the construction phase scenarios has shown that that worker traffic has assigned itself to the LRN through communities to the east of A1089, including Chadwell St Mary, East and West Tilbury. This is contrary to the commitment made by the applicant, generates harm to the local communities and under-estimates the impacts on Asda Roundabout during construction.
- 3.2.5 Work is ongoing with the applicant to establish an acceptable VISSIM base model and subsequent forecast models. Continued free-flow traffic at Asda Roundabout during construction of LTC is essential for the operation of the Tilbury 1 and Tilbury 2 tenants. The Port of Tilbury is the closest port to London and comprises 56 operational berths with 31



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independent working terminals across 10.2km of quay and contains 5 million sq. ft of warehousing. The crucial role of national port infrastructure is recognised and protected by the NPS for Ports, January 2012, in particular Section 3 relating to Government policy and the essential role of ports and importance of the ports sector, especially the Government's assessment of the need for new infrastructure and its attendant guidance.

- 3.2.6 The applicant requires access through the Port via a private road to access its proposed haul road, which connects onwards to the LTC compound nearest the northern portal of the tunnel. The Council understands that this access agreement is contingent on the applicant providing a traffic management strategy that meets the requirements of the PoTLL. It is difficult to perceive a situation where PoTLL would be prepared to allow the applicant access across its site whilst serious concerns remain about the inability of the Asda Roundabout to cope with construction traffic. It seems unlikely to the Council that PoTLL would be prepared to risk the commercial operations of existing tenants before it agreed to allow the applicant access across its site. Without this access, the applicant is not able to deliver the LTC DCO it is seeking consent for within its DCO application.
- 3.2.7 It is therefore crucial that VISSIM modelling for Asda Roundabout is completed and the construction traffic impacts are appropriately evaluated. Following this modelling exercise, it is highly likely that mitigation measures will be necessary at Asda Roundabout. The LHA has also raised concerns about the safe routing of cyclists and pedestrians across the junctions during construction and this must be addressed by the applicant as part of any mitigation. It should be noted that the Asda Roundabout currently falls outside the Order Limits of the DCO application and therefore the applicant will need to clearly set out how it intends to secure mitigation for the Asda Roundabout and provide a separate agreement prior to the conclusion of the DCO Examination. In the absence of a signed legal agreement any proposed mitigation for Asda Roundabout cannot be considered as part of this DCO Examination. Given the time needed to complete the modelling and agree the mitigation required, it appears highly unlikely that the serious issues identified at Asda Roundabout can be satisfactorily addressed within the remaining period of the DCO Examination.
- 3.2.8 **The agreed Joint Paper between the Council and the Port of Tilbury London Limited (PoTLL) is set out in Appendix B below.**

### 3.3 Manorway Roundabout Model

- 3.3.1 As stated in the Council's D3 submission [REP3-211](#), Section 14.3, a base model for the Manorway Roundabout junction had not been provided by the applicant and therefore it is not possible for the Council to judge whether the provided at D1 forecast models and the impact assessment results for this location are reliable.
- 3.3.2 The Council has prepared a base year model using observed traffic flows from 2022 to allow an updated forecast model to be developed by the applicant and agreed by the Council. The AM peak base model has been shared with the applicant just prior to the D5 submission. The PM peak base model and the Local Model Validation Report (LMVR) will be shared with the applicant ahead of D6 for them to review and adopt the base year models in forecasting prior to D6 submission.

## 4 Dartford Crossing

### 4.1 Introduction

- 4.1.1 The Council will provide a full response to the applicant's response to the Examining Authority's first set of written questions ([PD-029](#)) at D6.
- 4.1.2 However, the Council considers that the response to ExQ(1) Q4.1.1 'Modelled Effects: Dartford Crossing' raises such fundamental issues concerning the need and rationale for LTC that a response is provided below.
- 4.1.3 In summary, the response shows that no congestion relief is expected at Dartford Crossing from 2037 (possibly earlier), that the related key objective for LTC is not delivered and the argument that no other alternative transport scheme could provide the same relief as LTC is not valid, because LTC does not provide congestion relief at Dartford Crossing. This eventuality was also set out in the Council's LIR ([REP1-281](#)) in Sections 7.3 and 7.4.

### 4.2 ExQ(1) Q4.1.1 Modelled Effects: Dartford Crossing

- 4.2.1 This question was posed, as follows:

*'In terms of the first scheme objective, does the Applicant accept that free-flowing traffic conditions at the Dartford Crossing (i.e. above 85% V/C) will not be achieved in most 2037 modelled scenarios? If yes, does it therefore follow that the scheme would not provide "free-flowing" capacity at Dartford?'*

- 4.2.2 The applicant responded to this question, as follows:

*'The Applicant agrees that the forecasts of volume to capacity at the Dartford Crossing would be above 85% in most 2037 modelled scenarios.'*

- 4.2.3 In simple terms, this means that in most 2037 modelled scenarios there would not be free flowing traffic on the Dartford Crossing and that traffic congestion would not be reduced on the Dartford Crossing following the implementation of LTC.
- 4.2.4 The applicant then makes a series of statements to justify why this lack of relief of traffic congestion at Dartford Crossing is not a problem.
- 4.2.5 The Council considers that these statements do not overcome the lack of impact of LTC on Dartford Crossing and in fact, the statements help demonstrate the fundamental issues associated with the delivery of new highway capacity in this location as described in following sections.

### 4.3 Need for the Project and Scheme Objective

- 4.3.1 In the 'Need for the Project' ([APP-494](#)) and many other documents the applicant presents a summary of traffic congestion issues at Dartford Crossing.
- 4.3.2 This leads to the definition of the following Scheme Objective (Table 4.6 [APP-494](#)):

*'Transport: To relieve the congested Dartford Crossing and approach roads and improve their performance by providing free-flowing north-south capacity.'*

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- 4.3.3 In examining the scheme, the Council had always understood that this objective related to 'providing free-flowing north-south capacity' on the Dartford Crossing.
- 4.3.4 This understanding was based on the description of project benefits which include:  
*'The Project would significantly reduce traffic congestion at the Dartford Crossing' (Table 5.2 Need for the Project ([APP-494](#))*  
*'If the Project is built (as shown by the Do Something scenario), it would provide significant relief to the Dartford Crossing and its approach roads, as well as many roads to the west of the Project, including the A2 and A13' (para 7.1.7 of Traffic Forecasts Non-Technical Summary [APP-528](#))'.*
- 4.3.5 The applicant's answer to ExQ(1) Q4.1.1 clearly states that these expected benefits of reduced congestion at Dartford Crossing are **not** in fact forecast to occur by 2037, with the unstated implication that they these benefits are also not expected in the design year (2045).
- 4.3.6 This is of fundamental importance to the residents of Thurrock because they face at least six years of construction, the loss of 10% of their land, 11% of green belt and a wide range of other negative impacts for a scheme, which does not provide an improvement to the Dartford Crossing.
- 4.3.7 The applicant could argue that Thurrock residents could use the LTC to cross the River Thames. However, for most residents the Dartford Crossing will continue to be the most accessible cross-river connection because there is only a single access to the LTC in Thurrock at the A13/A1089/Orsett Cock junction. This poor connectivity to LTC by Thurrock residents is compounded by the forecast congestion at A13/A1089/Orsett Cock and the removal of Tilbury Link Road from the scheme.

#### 4.4 Shifting Scheme Objective

- 4.4.1 The applicant attempts to overcome this fundamental challenge to LTC (i.e. that the expenditure of £8,083m (Table 6.2 [APP-526](#)) to provide a new river crossing does not alleviate congestion at Dartford Crossing) by restating the transport objective for the scheme in a different way (ExQ(1)\_4.1.1) (our underlining): However, the applicant's Funding Statement ([APP-063](#)) states in paragraph 2.1.1 that the cost envelope of the scheme is £5.2bn - £9bn. This is corroborated in the National Audit Office Report in November 2022 (refer to the Council's LIR ([REP1-281](#)) Sections 7.3.19 – 7.3.22.  
*'However, this does not undermine the Scheme Objective of providing free flowing north-south capacity by the new A122'.*
- 4.4.2 This means that the scheme objective as previously stated - *'to relieve the congested Dartford Crossing and approach roads and improve their performance by providing free-flowing north-south capacity'* **has now been restated as 'maintaining high levels of congestion on the Dartford Crossing and its approach roads, while providing free-flowing north-south capacity only on the A122'**.
- 4.4.3 According to the Council's research, this objective has not previously been stated in these terms by the applicant. It is an important change and an admission by the applicant that they cannot demonstrate an improvement in traffic congestion at Dartford Crossing.

## 4.5 More Traffic Capacity Leads to More Traffic Demand

4.5.1 The fact that the provision of more north-south highway capacity does not lead to congestion relief at Dartford Crossing should not come as a surprise. All the previous schemes to provide additional capacity at Dartford Crossing have led to increases in traffic demand.

4.5.2 In fact, the applicant makes this clear that these increases in traffic demand happen more quickly than traffic forecasts predict at the planning stage by stating (paragraph 4.2.3 within the Need for the Project ([APP-494](#))):

*'Following the opening of the QEII Bridge, which effectively doubled capacity, it only took seven years until traffic was again capacity constrained.'*

4.5.3 The word 'only' reflects the fact that traffic grew at a much faster rate than had been expected at the time of the planning and construction of the QEII Bridge.

4.5.4 For LTC, the applicant is already stating now, at the application stage, that at the Dartford Crossing the congestion relief associated with LTC will have disappeared within only seven years of opening. If this very limited period of impact is already acknowledged, it might be assumed that the actual period of relief may be significantly less than seven years from opening.

4.5.5 The Council note that there is an important and repeated ambiguity in the definition of what constitutes an 'improvement' in travel conditions.

4.5.6 In the formal process of appraisal, it is common to define 'improvement' as the difference between forecast conditions 'with' and 'without' the scheme. This means that if conditions with the scheme are forecast to get worse this will still be treated as a benefit if conditions without the scheme are forecast to deteriorate even more.

4.5.7 These are treated as having the same value to travellers as the case where conditions without the scheme are forecast to get worse and conditions with the scheme are forecast to get better.

4.5.8 In common language, however, there is a universal understanding that the words 'improvement in travel conditions' means that conditions will get better. This latter meaning is reflected in the general publicity material for the scheme.

4.5.9 The Council do not challenge here the underlying concept of such appraisals, but we do stress that for all practical purposes the claim 'conditions will get worse, but not as much as otherwise' is **different** from the claim where 'conditions will get better'.

4.5.10 This is fundamental to public acceptance, transparency and trust.

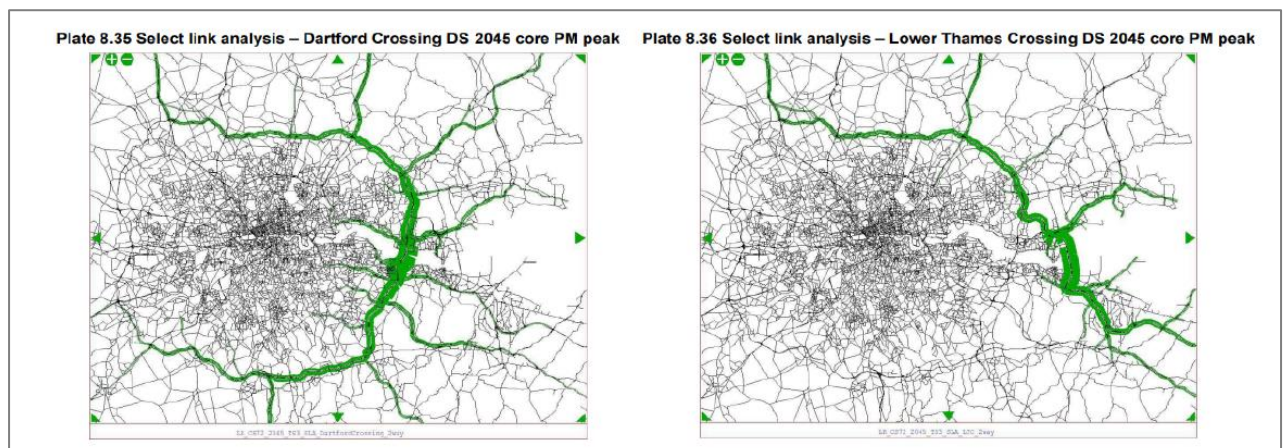
4.5.11 The Council do not consider that it is possible that the applicant continually deliberately encouraged public understanding to be of an improvement at Dartford Crossing, while quietly knowing that this was not what they expected to happen.

4.5.12 Therefore, the Council concludes that the applicant until now must have genuinely expected traffic conditions at Dartford Crossing to be better following the delivery of LTC than they now accept.

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## 4.6 No Change for Local Users

- 4.6.1 In examining the performance of the Dartford Crossing, the impact on local residents is a very important consideration for the Council. Impacts need to be considered from the point of view of a local resident, i.e. a comparison with the base year (i.e. existing conditions) and not in comparison to a hypothetical counter-factual (i.e. a Do Minimum).
- 4.6.2 Local residents are likely to consider the following:
- Traffic flows do not reduce: analysis provided by the Council at D4 (Table 2.1 and Table 2.2 of [REP3-211](#)) shows that traffic flows do not reduce at Dartford Crossing in many time periods and in fact they increase.
  - Journey times do not improve: analysis provided by the Council at D4 ([REP3-208](#)) has shown that journey times across Dartford Crossing are forecast to improve by a maximum of one minute in each direction compared to the base year and this is a very small change.
  - Crossings serve different travel markets: the journey patterns of local, regional and national users of the Dartford Crossing and LTC show that the two crossings would service very different travel markets, i.e. LTC is not a direct alternative route for current Thurrock-based users of the Dartford Crossing. This was shown in Figure 7.4 of Thurrock's LIR ([REP1-281](#)) which is repeated below for convenience.



## 4.7 What are the Alternatives?

- 4.7.1 The history of Dartford Crossing shows that all previous increases in traffic capacity have led to associated increases in traffic demand. The applicant's response to ExQ(1) Q4.1.1 shows that the applicant now expects exactly the same thing to happen following the construction of LTC and that Dartford Crossing will still be congested by 2037 (and possibly earlier).
- 4.7.2 There is a need to improve cross-river connections to support economic growth as highlighted by the applicant in the 'Need for the Project' ([APP-494](#)). The Council agrees with this analysis. There are different ways to provide a significant proportion of this improved connectivity at a significantly reduced cost and with significantly reduced negative impacts. These have been described in previous submissions (e.g. Local Impact Report Appendix B Transport Alternatives [REP1-283](#)) and are summarised below:
- Improve public transport connections across the River Thames by providing improved bus priority measures and levels of bus service provision;
  - Implement new cross-river high-quality public transport service in the form of a tram or bus rapid transit service;

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- c. Review and update arrangements for northbound Dangerous Goods Vehicles which currently reduce capacity by 8-12% (paragraph 4.2.14 Need for the Project ([APP-494](#))) and which have, however, not taken any account of the substantial reduction in the need for petrol-carrying lorries (a main class of dangerous goods vehicles) as the proportion of electric vehicles increases over the appraisal period; and,
  - d. Use tolls to manage demand.
- 4.7.3 In considering these alternative options, the scale and cost of LTC needs to be considered. LTC's cost of £8-£9bn means that even 10% of this (£800-900m) would be a nationally significant investment in public transport. In practice, schemes cost much less and Fastrack, which operates in North Kent has been delivered for 1-1.5% of the current LTC cost.
- 4.7.4 The applicant consistently argues that no other alternative scheme could provide the level of relief which LTC delivers at Dartford Crossing (see our comments on this in paragraph 8.6.11 of Thurrock's Local Impact Report [REP1-281](#)). This argument depends on accepting traffic forecasts which are themselves predicated on the absence of such alternatives.
- 4.7.5 But as shown by the applicant's own analysis and response to ExQ(1) Q4.1.1 no relief at Dartford Crossing is expected by 2037. This means that other options which less expensively change the traffic forecasts by managing demand at Dartford Crossing should have been properly studied and their contribution to better, cheaper alternatives for a proportion of cross-river travel will themselves transform the appraisal of the costs and benefits of LTC as designed. This effect has never been seriously examined. The ExA responsibility, as stated in NPSNN, is to establish that such an appraisal has been carried out.

## 4.8 Summary

- 4.8.1 **The applicant's response to ExQ(1) Q4.1.1 on Modelled Traffic: Dartford Crossing is of fundamental importance to the Council. The applicant's response confirms that they do not expect LTC to provide north-south free-flowing capacity at Dartford Crossing from 20237 in most modelled periods. This means that the key benefits of LTC in delivering congestion improvements at Dartford Crossing as articulated by the applicant in the 'Need for the Project' ([APP-494](#)) and key conclusions in 'Traffic Forecasts Non-Technical Summary' ([APP-528](#)) are not achieved.**
- 4.8.2 **In practice, the lack of benefit for the Dartford Crossing should have been expected given the applicant's own analysis of the previous impact of providing additional traffic capacity at Dartford Crossing, i.e. additional traffic capacity has led to additional demand. The applicant's traffic models show that for residents of Thurrock, as for residents elsewhere, LTC would not reduce traffic flows or journey times across Dartford Crossing. LTC is also not an alternative to Dartford Crossing for many Thurrock residents because of the limited access to LTC (only possible via the congested A13/A1089/Orsett Cock junction). Several other alternative options exist to improve cross-river travel at a fraction of the cost of LTC.**
- 4.8.3 **The LTC scheme is forecast to cost £8 - £9bn and is predicated on providing congestion relief at Dartford Crossing. The applicant's analysis shows that despite this huge investment and the significant impacts on the residents of Thurrock (from six years of construction, removal of 10% of land, 11% of Green Belt and many other negative impacts), LTC does not provide the key benefits stated by the applicant, which underpin the rationale for the scheme. The Council would not find acceptable a suggestion by the applicant that they always knew this to be the case and that it is only careless reading of their objectives and claims which has led to misunderstanding.**

## **Appendix A    Joint Position Statement – Orsett Cock (Applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG))**

# Lower Thames Crossing

Thurrock Council Submission at Deadline 5

**Appendix A: Joint Position Statement – Orsett Cock (Applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG))**

Thurrock Council

 [thurrock.gov.uk](https://www.thurrock.gov.uk)



Thurrock Council Submission at Deadline 5 – Appendix A: Joint Position Statement – Orsett Cock (Applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG))  
Lower Thames Crossing

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## Document Control Sheet

**Project Name:** Lower Thames Crossing

**Report Title:** Thurrock Council Submission at Deadline 5 (D5) – Appendix A: Joint Position Statement – Orsett Cock (Applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG))

**Doc Ref:** FINAL

**Date:** 03 October 2023

	Name	Position	Signature	Date
<b>Prepared by:</b>	Various			3 October 2023
<b>Reviewed by:</b>	David Bowers / Chris Stratford	Director / Senior Consultant	DB / CS	3 October 2023
<b>Approved by:</b>	Tracey Coleman	Chief Planning Officer, Thurrock Council	TC	3 October 2023

Thurrock Council

## **Contents**


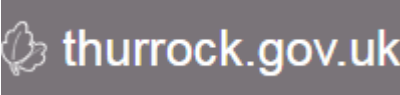
### **9.113 Joint Position Statement: Orsett Cock Junction**

Thurrock Council Submission at Deadline 5 – Appendix A: Joint Position Statement – Orsett Cock  
(Applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited (PoTLL) and DP  
World London Gateway (DPWLG))

Lower Thames Crossing

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<b>Port of Tilbury London Limited</b>	<b>DP World London Gateway</b>
<b>Essex County Council</b>	

## 9.113 Joint Position statement: Orsett Cock junction

### 1 Introduction

- 1.1 At Issue Specific Hearing 7 on 11 September 2023 the Examining Authority directed the Applicant and relevant local authorities to:
- 1.2 *“Undertake a workshop and then present a joint paper in respect of the traffic modelling for this junction. The focus should be on narrowing areas of disagreement specifically to reconcile identified differences between the LTAM and VISSIM modelling while recognising that there will always be a degree divergence between different models. Local Highway Authorities should not insist on an unreasonable degree of convergence which goes beyond that normally achieved in respect of other large road schemes.”* [Action Point 6 – [EV046e](#)]
- 1.3 The Applicant, Thurrock Council and Essex County Council met on 25 September 2023. Due to the relevance of the discussion to the Port of Tilbury London Limited (PoTLL) and DP World London Gateway (DPWLG), both of those parties were also invited and attended the meeting.
- 1.4 This meeting was considered by all parties to be a follow on to a previous meeting, held on 16 August 2023, with the exception of PoTLL to discuss the status of local traffic models being undertaken by National Highways. PoTLL were not a party to the 16 August 2023 meeting.

### 2 Review of current position

- 2.1 A review was undertaken of the actions set out by Thurrock Council , Essex County Council, and DPWLG arising from the meeting on 16 August. These actions were presented by Thurrock Council in Table 10.2 of their Deadline 4 submission titled Thurrock Council Comments on Applicant’s Submissions at Deadline 3 (D3) [[REP4-354](#)]. Only the actions relating to Orsett Cock were discussed, revised where appropriate, and a series of defined actions that focus on the Orsett Cock junction and the delivery of the agreed model outputs are set out at Annex A of this document.

### 3 Agreed forward modelling plan

- 3.1 A plan for further modelling of the A122 / A13 / A1089 junction including the Orsett Cock junction was agreed, which National Highways will proceed with on a 'without prejudice' basis as set out below in Table 5. This plan includes:
- (a) Seeking agreement on the changes requested to the Applicant's Orsett Cock junction forecast VISSIM model implementation plan (version 2 submitted at D1), including addressing latent demand within the model
  - (b) Updating the Applicant's Orsett Cock junction forecast VISSIM model for submission to the Examination as V3 of the model
  - (c) Taking findings from the Applicant's Orsett Cock junction forecast VISSIM model and including them into the LTAM model; and
  - (d) Sensitivity testing to address reassignment of traffic through Orsett village.

#### Refinement of the Applicant's Orsett Cock junction VISSIM model

- 3.2 The Applicant has considered the comments provided by Thurrock Council at Deadline 3 along with reviewing the VISSIM forecast model provided by Thurrock Council [\[REP3-207\]](#) and set out its position on whether the Applicant considers it appropriate for inclusion in an update of the Applicant's Orsett Cock junction forecast VISSIM model (Version 3). This position is provided as Annex A.
- 3.3 The Applicant proposes to prepare the VISSIM model (Version 3) based on the position set out in Annex B, and to issue this model, including an update to the outputs provided as Tables 4.5, 4.6, 4.7 and 4.8 in Localised Traffic Modelling [\[REP3-126\]](#) as well as network statistics on latent demand and delay.
- 3.4 The position of the Interested Parties on the Applicant's Orsett Cock junction VISSIM model (Version 3) are set out in Table 1.

**Table 1 – All Party positions on the Applicant's Orsett Cock junction VISSIM forecast model**

Interested Party	Position	Commentary
Thurrock Council	Matter not agreed	The Council reviewed the Orsett Cock forecast VISSIM model (V1) and provided their model audit at D3 <a href="#">[REP3-207]</a> along with an updated VISSIM model that addressed the Council's model audit. The applicant has chosen not to

		<p>adopt the updated VISSIM model provided to them by the Council and instead is proposing to address some but not all of the comments provided by the Council and issue a Version 3 of the forecast model by 6 October.</p> <p>The Council has reviewed the comments provided by the applicant in Annex B and provided a response to the comments with a Red/Amber/Green status.</p> <p>The response provided by the applicant is accepted (green) for all issues except three, one of which is amber and the other two are red.</p> <p>With regards to the amber issue, clarification is required with regards to the use of VISVAP.</p> <p>The two red issues are critical and need to be addressed by the applicant:</p> <ul style="list-style-type: none"> <li>- One of the 'red' issues is in relation to driver behaviour modelled by the applicant in the forecast VISSIM model in order to increase the throughput of the roundabout. The modelled driver behaviour should only be used where traffic is temporarily expected to accept reduced safety standards, which is not appropriate for Orsett Cock.</li> </ul> <p>The other 'red' issue is in relation to the extended weave length in the model not being replicated in the general arrangement drawings</p> <ul style="list-style-type: none"> <li>- – the general arrangement drawings need to be updated to align with the forecast model and submitted to the Examination. It should not be left to be resolved at detailed design.</li> </ul>
Essex County Council	Matter not agreed	<p>ECC has no comments to make but reiterates its position that ECC notes the discussions that took place at Issue Specific Hearings and agrees with the submissions from Thurrock and both Ports that the junction must perform adequately. ECC has no comments on the current modelling because the cordons provided to us by the LTC modelling team do</p>

		not allow us to adequately investigate that junction, but we note the concerns raised by others. The junction is also not part of the Greater Essex network, Thurrock is the Highway Authority. We agree that this vital junction must perform adequately from day 1 of the Lower Thames Crossing operation and be capable of dealing with revised and increased traffic movements. Until there is consensus around this matter, we remain concerned.
Port of Tilbury London Limited	N/A	PoTLL has not to date provided comments on the VISSIM modelling inputs and does not intend to add to those of Thurrock Council.
DP World London Gateway	Matter not agreed	The Orsett Cock junction is complex in layout and operational terms and the detailed representation that is provided within VISSIM is far greater than can be achieved through a strategic model alone. The applicant's current VISSIM model clearly conflicts in terms of outputs with LTAM and includes significant latent demand, i.e., demand from the LTAM model which cannot enter the VISSIM model due to blocking back within the model. This must be addressed before the results, in particular delay, can be interpreted.
Applicant		<p>The Applicant maintains that the LTAM model is appropriate for the consideration of the benefits and impacts of the project. Nevertheless, the Applicant has agreed to make modifications to the VISSIM model to support the considerations of this matter through the Examination.</p> <p>The Applicant considers that the proposed position set out in Annex B to make modifications for VISSIM forecast model version 3 is appropriate and suitable.</p> <p>On the specific issue relating to the use of merging link behaviour, the Applicant does not accept the characterisation of either the description of the setting as reflecting a reduced safety standard, nor to the proposed limitation on usage of this setting, to where traffic is temporarily expected to accept reduced safety standards. The Applicant considers that the use of the urban (merge) setting is a function of the nature and location of the road network, and that use this behaviour is appropriate in this case.</p>

## **Incorporating the findings of the Applicant’s Orsett Cock junction VISSIM model into a run of the Lower Thames Area Model (LTAM)**

3.5 The Applicant has proposed to undertake a run of the LTAM incorporating the findings of the Orsett Cock junction VISSIM model as follows:

- (a) National Highways to provide a comparison of turning traffic movements at Orsett Cock within the base VISSIM and LTAM models to demonstrate the traffic flows, and set out the basis for the difference
- (b) Change the signal timings in an LTAM run to the optimised signal timings developed in the Orsett Cock junction VISSIM model (version 3)
- (c) Calculate the delay difference between the LTAM run (with optimised signal timings) and the Orsett Cock junction VISSIM model (version 3) for each arm at the Orsett Cock junction
- (d) Insert the delay difference as a fixed time penalty in a further LTAM run
- (e) Report on the changes in flows, link times, delays, and V/C on the local and strategic road network for the fully modelled area of LTAM. A table of key journey times will be provided, setting out all the journey times to and from London Gateway Port and Port of Tilbury that were included in the updates to the Transport Assessment Appendices B and C provided at Deadline 4.

3.6 Subject to the successful agreement of the Orsett Cock junction VISSIM model (version 3), or a decision to proceed without agreement by 29 September 2023, these actions would be completed by 20 October 2023.

3.7 The positions of the Interested Parties on the Applicant’s proposed approach to reflecting the Orsett Cock junction VISSIM model findings in an LTAM run are set out in Table 2.

**Table 2 – Party positions on the Applicant’s proposed approach to reflecting the Orsett Cock junction VISSIM model findings in an LTAM run**

<b>Interested Party</b>	<b>Position</b>	<b>Commentary</b>
Thurrock Council	Matter not agreed	Thurrock Council set out it’s detailed response on model iteration within their Post-event submissions, including written submission of oral comments made at the hearings held w/c 4 and 11 Sept 2023 [ <a href="#">REP4-352</a> ] (Appendix A of



	<p>ISH4 written submission). This summarised the industry best practice for model iteration to ensure a reasonable level of consistency across different modelling software platforms. Currently LTAM is significantly underestimating delays forecast within the VISSIM modelling of Orsett Cock.</p> <p>It should be noted that this is not just an Orsett Cock specific issue and LTAM should have a reasonable level of alignment with other VISSIM models being prepared by the applicant for key junctions within Thurrock. Orsett Cock has been identified, as the VISSIM modelling is the most progressed for this junction.</p> <p>There is not sufficient time within the Examination for the applicant to undertake the industry best practice approach to model iteration. Therefore, it was agreed at the Joint Workshop for the applicant to undertake the steps set out in paragraph 3.5. Whilst it is not industry best practice, the Council considers that the proposed steps provide a simplistic way of reflecting the delays forecast in VISSIM at Orsett Cock within LTAM in the short timescales available.</p> <p>It is unfortunate that the Council is in the position of needing to accept sub-standard modelling practices as a result of the applicant's lack of adherence to best practice during the model development phase pre-DCO submission.</p> <p>The same process as set out in paragraph 3.5 should also be undertaken for the other junctions being assessed by the applicant (i.e. The Manorway, A13 westbound on-slip at Five Bills, Daneholes, Marshfoot and Asda roundabout).</p> <p>The updated LTAM modelling will result in reassignment of traffic away from congested junctions in Thurrock and put additional pressure on other junctions that are operating close to or at capacity. The Transport</p>
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		Assessment [ <a href="#">REP4-148</a> ], Combined Modelling and Appraisal Report [ <a href="#">APP-518</a> ] and Benefit-Cost Ratio (BCR) will need to be updated to reflect the revised LTAM modelling. Without this, the modelling steps set out in paragraph 3.5 are meaningless.
Essex County Council	Matter not agreed	ECC has no comments to make but reiterates its position that ECC notes the discussions that took place at Issue Specific Hearings and agrees with the submissions from Thurrock and both Ports that the junction must perform adequately. ECC has no comments on the current modelling because the cordons provided to us by the LTC modelling team do not allow us to adequately investigate that junction, but we note the concerns raised by others. The junction is also not part of the Greater Essex network, Thurrock is the Highway Authority. We agree that this vital junction must perform adequately from day 1 of the Lower Thames Crossing operation and be capable of dealing with revised and increased traffic movements. Until there is consensus around this matter, we remain concerned.
Port of Tilbury London Limited	Matter agreed	The above tasks are not extensive and should be completed by the applicant in a shorter timeframe.
DP World London Gateway	Matter not agreed	The alignment of the models is essential to understand the operation of the A13 corridor and Port access. The performance of the Orsett Cock network reported with the detailed VISSIM model should be appropriately reflected in the LTAM model (or vice versa). This must include both the gyratory and the Rectory Road junction given that the route through Orsett village appears to be under-constrained relative to the VISSIM.  The applicant has suggested that there is a risk that the LTAM model will be over-constrained as an iterative approach is required to reach convergence. This is within their gift to reframe the test (e.g., not apply the full delay, address through iteration or sensitivity test).
Applicant		The Applicant has set out its position on this exercise in the response to Appendix A of Thurrock Council's submission [ <a href="#">REP4-352</a> ]

		<p>which is provided in <b>9.115 Applicant's Responses to IP's post-event submissions at Deadline 4.</b></p> <p>With specific regard to the transfer of signal timings from VISSIM to LTAM, the Applicant does not agree that this is appropriate, for reasons set out in the referenced submission. Without prejudice to this position, the Applicant has agreed to implement this into this run, to reduce the areas of disagreement.</p>
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### Sensitivity testing on Orsett Cock VISSIM model

- 3.8 Thurrock Council have advised that they have concerns relating to the use of Rectory Road by traffic seeking to avoid the Orsett Cock junction. This concern relates to historic work (the A13 widening) and future traffic flows with and without the project. As a consequence, Thurrock Council are considering potential future interventions in Orsett village. Thurrock Council have therefore requested two sensitivity analyses be undertaken using the Applicant's Orsett Cock junction VISSIM model to reflect two different scenarios:
- (a) Test 1 – reflect a scenario where a traffic restriction is placed in Orsett village to prevent traffic other than local traffic from using Rectory Road
  - (b) Test 2 – reflect a scenario where a traffic restriction is placed in Orsett village to prevent traffic other than public transport and active travel from using Rectory Road
- 3.9 The Applicant has agreed to prepare models to test the two scenarios, with the proposed implementation being as follows:
- (a) Test 1 – as a proxy for a traffic limitation, the Applicant will restrict traffic using Rectory Road to the level reported in the 2016 baseline. Any additional demand for that road will be re-routed to use the A128 southbound onto the Orsett Cock junction, or the A1013 eastbound onto the Orsett Cock junction.
  - (b) Test 2 – the Applicant will prevent traffic using Rectory Road, re-routing all demand for that road to use the A128 southbound onto the Orsett Cock junction, or the A1013 eastbound onto the Orsett Cock junction.
- 3.10 The Applicant will prepare these models following the issue of the Orsett Cock junction VISSIM model (version 3). Subject to the successful agreement of the Orsett Cock junction VISSIM model (version 3), or a decision to proceed without

agreement by 29 September 2023, these works would be completed by 20 October 2023.

3.11 The positions of the Interested Parties on the Applicant’s proposed approach to undertaking further sensitivity testing using the Orsett Cock junction VISSIM model are set out in Table 3.

**Table 3 – Party positions on the Applicant’s proposed approach to sensitivity testing on Orsett Cock VISSIM model**

Interested Party	Position	Commentary
Thurrock Council	Matter not agreed	<p>The commentary provided by the applicant at paragraph 3.8 is misleading. In discussions with the applicant, the Council has shared its recent experience of traffic re-routing through Orsett village during the A13 improvement works, which required extensive traffic management at Orsett Cock. This information was shared with the applicant purely to demonstrate the sensitivities of this part of Thurrock’s network, but it is not the justification for the sensitivity tests as purported by NH.</p> <p>The Council continues to be concerned that the forecast delays at Orsett Cock will result in traffic reassigning through Orsett village. The sensitivity tests effectively seek to reassign traffic back onto appropriate routes (i.e. from Rectory Road to A128 southbound) to determine the impact at Orsett Cock without additional reassignment of traffic.</p> <p>The scope of the sensitivity tests is agreed by the Council. However, the Council has consistently raised the need for interventions to be provided by the applicant to mitigate the effect of traffic reassigning through Orsett village as a result of increased queuing and delay at Orsett Cock caused by LTC. It is considered that mitigation needs to be in the form of mitigation at Orsett Cock to reduce the forecast level of queuing and delay as well as measures in Orsett village and on Rectory Road to reduce the level of reassigned traffic. The sensitivity tests are not an end in themselves, they need to be used to inform appropriate</p>

		mitigation measures for Orsett Cock and Orsett village.
Essex County Council	Matter not agreed	ECC has no comments to make but reiterates its position that ECC notes the discussions that took place at Issue Specific Hearings and agrees with the submissions from Thurrock and both Ports that the junction must perform adequately. ECC has no comments on the current modelling because the cordons provided to us by the LTC modelling team do not allow us to adequately investigate that junction, but we note the concerns raised by others. The junction is also not part of the Greater Essex network, Thurrock is the Highway Authority. We agree that this vital junction must perform adequately from day 1 of the Lower Thames Crossing operation and be capable of dealing with revised and increased traffic movements. Until there is consensus around this matter, we remain concerned.
Port of Tilbury London Limited	N/A	PoTLL has not, and does not, request the sensitivity testing. Therefore PoTLL has no position on the approach proposed.
DP World London Gateway	Matter agreed	<p>The assignment through Orsett should be critically assessed to ensure that it is either realistic, and each route can accommodate the assigned demand, or it is not and the model is over assigning onto unsuitable routes (which are under-constrained in the models)</p> <p>If the models are not under constrained and significant traffic will re-route from principal roads to minor roads then the modelling assessment must also reflect and consider a reasonable response from the local highway authorities on operational, safety and/or environmental grounds. This is necessary to understand the operation of the A13 corridor and Port access.</p>
Applicant		The Applicant has agreed to undertake this sensitivity test, without prejudice to its position, to reduce the areas of disagreement.

**4 Forward plan to discuss alignment of the LTAM and VISSIM v3 models, once the modelling work is completed**

4.1 The position of the Applicant and Interested Parties on any forward plan is set out in Table 4.

**Table 4 – Positions on any Forward Plan**

Party	Position
Thurrock Council	<p>The Council response to Q4.1.10 and Q4.1.13 in the Responses to ExQ1 submitted at D4 <a href="#">[REP4-353]</a> and Appendix A of ISH4 written submissions <a href="#">[REP4-352]</a> set out why the Council, as local highway authority, requires there to be an agreed forecast VISSIM model for Orsett Cock and a reasonable level of alignment between VISSIM and LTAM to enable impacts and mitigation to be understood and agreed during the Examination.</p> <p>This Joint Paper has set out the modelling steps required to reduce the level of <u>technical</u> disagreement between the applicant and the local highway authorities and the Ports. However, the proposed simplistic modelling steps set out in this Joint Paper to better align VISSIM and LTAM (paragraph 3.5) will result in changes to traffic impacts in Thurrock compared to those reported by the applicant within the Transport Assessment <a href="#">[REP4-148]</a>, Combined Modelling and Appraisal Report <a href="#">[APP-518]</a> and will require these assessments and the BCR to be updated to reflect the revised LTAM modelling. Without this, the modelling steps agreed within this Joint Paper are meaningless.</p> <p>Likewise, the purpose of agreeing the forecast VISSIM model for Orsett Cock and undertaking the sensitivity testing for Rectory Road is to understand the impacts at Orsett Cock and develop appropriate mitigation to cater for the forecast demand as well as mitigation for Orsett village. The mitigation at Orsett Cock needs to also include bus priority and safe crossing facilities for cyclists and pedestrians. Without this, the modelling steps for the VISSIM forecast model agreed within this Joint Paper are meaningless.</p> <p>The applicant's position that no further work is required beyond the modelling steps set out in this Joint Paper is not acceptable.</p>
Essex County Council	<p>ECC has no comments to make but reiterates its position that ECC notes the discussions that took place at Issue Specific Hearings and agrees with the submissions from Thurrock and both Ports that the junction must perform adequately. ECC has no comments on the current modelling because the cordons provided to us by the LTC modelling team do not allow us to adequately investigate that junction, but we note the concerns</p>

Party	Position
	raised by others. The junction is also not part of the Greater Essex network, Thurrock is the Highway Authority. We agree that this vital junction must perform adequately from day 1 of the Lower Thames Crossing operation and be capable of dealing with revised and increased traffic movements. Until there is consensus around this matter, we remain concerned.
Port of Tilbury London Limited	Forward plan should focus on identifying suitable mitigation measures and securing these in the DCO.
DP World London Gateway	Only once the modelling work has been carried out can appropriate measures to protect access to the Ports be assessed.
Applicant	The Applicant maintains that the LTAM run used to inform the application and set out in the Combined Modelling and Appraisal Report [APP-518] is an appropriate model to determine the impacts of the project and to inform the planning decision. The Applicant does not consider there to be a need to “reconcile identified differences between the LTAM and VISSIM modelling”. As the Applicant has set out in Annex A.5 of the Post-event submission for ISH4 [REP4-180], the two different models are developed for different purposes, and the degree of alignment between the models is normal.

## 5 Parties position on Action Point

5.1 The position of the Applicant and Interested Parties on this Action point are set out in out in Table 5.


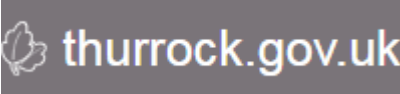
**Table 5 – Positions on the Action Point**

Party	Position
Thurrock Council	<p>The Council set out it’s detailed response on model iteration within their Post-event submissions, including written submission of oral comments made at the hearings held w/c 4 and 11 Sept 2023 [REP4-352] (Appendix A of ISH4 written submission). This summarised the industry best practice for model iteration to ensure a reasonable level of consistency across different modelling software platforms. The industry best practice for model iteration set out by Thurrock Council is a matter that specialist transport consultants representing Thurrock Council, Essex County Council, and the two national ports (PoTLL and DPWLG) are all in agreement on.</p> <p>The same process as set out in paragraph 3.5 should also be undertaken for the other junctions being assessed by the applicant (i.e. The Manorway, A13 westbound on-slip at Five Bills, Daneholes, Marshfoot and Asda roundabout).</p>

Party	Position
	<p>The local highway authorities and ports are also in agreement that the lack of alignment between the Orsett Cock forecast VISSIM models (and potentially the other VISSIM models) and LTAM needs to be addressed and, following this, that the Transport Assessment [<a href="#">REP4-148</a>], Combined Modelling and Appraisal Report [<a href="#">APP-518</a>] and BCR will need to be updated to reflect the revised LTAM modelling.</p> <p>This Joint Paper sets out the modelling steps required to finalise the VISSIM forecast model for the junction by 20 October. There are two 'red' critical items that have not been addressed by the applicant that are required for the forecast VISSIM model to be agreed.</p> <p>The agreed forecast VISSIM model should then be used to inform mitigation proposals for Orsett Cock and Orsett village to be secured within the DCO.</p>
Essex County Council	<p>ECC has no comments to make but reiterates its position that ECC notes the discussions that took place at Issue Specific Hearings and agrees with the submissions from Thurrock and both Ports that the junction must perform adequately. ECC has no comments on the current modelling because the cordons provided to us by the LTC modelling team do not allow us to adequately investigate that junction, but we note the concerns raised by others. The junction is also not part of the Greater Essex network, Thurrock is the Highway Authority. We agree that this vital junction must perform adequately from day 1 of the Lower Thames Crossing operation and be capable of dealing with revised and increased traffic movements. Until there is consensus around this matter, we remain concerned.</p>
Port of Tilbury London Limited	<p>The completion of the above modelling (3.2 to 3.7) will provide adequate alignment of the differing modelling approaches and enable a more informed judgement in identifying suitable mitigation measures.</p>
DP World London Gateway	<p>Access to Ports is of strategic importance for commerce and it is reasonable to understand the operational implications of changes in the transport system. Here the detailed VISSIM model reports significantly more operational stress than the strategic LTAM model. Given the degree of variance it is appropriate to refine the strategic LTAM model. This will give confidence in the LTAM model as a whole.</p>
Applicant	<p>The approach to incorporating the findings of a VISSIM model into a strategic model such as Saturn is not in accordance with any guidance and does not constitute normal practice. This is set out in the Post-event submission for ISH4 [<a href="#">REP4-180</a>], both at</p>



Party	Position
	<p>agenda item 3(a)(i) and within Annex A.3. Application of this technique to a single junction will create an imbalance across the model, as the delays input at the Orsett Cock junction may disproportionately impact traffic using that junction. The process of preparing the Orsett Cock VISSIM model took account of different traffic counts, and aspects of driver behaviour. Similar aspects would not be included at other junctions along the A13, the A128, the A2 and wider network. As stated at ISH4, the process of preparing localised models for all junctions, and then reflecting the model delays back into LTAM, is not standard practice, and would extend the modelling period substantially beyond the requirements of the guidance and so would be disproportionate.</p> <p>Notwithstanding this, the Applicant recognises the concern set out by Interested Parties during Issue Specific Hearing 4, that flows across the road network may be sensitive to delays at the Orsett Cock junction. The Applicant has therefore agreed to undertake this modelling exercise on a without prejudice basis, and to provide this information to Interested Parties in order to support the conversation.</p>

	
Port of Tilbury London Limited	DP World London Gateway

### Annex A – Agreed Action list

Action ID	Related Thurrock Council	LHA /IP action description	Action owner	Planned timeline
<b>Developing an agreed VISSIM model of the A122 / A13 / A1089 junction, including Orsett Cock roundabout</b>				
1	2	Applicant to share version control for all modelling going forward and model log summarising changes that are made between versions.	NH	Completion by 29 September 2023
2	11	Thurrock Council to provide Applicant with comments on the VISSIM model shared in 2022.	TC	Completed at Deadline 3
3	12	Applicant to review and address Thurrock's comments documented in <a href="#">[REP3-207]</a> (Thurrock's review of changes made in Model Version 2 in comparison with Model Version 1), Appendix E, Annex 3 and provide explanation of changes made to the model	NH	Completion by 6 October 2023
4	12	Applicant to review Thurrock Council's comments on VISSIM model V1 and incorporate / provide a reason for not incorporating	NH	Completed on 26 September 2023
5	--	Thurrock Council to provide as-built drawings of the Orsett Cock junction and will provide as soon as they are available	TC	Completion by 29 September 2023
6	--	All parties to comment on Applicant's Joint Paper for Orsett Cock and confirm agreement / disagreement	All	Completion by 29 September 2023

Action ID	Related Thurrock Council	LHA /IP action description	Action owner	Planned timeline
7	5, 14	Applicant to prepare and issue VISSIM model version 3 (subject to agreement at action 5)	NH	Completion by 6 October 2023
<b>Incorporating VISSIM model findings into the LTAM</b>				
8	13, 17, 19	Applicant to incorporate signal timings and junction arm delays into the LTAM, and provide model outputs showing changes to flows, delays and V/C (Volume over Capacity) on the local road network and strategic road network for the entire LTAM area	NH	Completion by 20 October 2023
<b>Further sensitivity analysis of the A122 / A13 / A1089 junction, including the Orsett Cock junction</b>				
9	15a	Run a sensitivity test reallocating a proportion of Rectory Road traffic to A128 (i.e. limit to local traffic through Orsett) and understand implications on the Orsett Cock junction Test 1: Assume 2016 base traffic through Orsett village remains and all other traffic reallocated onto A128.	NH	Completion by 31 October 2023
10	15b	Run a sensitivity test reallocating a proportion of Rectory Road traffic to A128 (i.e. limit to local traffic through Orsett village) and understand implications on the Orsett Cock junction Test 2: Rectory Road closed to all traffic except public transport and active travel.	NH	Completion by 31 October 2023

## Annex B – Applicants and Interested Parties positions on Thurrock Council’s comments on the VISSIM forecast model version 1

### Applicant’s context

#### VISSIM Forecasting Model Versions

In the lead up to the DCO examination, two versions of the Orsett Cock forecasting model were issued by National Highways (NH) to Thurrock Council.

The VISSIM forecasting model versions that have been issued by NH to Thurrock Council are:

1. Version 1 (NH version no. 1.5) issued to Thurrock in September 2022
2. Version 2 (NH version no. 2.4) issued, to Thurrock in July 2023 (at Deadline 1)

Since version 1 was issued to the Council the main change in version 2 of the VISSIM forecasting model was the updating of the forecast traffic flows used in the model and taken from LTAM.

The LTAM forecast year model runs used as the basis for the VISSIM model matrices were:

- Version 1 used forecasted traffic flows from LTAM run ID CM45 for the Do Minimum scenario and LTAM run ID CS67 for the Do Something scenario; and
- Version 2 used forecasted traffic flows from LTAM run ID CM49 for the Do Minimum scenario and LTAM run ID CS72 for the Do Something scenario.

It should be noted that the LTAM forecast year matrices are not used directly in the VISSIM model but are used in the preparation of the future year matrices used in VISSIM, which are based on one day 2016 turning counts at the Orsett Cock junction.

**Version 2** also included these additional changes:

- a) Updated the edges to a total of 36 edges in the DM scenario and 37 in the DS scenario.
- b) Amended speeds with Desired Speed Decision (DSD) on two slip roads.
- c) Added a route closure to prevent vehicles using the A13 WB off slip – Orsett Cock – A13 EB on slip.

Version 2 of the model was used to produce the results presented in the Orsett Cock Forecasting Report and the Localised Modelling Report.

### Comments and responses

Thurrock Council provided comments on the microsimulation (VISSIM) forecast modelling of Orsett Cock Interchange within Annex 5, of Appendix E of the Thurrock Council Comments on Applicant’s Submissions at Deadline 1 and 2 [\[REP3-207\]](#)

The table in this Annex provides a summary of these comments, the Applicant’s position on these comments, and the response to that position from Thurrock Council, along with a RAG rating provided by Thurrock Council as characterised below.

It should be noted that the comments received from the Council relate to version 1 of the VISSIM.

Some of the comments made by the Council (on model version 1) had already been addressed by National Highways in version 2 of the VISSIM forecasting model.

## Thurrock Council’s Comments on National Highways’ Responses

The Council’s comments on version 1 of the VISSIM forecasting model together with NH’s responses, are shown in the table on the next page.

National Highways are currently producing version 3 of the VISSIM forecasting model which is based on version 2, with amendments to address some of the issues raised by Thurrock.

Thurrock Council has reviewed the comments provided by NH and their response is provided next to the National Highways’ comments in the table on the next page. Each comment provided by Thurrock Council has been assigned a Red/Amber/Green (RAG) status based on the criteria in the table below.

### Thurrock Council’s RAG Review Categorisation

RAG Category	Description
<b>Comments</b>	Findings noted as part of the model audit process that may require consideration and amendment however not deemed to have a material impact on the overall operation or outputs derived from the model.
<b>Recommendations /Additional Information required</b>	These observations constitute of suggested recommendations as part of the model audit process and request for supporting evidence made by the reviewer to provide assurance that best modelling practice has been adhered to and therefore the modelling outputs are reliable.
<b>Critical Issues</b>	Issues in the model that require corrective action as these are deemed to have an impact on the operation of the model and associated outputs.

The table on the next page is focused on addressing National Highways’ comments on Thurrock’s review of Orsett Cock VISSIM model version 1.5 (Version 1). For the model to be acceptable, the Council also requests that National Highways addresses Thurrock’s comments documented in [\[REP4-352\]](#) (Post-event submissions, including written submission of oral comments made at the hearings held w/c 4 and 11 Sept 2023). This has specifically requested changes to the model to address discrepancies between LTC design and the microsimulation model in the Do Something

model, e.g. extended weave length. This issue was discussed at the Joint Workshop held on 25 September and has been included in the table below to set out the positions on this matter.

### Summary of Thurrock Council's comments with the positions of the Applicant and Thurrock Council

Thurrock Council's comments on **version 1** of the VISSIM forecasting model together with NH's responses and Thurrock Council's position, are shown in the table below.

The Applicant is currently producing **version 3** of the VISSIM forecasting model which is based on version 2, with amendments to address some of the issues raised by Thurrock.

No	Scenario	Thurrock proposed change to VISSIM version 1 model	Thurrock more detailed description of proposed change	National Highways response	Thurrock Council Response													
1	DM, DS	Orsett Cock edge closures	Version 1 contains too many edges. This can be reduced to 36 in DM and 37 in DS	Already included in NH version 2., and will be included in version 3	National Highways' resolution is accepted.	Green												
2	DM, DS	A1013 EB approach	Reduce flare length to more accurately reflect available road space	<p>We coded the flares following TfL's standard practice to extend the link of the flare as necessary to allow diverging at the correct location on the link, as vehicles do not change lane immediately when they enter a link representing a flare. These changes are small and not all of the flares reduce in length:</p> <table border="1"> <thead> <tr> <th>Location</th> <th>v1 &amp; 2</th> <th>Thurrock's Comments</th> </tr> </thead> <tbody> <tr> <td>A1013 W</td> <td>40.03m</td> <td>38.81m</td> </tr> <tr> <td>A1013 E</td> <td>59.31m</td> <td>58.63m</td> </tr> <tr> <td>A128 S Brentwood Rd</td> <td>53.04m</td> <td>53.63m</td> </tr> </tbody> </table> <p>Additionally, the model was originally built while the Orsett Cock junction was under construction. Now the works are complete the flare lengths can be adjusted if required to match the junction as built, if we are provided with an 'as-built' drawing., but these are small as shown above. Otherwise, version 3 will retain the same dimensions as versions 1 &amp; 2</p>	Location	v1 & 2	Thurrock's Comments	A1013 W	40.03m	38.81m	A1013 E	59.31m	58.63m	A128 S Brentwood Rd	53.04m	53.63m	<p>National Highways' resolution accepted.</p> <p>It should be noted that NH has already been provided with the 'for construction' drawings of the Orsett Cock improvement scheme that was recently implemented.</p> <p>Thurrock Council has requested the 'as built' drawings', which will be provided when available.</p>	Green
Location	v1 & 2	Thurrock's Comments																
A1013 W	40.03m	38.81m																
A1013 E	59.31m	58.63m																
A128 S Brentwood Rd	53.04m	53.63m																



No	Scenario	Thurrock proposed change to VISSIM version 1 model	Thurrock more detailed description of proposed change	National Highways response	Thurrock Council Response	
3	DM	Lane use in circulatory carriageway	Lane allocation should be changed to match the as-built lane allocation between the A13 EB off-slip and Brentwood Road now the roundabout has been built.	At the time of model development, no as-built drawings were available. We agree to change this lane allocation in version 3 with southbound traffic to Brentwood Rd (S) using the left (nearside) lane, if we are provided with an 'as-built' drawing.	NH has already been provided with the 'for construction' drawings. The as-built lane allocation for the southbound circulatory can also clearly be seen on aerial mapping. The Council has re-provided the 'for construction' drawings and has requested the 'as built' drawings', which will be provided when available.  The Council accepts NH proposed resolution of this issue.	Green
4	DM, DS	Change link behaviour	Change link behaviour from urban(merge) to urban(motorised)	The Urban (merge) behaviour was applied to allow smoother and more co-operative lane change behaviour between vehicles on the circulatory, and to avoid vehicles waiting for unrealistically long times to change lane.  NH do not agree to changing the link behaviour.	Changing link behaviour to 'merging' is not accepted to be good practice in the circulatory, and it should only be used where traffic is temporarily expected to accept reduced safety standards, e.g. when joining the motorway from a slip road. This is a temporary behaviour and should not be used as a standard way of practice to increase the throughput of the roundabout. 'Advanced merging' or 'Cooperative lane change' could be considered, which are parameters on the Lane Change tab of the driving behaviour.  Proposed resolution not accepted.	Red
5	DS	Change merge locations	Change merge locations between new LTC network and the A13	This is a difference in VISSIM coding style. The coding currently allows a merging behaviour for vehicles to merge in turn which is judged to be representative of driver behaviour in this area. NH do not agree with this change.	Thurrock Council considers that the applied VISSIM coding may underestimate throughput at the merges and may highlight issues with the model which would not happen when built.  Despite differences from the recommended approach, National Highways resolution is accepted.	Green

No	Scenario	Thurrock proposed change to VISSIM version 1 model	Thurrock more detailed description of proposed change	National Highways response	Thurrock Council Response	
6	DS	Change diverge locations	Change entry diverge locations within the model	The slight difference in diverge locations is due to the coding style referred to above. NH do not agree with this change.	Thurrock Council considers that the applied VISSIM coding may underestimate cooperation and throughput at the diverges and may highlight issues with the model which would not happen when built.  Despite differences from the recommended approach, National Highways resolution is accepted.	Green
7	DS	Change reduced speed areas on slip roads	Change reduced speed areas on slip roads	The speeds on two slip roads were amended in version 2 of the model – the speed from LTC S (NB) to A13 EB (Orsett Cock) was changed from 40mph to 30mph and the speed from A1089 to LTC S from 70mph to 50mph, with Desired Speed Decision (DSD).  NH do not agree with Thurrock that the slip road from the A1089 to LTC (S) should be 30mph as the advisory speed limit is 50mph.	National Highways' resolution is accepted.	Green
8	DS	Change signals timings	Change signal timings to VISVAP (vehicle activated) signal control which is dependent on traffic demand	NH do not agree with this. Fixed signal timings maintain signal coordination of the stop lines on the circulatory.	National Highways' comment on the application of signal timings contradicts the practice followed by National Highways on the released Version 2 models. While the 2030 DM and DS models are using fixed time, the 2045 DM and DS models use VISVAP. National Highways is required to explain this approach.	Amber
9	DS	Link resolution and accuracy	Change links to match as built design across whole model	These are very minor discrepancies which would have no impact on the performance of the junction in the model. NH can change in version 3 of the model if necessary following receipt of the as-built drawings.	National Highways' response is accepted.	Green

No	Scenario	Thurrock proposed change to VISSIM version 1 model	Thurrock more detailed description of proposed change	National Highways response	Thurrock Council Response	
10	DS	Extend length of A13 approach link	Extend A13 EB approach by 700 metres	<p>Agreed – this addresses the latent demand issue as the entire length of any queue would appear in the model.</p> <p>The entry links at Rectory Road and the A128 N approach will also be extended for the same reason in version 3.</p>	National Highways' resolution is accepted. In order to determine if the latent demand issue has been sufficiently resolved by V3 of the forecast model, the applicant is required to include latent demand and delay results within the model outputs submitted to the Examination.	Green
11	DS	Change A13 WB – LTC NB merge coding	Change merge coding	This is a difference in VISSIM coding style. The coding currently allows a merging behaviour for vehicles to merge in turn which is judged to be representative of driver behaviour in this area. NH do not agree with this change.	<p>Thurrock Council considers that the applied VISSIM coding may underestimate cooperation and throughput at this merge and may highlight issue with the model which would not happen when built.</p> <p>Despite differences from the recommended approach, National Highways resolution is accepted.</p>	Green
12	DM, DS	Change length of reduced speed areas (RSA)	Reduce RSA lengths to avoid them running through connector start or end points	This occurs at the A128 N, A1013 E and A128 S entries to the roundabout, with minor impacts. Agree to update RSA lengths in version 3.	National Highways' resolution is accepted.	Green
13	DS	Add diverge to node 119	Node 119 did not include a diverge point	Agree to add diverge to node 119 in version 3.	National Highways' resolution is accepted.	Green
14	DS	Add nodes to diverge points	Not strictly required but add nodes to 9 diverge points	Agree to add nodes to 9 diverge points in version 3	National Highways' resolution is accepted.	Green
15	DS	Add route closure to prevent vehicles using	Prevents vehicles using A13 WB off slip – Orsett Cock – A13 EB on slip	Already included in NH version 2 and will be included in version 3	National Highways' resolution is accepted.	Green

No	Scenario	Thurrock proposed change to VISSIM version 1 model	Thurrock more detailed description of proposed change	National Highways response	Thurrock Council Response
		A13 WB off slip – Orsett Cock – A13 EB on slip			
	DS	Extended weave length for traffic coming off LTC and weaving with A13 EB off slip	As set out in Thurrock Council's LIR <a href="#">[REP1-281]</a> and reiterated at ISH3 <a href="#">[REP4-352]</a> there is a discrepancy between the VISSIM forecast model and weaving length on the eastbound approach to the Orsett Cock junction requires vehicles leaving LTC to merge with traffic on the A13 eastbound off-slip over just 90m. The forecast VISSIM model shows significant congestion at this location and in order to resolve this the applicant extended the weave length from 90m to circa 200m within the model, which is still not sufficient to accommodate the queuing. However, the design of the junction has not been updated to reflect the need for a much longer weave length.	The Applicant has set out its position on the detailed design process. In recognition of the concern expressed by Thurrock Council, the Applicant has set out a proposed Requirement in relation to the operation of Orsett Cock junction, which is discussed in <b>9.114 Wider Network Impacts Update</b> . The Applicant considers that the VISSIM model design is appropriate.	<p>The Council considers that the general arrangement drawings submitted with the DCO application need to be updated to reflect the extended weave length shown to be required by the VISSIM forecast modelling. The updated general arrangement drawings need to be submitted by the applicant as part of the Examination. The weave length would need to be extended by more than 100m, which is not insignificant and could have consequential effects on other aspects of the junction design. This issue should not be left to the detailed design stage to be resolved.</p> <p>The Council does not accept National Highways' position.</p>

Red

## **Appendix B    Joint Position Statement – Asda Roundabout (Thurrock Council and PoTLL)**

Appendix A: Review of NH 2018 Survey Data

Annex A: Asda Roundabout – All Surveys NH Comparison Summary

# Lower Thames Crossing

Thurrock Council Submission at Deadline 5

Appendix B: Joint Position Statement – Asda Roundabout (Thurrock Council  
and PoTLL)

Thurrock Council

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Thurrock Council Submission at Deadline 5 – Appendix B: Joint Position Statement – Asda Roundabout (Thurrock Council and PoTLL)  
Lower Thames Crossing

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## Document Control Sheet

**Project Name:** Lower Thames Crossing

**Report Title:** Thurrock Council Submission at Deadline 5 (D5) – Appendix B: Joint Position Statement – Asda Roundabout (Thurrock Council and PoTLL)

**Doc Ref:** FINAL

**Date:** 03 October 2023

	<b>Name</b>	<b>Position</b>	<b>Signature</b>	<b>Date</b>
<b>Prepared by:</b>	Various			3 October 2023
<b>Reviewed by:</b>	David Bowers / Chris Stratford	Director / Senior Consultant	DB / CS	3 October 2023
<b>Approved by:</b>	Tracey Coleman	Chief Planning Officer, Thurrock Council	TC	3 October 2023

Thurrock Council

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## Annexes

Appendix A: Review of NH 2018 Survey Data

Annex A: Asda Roundabout – All Surveys NH Comparison Summary



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## B.1 Thurrock Council and PoTLL Joint Position Statement on Asda Roundabout

B.1.1 This note provides a joint position statement of Thurrock Council and Port of Tilbury London Limited (PoTLL) with respect to Asda roundabout.

## B.2 Base VISSIM Model

B.2.1 At Deadline 3 National Highways provided the Council and Port of Tilbury with the ASDA roundabout base year microsimulation (VISSIM) model and associated Local Model Validation Report (LMVR) ([REP3-128](#)) for both the construction and operational periods.

B.2.2 The Council has undertaken a review of the base model, which was presented at Deadline 4 in Appendix A, Annex 2 of Thurrock Council Comments on Applicant's submissions at Deadline 3 ([REP4-354](#)). The review of the base VISSIM model has identified critical issues, which need to be addressed before comments can be provided on the forecast models and the results. The findings of Thurrock Council's Asda roundabout base VISSIM model review are supported by PoTLL. It is estimated that it would take the applicant no longer than 1-2 days to address all of the issues identified within the model review.

B.2.3 At Deadline 4, PoTLL raised concerns with the observed traffic flows modelled in the base VISSIM model of Asda roundabout as set out in the PoTLL 'Comments on Applicant's submissions at D3' ([REP4-349](#)). Within the submission at D4 PoTLL compared the traffic flows used by the applicant, collected on 17 May 2018, with data collected by PoTLL on 13 March 2018. PoTLL were concerned that the applicant may be underestimating the baseline traffic flow through the roundabout, resulting in reduced impacts in the future year modelling.

B.2.4 Since the D4 submission, PoTLL has undertaken a review of the wealth of traffic data collected by PoTLL during 2017 and 2018 (rather than the single day comparison presented at D4) and compared it against the traffic data collected on 17 May 2018 and used by the applicant for the development of the base VISSIM model. This comprehensive analysis is included as **Appendix A and its Annex A** of this Joint Paper and shows that:

- a. 17 May 2018 traffic count data used by the applicant does not represent a 'typical day' for traffic flow movements through the ASDA roundabout;
- b. The survey data collected by the applicant on the 17 May 2018 is shown to be the lowest total count data of all survey data collected by PoTLL during 2017 and 2018, during all three peak hours reviewed.
- c. Further it is understood that the ASDA roundabout base VISSIM model has used Automatic Number Plate Recognition (ANPR) traffic data collected in May 2018 as opposed to 17 May 2018 MCC traffic data. The ANPR traffic data being a further 10% lower than the 17 May 2018 data.
- d. For Tilbury2 DCO, National Highways required PoTLL to use the average of October 2017, November 2017 and March 2018 survey data, which is considerably higher than the flows used by National Highways for the Lower Thames Crossing assessment.
- e. The ASDA roundabout base VISSIM needs to be revalidated using more representative base year traffic data.

## B.3 Asda Roundabout Modelling Next Steps

B.3.1 Based on the review of the modelling provided to date, Thurrock Council and PoTLL have set out the following steps that are required to agree the modelling to enable impacts and need for mitigation to be determined and to then advance the concepts for the required mitigation prior to the close of the Examination.

**Table 3.1: Thurrock Council's and PoTLL considerations on an indicative programme for the remaining Asda Roundabout modelling and mitigation design tasks**

Step	Tasks	Timescale
1	<p>Agree Base Year Models</p> <p>NH to revalidate the base VISSIM model with more representative base traffic flows included in Appendix A of this note provided by PoTLL.</p> <p>NH to address the model audit comments submitted by Thurrock Council at D4 (<a href="#">REP4-354</a>).</p> <p>LMVR to be resubmitted based on revalidated base model and to include statistics on latent demand, which were not included in version 1 of the LMVR issued at D3 (<a href="#">REP3-128</a>).</p>	2 weeks
2	<p>Agree forecast VISSIM models – Core Scenario (2030 &amp; 2045) – construction and operational phases (2030 only for construction).</p> <p>NH to prepare and submit updated forecast models for 2030 and 2045 based on the revalidated and agreed base VISSIM model.</p> <p>NH to address comments provided by Thurrock Council (<a href="#">REP4-354</a>) and PoTLL (<a href="#">REP4-349</a>) on the forecast modelling for the construction and operational phases at D3.</p> <p>Construction worker travel to be correctly assigned through the Asda roundabout as set out in Thurrock Council's Comments on Applicant's submissions at D3 (<a href="#">REP4-354</a>).</p> <p>Thurrock Council and PoTLL to review updated forecast models.</p>	<p>2 weeks for NH to prepare updated forecast models.</p> <p>1 week for Thurrock Council and PoTLL to review models.</p>
3	<p>Align forecast LTAM and VISSIM at Asda Roundabout – Core Scenario (2030 &amp; 2045)</p> <p>NH to provide a comparison of VISSIM and LTAM output to determine if the models are sufficiently well aligned.</p> <p>There is not sufficient time within the examination for the industry best practice model iteration process to be undertaken by NH.</p> <p>It was proposed by NH at the Orsett Cock Joint Workshop to input delay penalties into LTAM to seek to model the queuing and delay forecast in VISSIM. Should there be a significant divergence between Asda roundabout forecast VISSIM model and LTAM, LTAM would need to be updated to</p>	<p>2 weeks</p> <p>(can be undertaken at risk in parallel with part of step 2 where Thurrock Council and PoTLL are reviewing forecast models).</p>

Thurrock Council Submission at Deadline 5 – Appendix B: Joint Position Statement – Asda Roundabout (Thurrock Council and PoTLL)  
Lower Thames Crossing

Step	Tasks	Timescale
	better reflect the VISSIM queuing and delay.	
4	Review impacts at Asda roundabout and develop mitigation concept requirements	1 week
5	Undertake mitigation scenario testing within the models	2 weeks
6	Incorporate mitigation into LTC design	2 weeks
7	<p>Capture mitigation in DCO and Authorised Works</p> <p>Capture mitigation in DCO and Authorised Works. Asda roundabout is currently not within the Order Limits and, based on the applicant's current forecast impacts, it is likely that third party land will be required to mitigation impacts.</p> <p>The DCO must secure that additional land is acquired and mitigation implemented by the applicant before the works (including any preliminary works) causing the impacts to the Asda Roundabout are commenced.</p>	1 week

**NOTE: A focused period of 10 - 12 weeks is anticipated to be required to complete the necessary outstanding modelling work on Asda Roundabout and establish mitigation designs that would be required and secure the required mitigation in the DCO, accepting that certain steps may be undertaken in parallel. This extends the completion period until towards the end of the Examination. Clearly, the applicant should confirm that this programme can be achieved within the Examination period, which can then be agreed between all parties.**

Thurrock Council Submission at Deadline 5 – Appendix B: Joint Position Statement – Asda  
Roundabout (Thurrock Council and PoTLL)  
Lower Thames Crossing

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## **Appendix A: Review of NH 2018 Survey Data**

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# Lower Thames Crossing: Review of ASDA Roundabout Traffic Survey Data

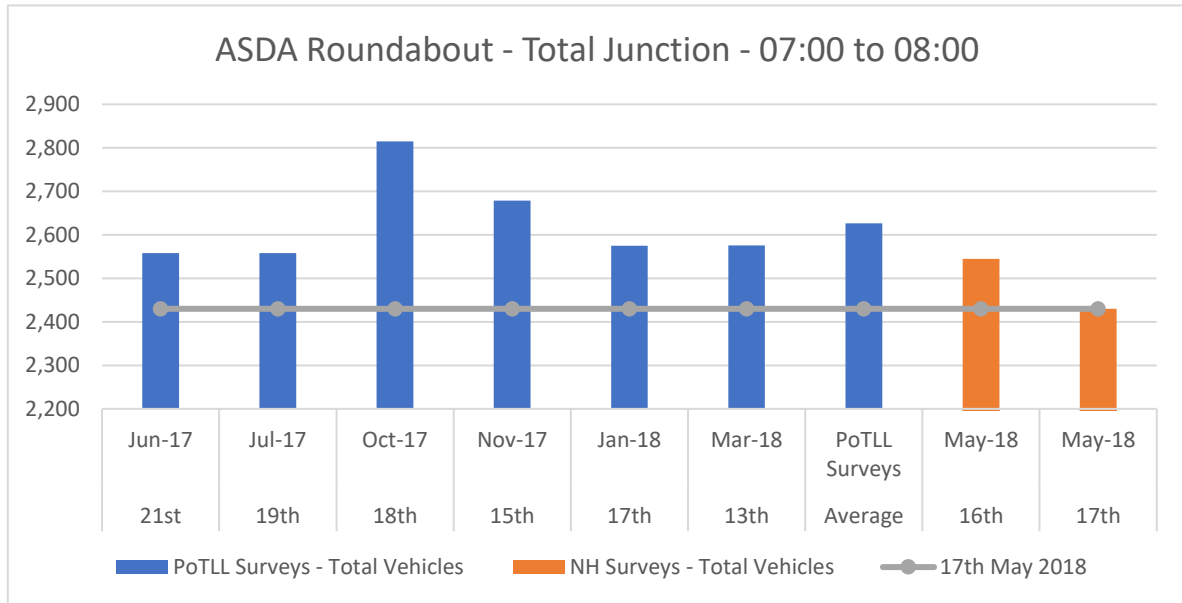
Ref: PH/CM/ITL14229  
Date: 27 September 2023

## Introduction

- 1.1.1 A review has been undertaken of the National Highways (NH) May 2018 traffic survey data for the ASDA roundabout, which was provided at Deadline 4. The traffic survey collected data over 5 days between 16 May 2018 and 20 May 2018 (Wednesday to Sunday). The survey was a Manual Classified Count (MCC) recording all turning movements through the junction. In addition, an Automatic Number Plate Recognition (ANPR) survey was conducted over the same time period.
- 1.1.2 NH have used the ANPR survey data from Thursday 17 May 2018 traffic data in the ASDA Roundabout VISSIM as set out in the Local Model Validation Report (LMVR) at Appendix I of the Localised Traffic Modelling report (Deadline 3).
- 1.1.3 The Port of Tilbury London Limited (PoTLL) collected MCC data at the ASDA roundabout on:
- 21 June 2017;
  - 19 July 2017;
  - 18 October 2017;
  - 15 November 2017;
  - 17 January 2018; and
  - 13 March 2018.
- 1.1.4 The surveys were all carried out on a Wednesday. The PoTLL survey data is included at **Appendix A**
- 1.1.5 This review compares the NH MCC data and the PoTLL MCC data. However, it is noted that the raw data provided by NH shows ANPR capture rates of around 90% when compared to the NH MCC traffic flows. In other words, the traffic data in the model is 10% lower than the NH MCC for 17 May 2018.

**07:00 to 08:00 AM Peak Hour Comparison**

**Plate 1: Total Junction Traffic Flow Comparison – 07:00 to 08:00**

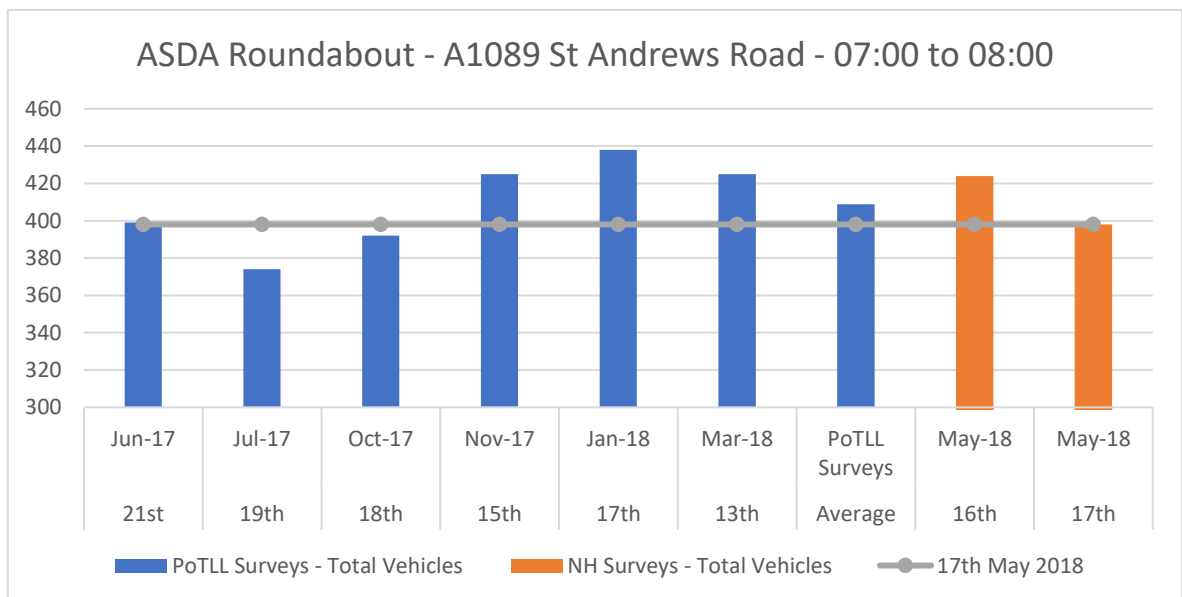


Source: i-Transport and National Highways.

1.1.6 **Plate 1** details the total junction traffic flow comparison between the PoTLL surveys and the NH surveys, during the 07:00 to 08:00 AM peak hour. The average of the PoTLL surveys data is also shown for reference.

1.1.7 The 17 May 2018 data is the lowest of all count data. And the lowest of NH count data.

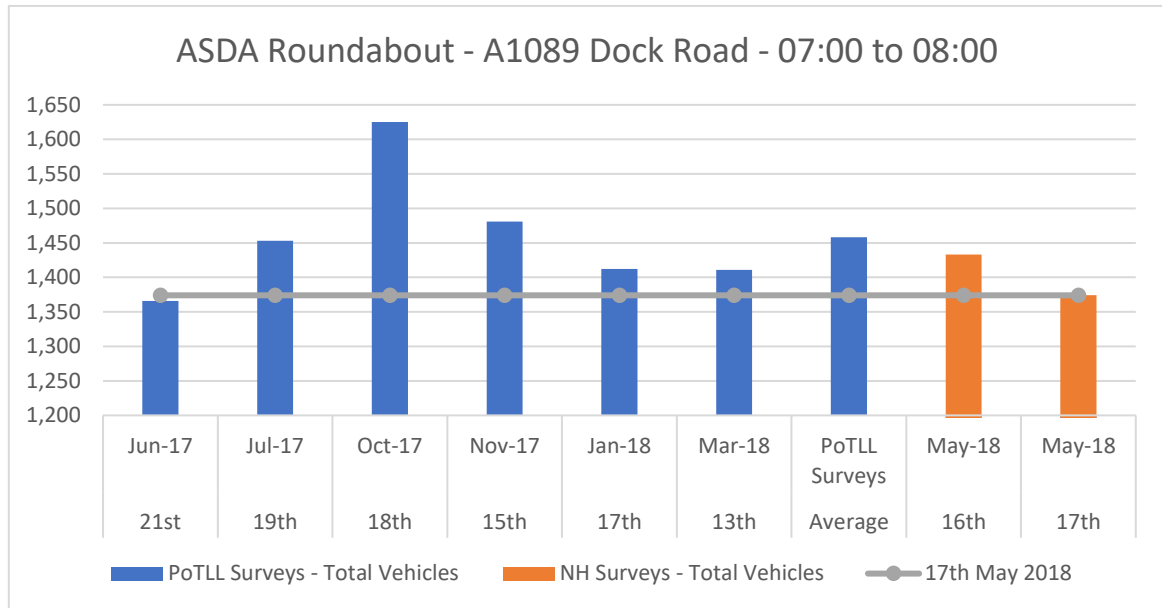
**Plate 2: A1089 St Andrews Road Traffic Flow Comparison – 07:00 to 08:00**



Source: i-Transport and National Highways.

1.1.8 **Plate 2** details the A1089 St Andrews Road arm traffic flow comparison. Traffic flows are comparable.

**Plate 3: A1089 Dock Road Traffic Flow Comparison – 07:00 to 08:00**

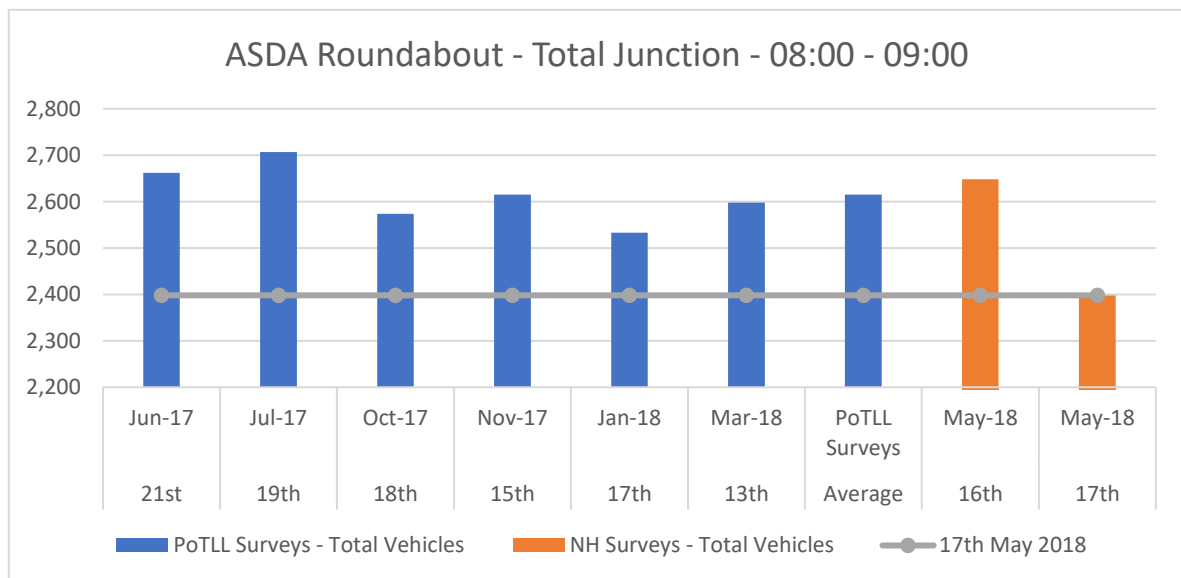


Source: i-Transport and National Highways.

1.1.1 **Plate 3** details the A1089 Dock Road arm traffic flow comparison. The traffic flows on 17 May 2018 are equal lowest and below 16 May 2018.

**08:00 to 09:00 AM Peak Hour Comparison**

**Plate 4: Total Junction Traffic Flow Comparison – 08:00 to 09:00**



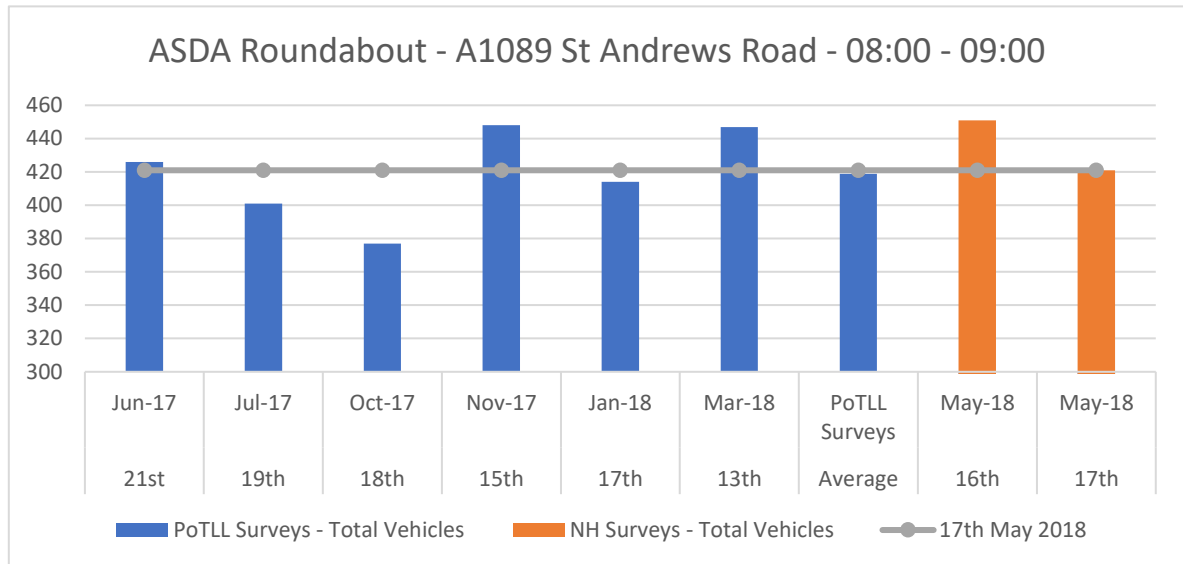
Source: i-Transport and National Highways.

1.1.2 **Plate 4** details the total junction traffic flow comparison during the 08:00 to 09:00 AM peak hour.



1.1.3 The comparison highlights 17 May 2018 represents the lowest count data by a considerable margin. Generally, it is at least 10% lower.

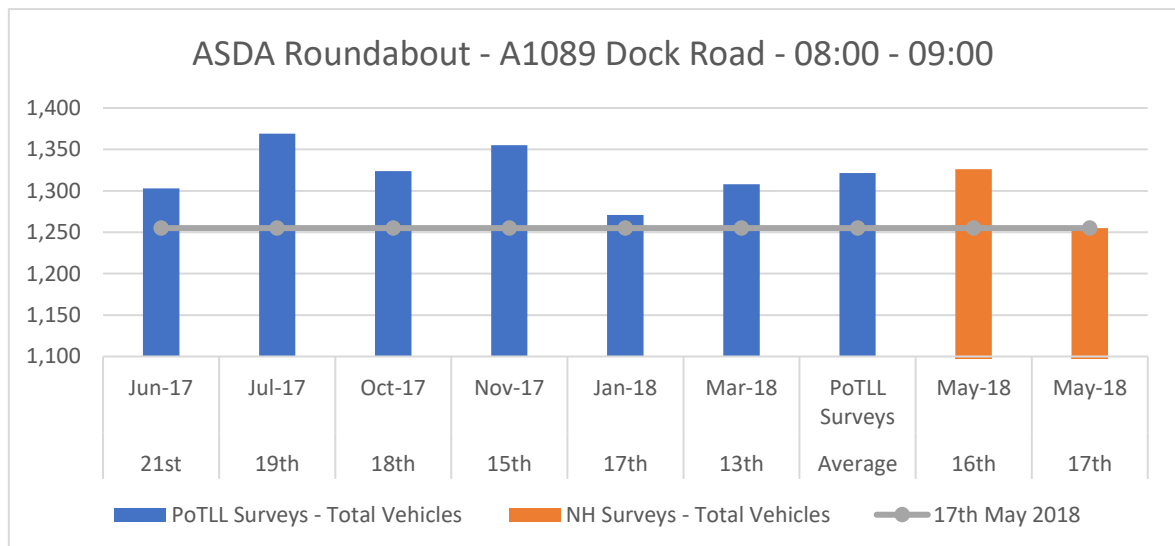
**Plate 5: A1089 St Andrews Road Traffic Flow Comparison – 08:00 to 09:00**



Source: i-Transport and National Highways.

1.1.4 **Plate 5** details the A1089 St Andrews Road arm traffic flow comparison. There is little difference across the count data.

**Plate 6: A1089 Dock Road Traffic Flow Comparison – 08:00 to 09:00**

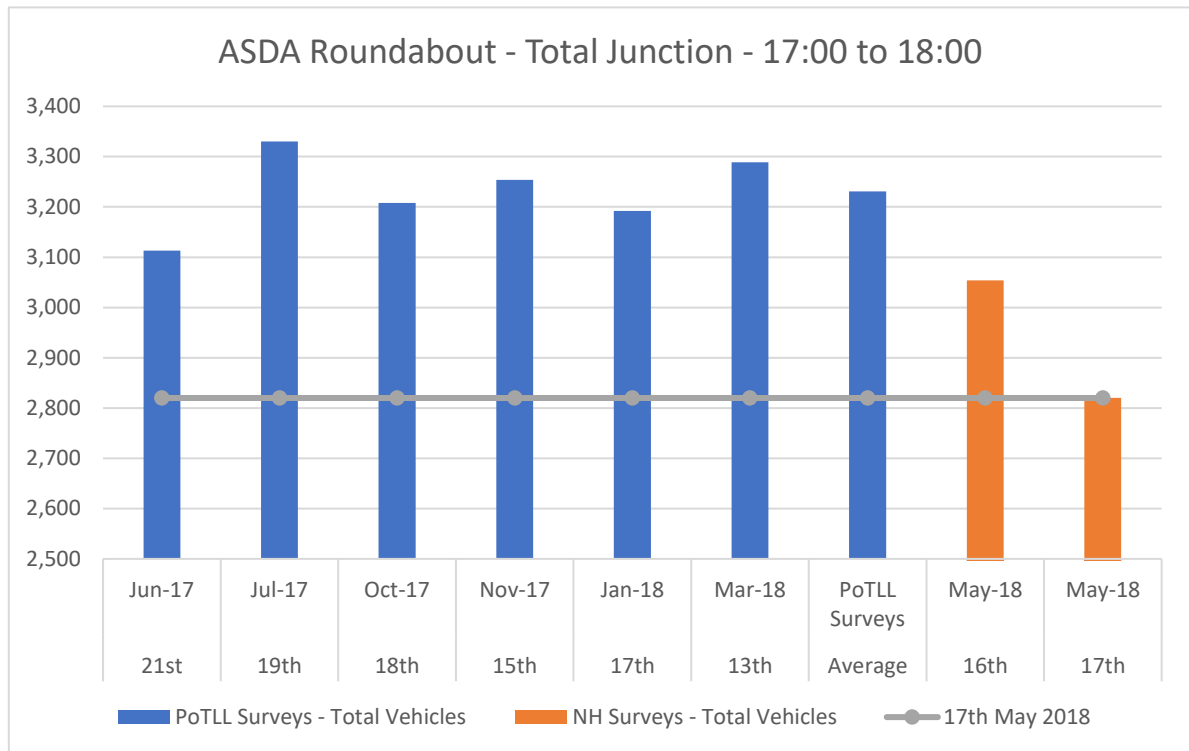


Source: i-Transport and National Highways.

1.1.5 **Plate 6** details the A1089 Dock Road arm traffic flow comparison during the 08:00 to 09:00 AM peak hour. Again, there is a notable difference with the 17 May 2018 count data generally 10% lower than others.

**17:00 to 18:00 PM Peak Hour Comparison**

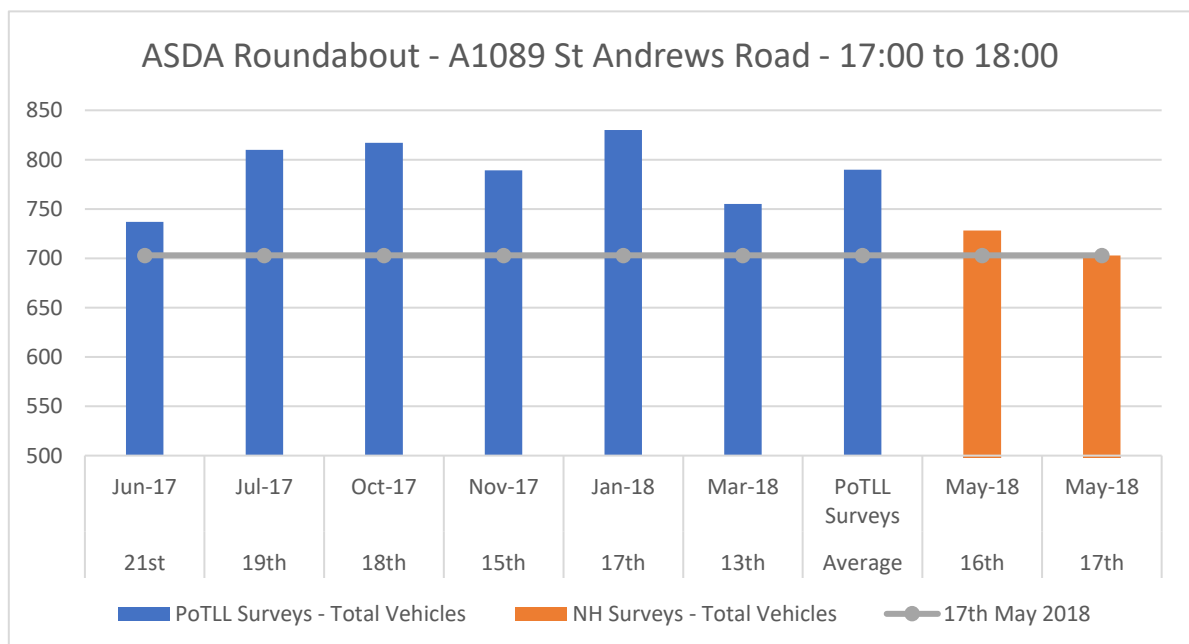
**Plate 7: Total Junction Traffic Flow Comparison – 17:00 to 18:00**



Source: i-Transport and National Highways.

1.1.6 **Plate 4** details the total junction traffic flow comparison during the 17:00 to 18:00 PM peak hour. Again, the 17 May 2018 represents the lowest count data. It is between 10% and 20% lower than all the others.

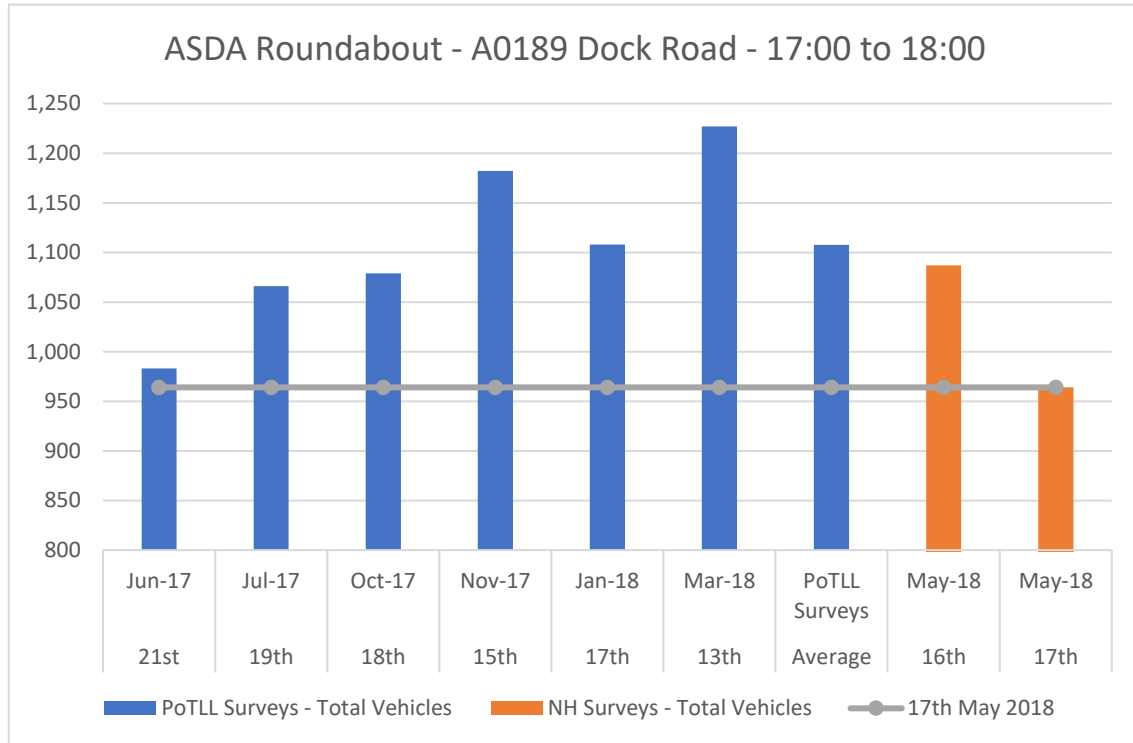
**Plate 8: A1089 St Andrews Road Traffic Flow Comparison – 17:00 to 18:00**



Source: i-Transport and National Highways.

1.1.7 **Plate 8** details the A1089 St Andrews Road arm traffic flow comparison during the 17:00 to 18:00 PM peak hour. The 17 May 2018 count data is generally around 10% lower than all other data.

**Plate 9: A1089 Dock Road Traffic Flow Comparison – 17:00 to 18:00**



Source: i-Transport and National Highways.

1.1.8 **Plate 9** details the A1089 Dock Road arm traffic flow comparison during the 17:00 to 18:00 PM peak hour. The 17 May 2018 count data is generally around 10% lower than all other data.

**Summary**

1.1.9 It is clear that the 17 May 2018 traffic count data does not represent a ‘typical day’ for traffic flow movements through the ASDA roundabout.

1.1.10 The survey data collected by NH on the 17 May 2018 is shown to be the lowest total count data of all survey data, during all three peak hours reviewed.

1.1.11 Further it is understood that the ASDA Roundabout VISSIM has used ANPR traffic data as opposed to 17 May 2018 MCC traffic data. The ANPR traffic data being a further 10% lower.

1.1.12 The ASDA Roundabout VISSIM needs to be revalidated using more representative base year traffic data.

1.1.13 For Tilbury2 DCO, NH required PoTLL to use the average of October 2017, November 2017 and March 2018 survey data.

## **APPENDIX A. POTLL SURVEY DATA**

Thurrock Council Submission at Deadline 5 – Appendix B: Joint Position Statement – Asda  
Roundabout (Thurrock Council and PoTLL)  
Lower Thames Crossing

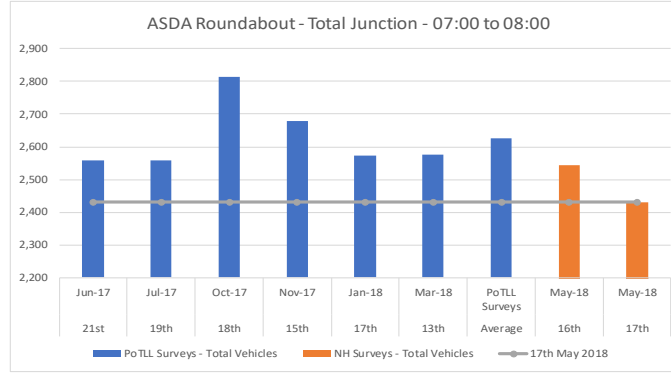
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## **Annex A: Asda Roundabout – All Surveys NH Comparison Summary**

# ASDA ROUNDABOUT: ALL SURVEYS NH COMPARISON SUMMARY - AM

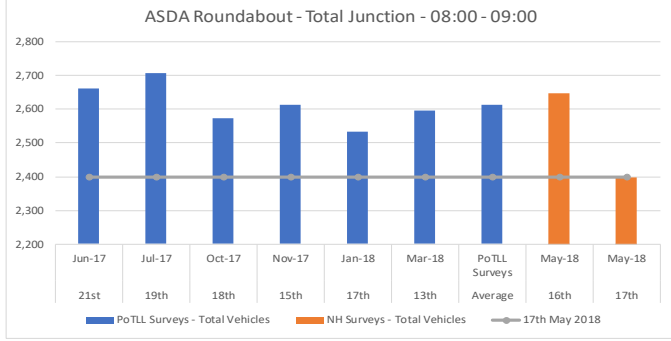
## Total Junction: 07:00 - 08:00

Month		Morning Peak Hour (07:00 - 08:00)	Difference between 17th May and others	
		Total Vehicles	Total Vehicles	Percentage
21st	Jun-17	2,558	128	5%
19th	Jul-17	2,558	128	5%
18th	Oct-17	2,815	385	16%
15th	Nov-17	2,679	249	10%
17th	Jan-18	2575	145	6%
13th	Mar-18	2,576	146	6%
Average PoTLL Surveys		2,627	197	8%
16th	May-18	2,545	115	5%
17th	May-18	2,430	0	0%



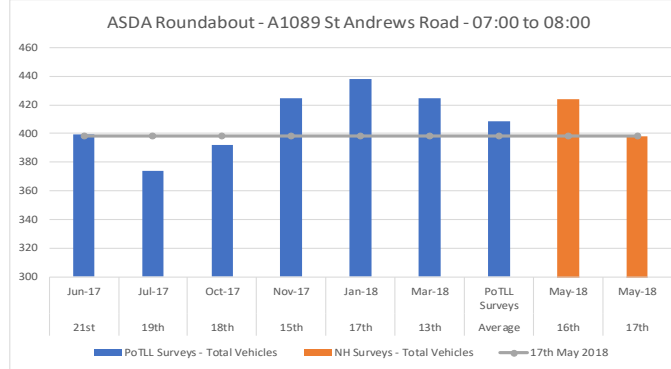
## Total Junction: 08:00 - 09:00

Month		Morning Peak Hour (08:00 - 09:00)	Difference between 17th May and others	
		Total Vehicles	Total Vehicles	Percentage
21st	Jun-17	2,662	264	11%
19th	Jul-17	2,707	309	13%
18th	Oct-17	2,574	176	7%
15th	Nov-17	2,615	217	9%
17th	Jan-18	2533	135	6%
13th	Mar-18	2,598	200	8%
Average PoTLL Surveys		2,615	217	9%
16th	May-18	2,648	250	10%
17th	May-18	2,398	0	0%



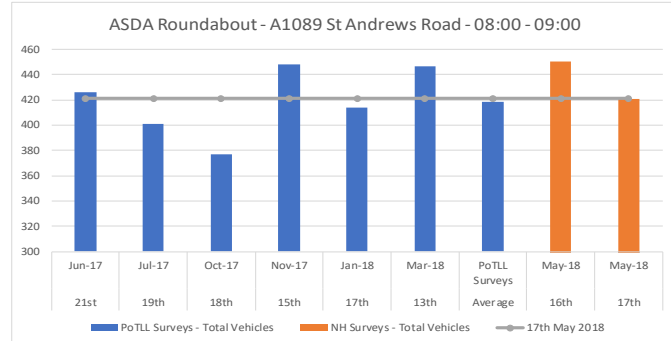
## A1089 St Andrews Road: 07:00 - 08:00

Month		Morning Peak Hour (07:00 - 08:00)	Difference between 17th May and others	
		Total Vehicles	Total Vehicles	Percentage
21st	June	399	1	0%
19th	July	374	-24	-6%
18th	October	392	-6	-2%
15th	November	425	27	7%
17th	January	438	40	10%
13th	March	425	27	7%
Average PoTLL Surveys		409	11	3%
16th	May	424	26	7%
17th	May	398	0	0%



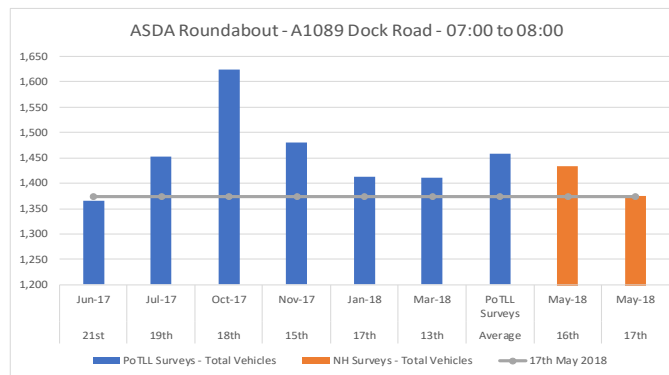
## A1089 St Andrews Road: 08:00 - 09:00

Month		Morning Peak Hour (08:00 - 09:00)	Difference between 17th May and others	
		Total Vehicles	Total Vehicles	Percentage
21st	June	426	5	1%
19th	July	401	-20	-5%
18th	October	377	-44	-10%
15th	November	448	27	6%
17th	January	414	-7	-2%
13th	March	447	26	6%
Average PoTLL Surveys		419	-2	-1%
16th	May	451	30	7%
17th	May	421	0	0%



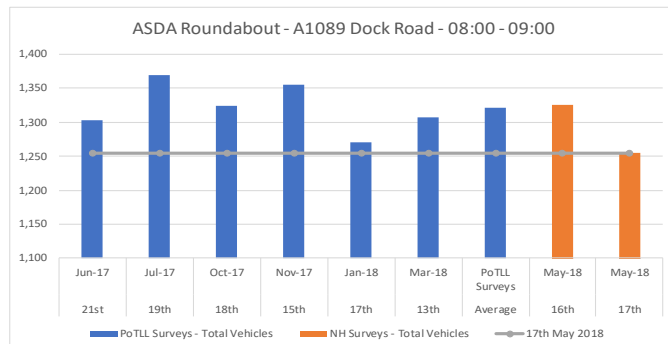
## A1089 Dock Road: 07:00 - 08:00

Month		Morning Peak Hour (07:00 - 08:00)	Difference between 17th May and others	
		Total Vehicles	Total Vehicles	Percentage
21st	June	1,366	-8	-1%
19th	July	1,453	79	6%
18th	October	1,625	251	18%
15th	November	1,481	107	8%
17th	January	1412	38	3%
13th	March	1,411	37	3%
Average PoTLL Surveys		1,458	84	6%
16th	May	1,433	59	4%
17th	May	1,374	0	0%



## A1089 Dock Road: 08:00 - 09:00

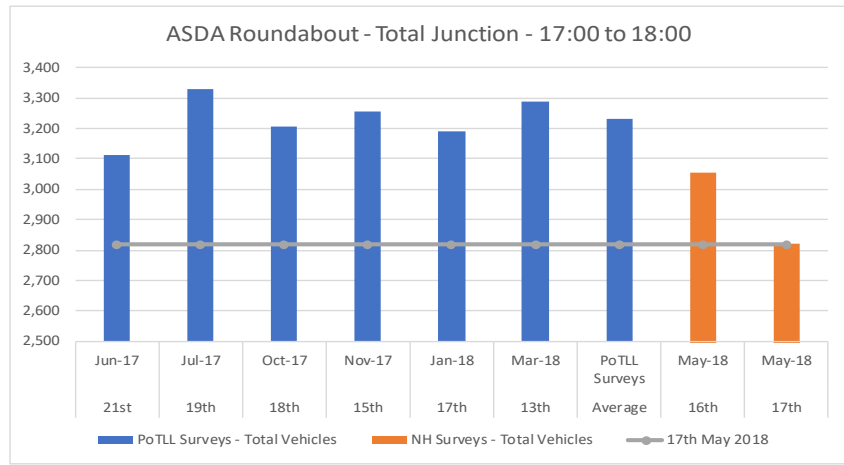
Month		Morning Peak Hour (08:00 - 09:00)	Difference between 17th May and others	
		Total Vehicles	Total Vehicles	Percentage
21st	June	1,303	48	4%
19th	July	1,369	114	9%
18th	October	1,324	69	5%
15th	November	1,355	100	8%
17th	January	1271	16	1%
13th	March	1,308	53	4%
Average PoTLL Surveys		1,322	67	5%
16th	May	1,326	71	6%
17th	May	1,255	0	0%



# ASDA ROUNDABOUT: ALL SURVEYS NH COMPARISON SUMMARY - PM

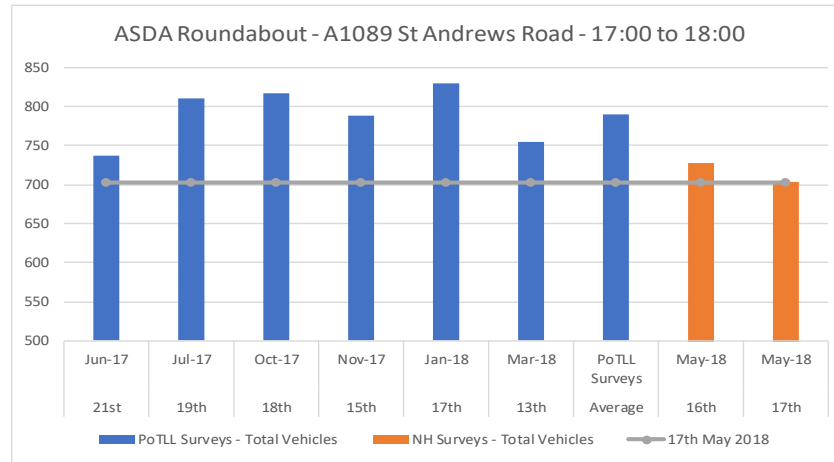
## Total Junction: 17:00 - 18:00

Month		Evening Peak Hour (17:00 - 18:00) Total Vehicles	Difference between 17th May and others	
			Total Vehicles	Percentage
21st	Jun-17	3,113	293	10%
19th	Jul-17	3,330	510	18%
18th	Oct-17	3,208	388	14%
15th	Nov-17	3,254	434	15%
17th	Jan-18	3,192	372	13%
13th	Mar-18	3,289	469	17%
Average PoTLL Surveys		3,231	411	15%
16th	May-18	3,054	234	8%
17th	May-18	2,820	0	0%



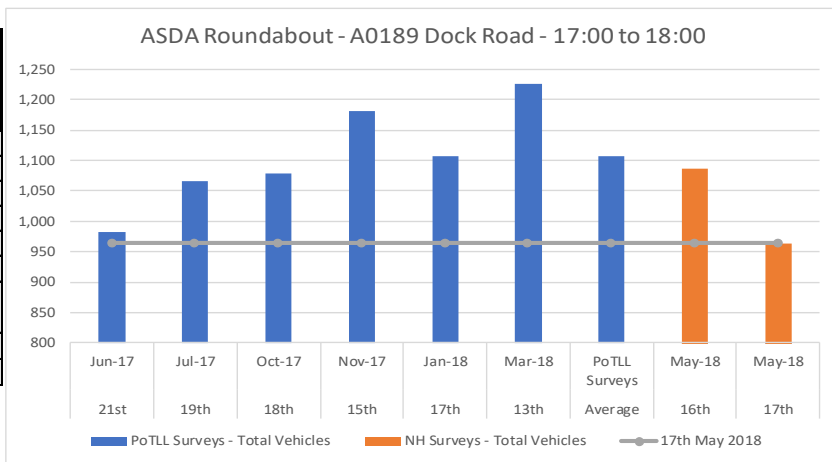
## A1089 St Andrews Road: 17:00 - 18:00

		Evening Peak Hour (17:00 - 18:00) Total Vehicles	Difference between 17th May and others	
			Total Vehicles	Percentage
June		737	34	5%
July		810	107	15%
October		817	114	16%
November		789	86	12%
January		830	127	18%
March		755	52	7%
PoTLL Surveys		790	87	12%
May		728	25	4%
May		703	0	0%



## A1089 Dock Road: 17:00 - 18:00

Month		Evening Peak Hour (17:00 - 18:00) Total Vehicles	Difference between 17th May and others	
			Total Vehicles	Percentage
21st	June	983	19	2%
19th	July	1,066	102	11%
18th	October	1,079	115	12%
15th	November	1,182	218	23%
17th	January	1,108	144	15%
13th	March	1,227	263	27%
Average PoTLL Surveys		1,108	144	15%
16th	May	1,087	123	13%
17th	May	964	0	0%



## **Appendix C Transcript of Workshop between Applicant, Thurrock Council, Essex County Council, Port of Tilbury London Limited and DP World London Gateway**



# Lower Thames Crossing

Thurrock Council Submission at Deadline 5

**Appendix C: Transcript of Workshop between Applicant, Thurrock Council, Essex CC, Port Tilbury London Ltd and DP World London Gateway 25.09.2023**

Thurrock Council

 [thurrock.gov.uk](https://www.thurrock.gov.uk)

Thurrock Council Submission at Deadline 5 Appendix C: Transcript of Workshop between Applicant, Thurrock Council, Essex CC, Port of Tilbury London Ltd and DP World London Gateway 25.09.2023  
Lower Thames Crossing

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## Document Control Sheet

**Project Name:** Lower Thames Crossing

**Report Title:** Thurrock Council Submission at Deadline 5 (D5) Appendix C: Transcript of Workshop between Applicant, Thurrock Council, Essex CC, Port of Tilbury London Ltd and DP World London Gateway 25.09.2023

**Doc Ref:** FINAL

**Date:** 03 October 2023

	Name	Position	Signature	Date
<b>Prepared by:</b>	Various			3 October 2023
<b>Reviewed by:</b>	David Bowers / Chris Stratford	Director / Senior Consultant	DB / CS	3 October 2023
<b>Approved by:</b>	Tracey Coleman	Chief Planning Officer, Thurrock Council	TC	3 October 2023

Thurrock Council

Thurrock Council Submission at Deadline 5 Appendix C: Transcript of Workshop between Applicant, Thurrock Council, Essex CC, Port of Tilbury London Ltd and DP World London Gateway 25.09.2023  
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Lower Thames Crossing

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## **Appendix C Transcript of Workshop between Applicant, Thurrock Council, Essex CC, Port of Tilbury London Ltd and DP World London Gateway 25.09.2023**

## LTC - Orsett Cock Workshop with NH-20230925\_130333-Meeting Recording

September 25, 2023, 12:03PM

Duration: 3h 1m 6s

**Chris Stratford** 0:03 So.

**Tim Wright / Helen Bowkett** 0:03 Before we kick off, sorry, Chris, do you think it would be worth just going round the table so that everybody knows?

**Chris Stratford** 0:06 Yes. That's exactly what I was planning to do, Tim, and hence the term introductions. So if I start and then I'll go round our virtual room and then you can go around yours and then we bring Port Tilbury and DP World in and Essex in. Yes.

**Tim Wright / Helen Bowkett** 0:15 Right. Yep.

**Chris Stratford** 0:28 OK. So, Chris Stratford coordinating the thorough response, David.

**Bowers, David** 0:34 Hi, I'm David Bowers representing Thurrock, Director of transport planning.

**Phil Stanier** joined the meeting

**Chris Stratford** 0:39 Kirsty.

**Kirsty McMullen** 0:41 I'm Kirsty McMullen and representing Thurrock. So, working with the Stantec team.

**Chris Stratford** 0:46 Colin.

**Black, Colin** 0:49 Colin Black, Thurrock Council.

**Chris Stratford** 0:53 Nadia.

**Lyubimova, Nadia** 0:57 Hi Nadia Lyubimova representing Thurrock coordinating transport modelling.

**Chris Stratford** 1:03 And OK, Sharon.

**Jefferies, Sharon** 1:07 Hi, Sharon Jefferies at Stantec working for Thurrock Council and Project Manager.

**Chris Stratford** 1:13 And the other Sharon now?

**Gunton, Sharon** 1:19 Working for Stantec for Thurrock Council and I'm project support.

**Chris Stratford** 1:21 Sorry. OK, so if we do the other stakeholders first, if you don't mind and follow the ExA's plan of leaving you till the last.

**Tim Wright / Helen Bowkett** 1:34 That's fine.

**Chris Stratford** 1:37 Last, so let's do Port of Tilbury first. Who wants to go first, Peter?

**Peter Ward** 1:43 Yeah. Thanks, thanks Chris. Peter Ward commercial director, Paul Terry and I have with me. John Speakman, who is our senior asset manager for property.

**Chris Stratford** 1:55 OK. And anybody else besides the two of you that works with Port of Tilbury?

**Phil Hamshaw** 2:00 Yes, me.

**Chris Stratford** 2:01 Sorry, Phil. There we go.

**Phil Hamshaw** 2:03 Phil Hamshaw from iTransport working on behalf of the Port of Tilbury and my colleague hopefully is on the line somewhere - Charlie Montgomery.

**Charles Montgomerie** 2:10 Yes. Good afternoon. I'm Charles Montgomery from iTransport also for Port of Tilbury.

**Chris Stratford** 2:17 Fantastic.

**Phil Hamshaw** 2:17 Thank you.

**Chris Stratford** 2:18 OK. So, then DP World, I think there's just one.

**Simon Tucker** 2:24 Thanks Chris. So actually, Trevor sends his apologies. He's on leave this week.

**Chris Stratford** 2:29 OK.

**Simon Tucker** 2:30 Still trying to work with this. So, I'm Simon Tucker from DTA dealing with traffic and transport matters on behalf of DP World. And my colleague Richard.

**Richard McCulloch** 2:40 I'm Richard McCulloch from DTA as well.

**Chris Stratford** 2:44 OK. And then last but not least, on the stakeholder front, Gary.

**Gary Macdonnell - Network Programme Manager** 2:51 Hi all, Gary Macdonnell, program manager in highways and transportation working at Essex County Council. I'll hand over to Jamshid.

**SOHEILI Jamshid** 3:01 Thanks, Gary. Good afternoon, everyone. Jamshid Soheili Director with SYSTRA and we're working on behalf of Essex on all things LTC.

**Chris Stratford** 3:13 OK, alright, unless I've missed anybody. I think that's everyone from the stakeholder side, Tim, if I hand over to you.

**Tim Wright / Helen Bowkett** 3:25 Fine. Thanks. And Gary, just a note, you faded out while you were speaking and back in again. So maybe something on your mic. OK, so I think you all know me, Tim Wright, Head of Consents for the Lower Thames Crossing and you'll know most of the people. I will run round.

**Helen Bowkett** 3:46 Helen Bowkett, traffic modelling and economics works Team Lead for Lower Thames Crossing.

**Tim Wright** Marius.

**Le Roux, Marius** 3:55 Marius Le Roux working on behalf of LTC for their localised traffic modelling.

**Tim Wright / Helen Bowkett** 4:02 Callum.

**Callum Brown** 4:05 Afternoon, everyone. Callum Brown, I'm part of the stakeholder engagement team at LTC.

**Tim Wright / Helen Bowkett** 4:12 Phil.

**Phil Stanier** 4:14 Good morning. Phil, afternoon rather, Phil Stanier, Lower Thames Crossing, stakeholder engagement manager.

**Tim Wright / Helen Bowkett** 4:21 And Gareth?

**Gareth Protheroe** 4:24 Afternoon all, Gareth Protheroe, working with Tim on LTC.

**Tim Wright / Helen Bowkett** 4:29 And I think that covers everybody from our team. If I've missed you, can you put your hand up and I do apologise. But I think I've got away with that.  
**Chris Stratford** 4:38 OK.

**Tim Wright / Helen Bowkett** 4:41 Back to you, Chris.

**Chris Stratford** 4:41 Must think we have, OK, right, well, I think given the fact that there are, I'm trying to count here, there's something like 15-17 people on the call. I think it does make sense and that we raise hands instead of interrupting, otherwise we're going to get into a real mess. Simple protocol. Tim, you sent us an email agenda, we sent you, having met collectively, our preferred agenda, and you wanted to talk about it first, so if I hand over at this point to Kirsty, who will sort of lead it from the technical side, from our point and then you can say what you want to say about the agenda.

**Kirsty McMullen** 5:28 Thanks Chris.

**Tim Wright / Helen Bowkett** 5:32 You want me to jump in?

**Kirsty McMullen** 5:32 Tim. Yes, Tim, over to you, just waiting for you to talk.

**Tim Wright / Helen Bowkett** 5:35 So no issue with the items on the agenda and we'll work through your agenda. I think my question is more, I mean, I saw the position put forward from the Examining Authority to be a sort of rounded discussion on all of the points, and therefore that's why I said, do we not want to discuss a without prejudice position on monitoring and mitigation so that we could understand your position that you'll put forward? I notice Port of Tilbury you put something in at Deadline 4 and DP World you made some comments on it, so my original agenda was designed to allow us to have a discussion around that and share our views on that prior to the next deadline for submission. Is that something that all parties do not want to discuss and actively want to limit this to just the discussion about modelling?

**Kirsty McMullen** 6:39 I suppose in terms of a couple of things and in terms of the actual remit of this workshop, it was quite a focused thing and that you know, going back to terms of National Highways, they're saying the focus should be on narrowing areas of disagreement, specifically to reconcile identified differences between LTAM and VISSIM, and so we really feel that we need to progress the modelling and the areas of those disagreements before we can take a view on mitigation. So I think we've set out, I think everyone's set out, their position at D4 and I'm sure you will have done as well, but haven't read it yet, but we've got three hours that I'm sure three hours will go quite quickly because there's a lot to discuss on the modelling and I think that until we've got a way forward with that, it's very difficult to jump to that next stage of what's appropriate in terms of mitigation. So, whether it's without prejudice or not, but it's all of this discussion today and we just say that up front and it feels premature.

**Tim Wright / Helen Bowkett** 7:52 So from my perspective, I feel that it would be sensible to have the conversations in parallel. We know time is not our friend and so that's why I was



suggesting that we should have an in-the-round discussion about all of these matters rather than limit ourselves to I think our KC said the slowest ship in the convoy. It feels like by the time we get to some position on the modelling we'll have timed out potentially further bits of discussion, that we could be beneficially having now.

**Kirsty McMullen 8:25** I think what would be helpful is if we go through it, I mean the purpose of today's workshop is to go through those steps that need to be done. And what we think is a realistic program for those and agreed the dates and I think then what we need to then do is say at what point do we feel within that once we've had that discussion and we're not saying that we need to get all the way to the end, we just need to be further than we are at the moment for us to understand exactly what the impacts are because we haven't got an agreed set of modelling.

So if we can then say we feel that at this point and as part of that program discussion that we feel that this is a sensible time that we can have another workshop to progress monitoring and mitigation and we can feed it into the discussions today on that basis, in terms of discussing the program.

**Tim Wright / Helen Bowkett 9:27** I guess just an open question to all stakeholders. Do you agree that it's premature to be discussing monitoring and mitigation now when you want to discuss that later in the program? I'll take silence as agreement then.

**Kirsty McMullen 9:47** Simon's got his hand up.

**Simon Tucker 9:52** Sorry it took me that long to find the hand thing. Sorry about that. That was the reason for that, I think, Tim, probably just wanted to say for the record that support what Kirsty has said in terms of the approach. There's a lot to get through in terms of understanding the detail and we do want to focus on understanding that before necessarily spending too much time on the mitigation. You have seen what we've submitted already in terms of our views and that's probably where it sits for now.

**Tim Wright / Helen Bowkett 10:27** Thank you. Alright, in that case, I'll go back to you. Kirsty. What's next on the agenda.

**Kirsty McMullen 10:38** And so I think, we were supposed to be setting the context and from both perspectives in terms of the purpose of today. And I think I would just cover that off in some respects in terms of the, we think it's most beneficial. There's a lot to get through in terms of focusing on what the Examining Authority wanted us to achieve today, which was to reconcile and identify differences in in the models and so, to narrow areas of disagreement and reconcile differences between LTAM and VISSIM, and to prepare a joint paper, but we haven't got long to do this. We've got today's meeting and by the end of today and what we're hoping to achieve is that we've got an agreed set of actions and dates and specific dates for those actions in order to move things forward from the modelling perspective in terms of Orsett Cock and LTAM and VISSIM and that we've got, and we've then set aside some time at the end to discuss the format of the joint paper and agree who is doing what in

order to get the joint paper prepared by the end of this week. And so that's the focus that we're wanting to do in terms of agenda items. What we wanted to do was to not spend an exhaustive amount of time on it, but to review the actions from the previous meeting, which was held on the 16th of August and review the actions that are specific to Orsett Cock and to just run through the actions that have been agreed by National Highways and set precise dates for those to be completed because at the moment we haven't got precise dates, some of which have been completed and then go through the ones that haven't been agreed and we can then just discuss what the way forward, if any, is on those and hopefully we can do that quite quickly before then moving on, we're hoping that you'd be able to provide an update on the VISSIM forecasting model based on the model we provided at D3, we could then have a joint discussion about the VISSIM forecast model and then once we've gone through that, then go on to discussion about aligning VISSIM and LTAM and the joint discussion on that and then agreeing program and the actions and the joint paper. So, I don't know if you had any comments on that, Tim. Thanks.

**Tim Wright / Helen Bowkett** 13:36 The principle I think that's the right way forward and we'll go through that, what I'm not going to commit to today is giving precise dates today. I think we've been through those actions. We think a lot of them are perhaps less well defined, so I think we need to have a conversation about them and agree what they are, and we will need to take that away and just reconfirm dates. So, we'll talk in principle around the dates, and I would agree absolutely that fixed dates need to go in the submission that returns to the Examining Authority, but we might need a couple of days to reflect internally, on those dates before it comes a joint position.

**Chris Stratford** 14:20 OK. Tim, we have prepared some slides that might help guide us through all of this and I don't know whether you want to put, if we put them up on the screen, whether it would help or whether you just want to carry on with the discussions, up to you.

**Tim Wright / Helen Bowkett** 14:38 Depends what's in the slides.

**Kirsty McMullen** 14:38 I can explain what's in the slides, it's literally just each of the actions specific to Orsett Cock and there's a number and a table that sets out the agreed actions and then it just so we can have a discussion on those and then the actions not agreed and see if we can have a discussion on this. So they are two separate things and then moving beyond that, it's then in ISH we may want to do slides in two halves that's agenda item. The next set of slides is just in terms of modelling steps which we've put forward in ISH4 for submission that set out what we consider to be the steps that are required to align the models or to complete the forecasting of the VISSIM model and then to align LTAM and VISSIM so that there were a short set of slides that have not actions for discussion and then next steps in terms of the modelling next steps.

**Tim Wright / Helen Bowkett** 15:52 So it's the first set of slides, essentially a representation of the table you included in your Deadline 4 submission.

**Kirsty McMullen** 15:59 Right. It literally just has the words of the action on it, rather than everything on it. So, it's the words of the action, and then what your response was.

**Tim Wright / Helen Bowkett** 16:06 OK. Yeah, let's bring that up then.

**Kirsty McMullen** 16:11 OK, they're just to help guide the discussion so that everyone's got them on the screen.

**Tim Wright / Helen Bowkett** 16:12 I think that's the easiest way to run through.

**Chris Stratford** 16:16 Kirsty, do you want to control that or do you want me to put it up?

**Kirsty McMullen** 16:20 You can put it up if you want, Chris, and then I can see the room.

**Chris Stratford** 16:22 No, no, it's not it. Whatever's easy for you, really.

**Kirsty McMullen** 16:23 OK, I've got them here.

**Chris Stratford** 16:26 OK, fine, good.

**Chris Stratford** 16:33 It's got the agenda there too so we can satisfy that one.

**Kirsty McMullen** 16:35 Yes. Is that sharing? Can everyone see?

**Chris Stratford** 16:48 Yeah.

**Chris Stratford** 16:52 It might be worth just flicking up the first two slides before we get to that. Yeah, just to say, there's the agenda and the next one was just a brief presentation of Action 6.

**Kirsty McMullen** 17:07 OK.

**Kirsty McMullen** 17:09 So the next few slides are just the ones that have been agreed. And so, I mean we're on the 25th of September now and so and in the response and that was provided to the actions from National Highways and for these three we can run through them. The first one was to have version control of all modelling going forward and a model log summarising changes that are made between versions. So, National Highways said that that would be provided in September. I'm not sure that has been provided yet. I don't think it has and will that be provided in September?

**Tim Wright / Helen Bowkett** 17:52 No it hasn't been provided yet, and that's coming out this week.

**Kirsty McMullen** 17:59 OK.

**Tim Wright / Helen Bowkett** 17:59 In terms of wording, I mean, I think I just need to make it clear we do have version control, but I appreciate for you it isn't being presented in a way that allows you to cross correlate, so that's the intent of this is more a communication of version [control].

**Kirsty McMullen** 18:16 I'm sure you have internal version control. It's just making sure that when we're, you know that we understand what version we're working with and what the changes have made been made since the last version, so that it speeds up this process and we're all able to refer to the right version.

**Tim Wright / Helen Bowkett** 18:21 Yeah, but I'll tell you when there's dates and I'm going to quibble about or need to check back with the team, but that one, I'm comfortable we'll do by the 29th, by this Friday.

**Kirsty McMullen** 18:35 OK. Thanks Tim. So, the next one is National Highways to provide dates of models set out in Table 3.2 of the Localised Modelling Report.

**Tim Wright / Helen Bowkett** 18:57 So we've set out all of the dates for the modelling that we undertook and their intended purpose.

**Tim Wright / Helen Bowkett** 19:03 Table 3.2 is a sort of simplification. Essentially, Table 3.1 of the Localised Modelling Report Appendix H - so if you go to Table 3.1 you'll see a sort of more comprehensive and possibly more explanatory list of the modelling work that was undertaken during design development and that's broken down in a phasing so it gives you now this was the work that was done between preferred route announcement and statutory consultation 2016 to 18 and then work that was done between statutory consultation and later consultations and so on. So that really, I think, provides what you're looking for and a little bit more of the explanation about what they're for.

**Kirsty McMullen** 19:54 Table 3.1 of Appendix H in which submission?

**Tim Wright / Helen Bowkett** 20:00 Of the Localised Traffic Modelling Report.

**Chris Stratford** 20:04 Maybe Tim, if you want to share the screen, you could bring it up so we can have a look.

**Kirsty McMullen** 20:10 Yeah. Because from our perspective, we've read the localised modelling report and we still are unclear in terms of how you know there's a, I think, from our perspective there are a lot of models that are set out within that that we weren't aware even existed and it was supposed this feeds into some of the other actions that and requests that it's just what's not clear is what the scope of those VISSIM models where how they've been used to feed into LTAM and the design and any iterative design process because that appears to have been a very internal process and we're not aware, but we weren't aware of quite a few of these models. And so if you're able to, and we've read the localised modelling report, and we had read that ahead of the meeting on the 16th of August, so the purpose of this action was that we needed more clarification beyond the localised modelling report.

**Tim Wright / Helen Bowkett** 21:26 I ask what the purpose of that clarification is, though I mean, why what is the use of that information because from my perspective, I think it's right that we do some internal assessments and review as we work up the scheme. We don't normally share that with stakeholders. You know, it's an internal development process, so honestly, I'm a little bit of lack of clarity about why you're seeking this sort of an extra level of information beyond what we've already provided.

**Kirsty McMullen** 22:03 I well, just before we go on to that this isn't agreed. Yeah, we're not actually talking about something that hasn't been agreed to. You've agreed to provide dates of the models so it out, so I thought this was going to be quite a simple one. So there's, you

know, we've looked at Table 3.1. It sets out a number of models and, but it's I think what you're trying to do is say that and we've done a lot of work and there's lots of design evolution and there's lots of modelling and iterative approach to modelling. We are relatively blind to that process, and I suppose it's us understanding how you've gone through that process and so that we can understand whether there has been an iterative approach to modelling that there is claimed.

**Tim Wright / Helen Bowkett** 23:07 So I go back and say if we directly respond to that action, this is the information that we will provide. It will be a signpost to this information.

**Kirsty McMullen** 23:22 OK, so no dates then will be provided.

**Kirsty McMullen** 23:25 No timeline.

**Tim Wright / Helen Bowkett** 23:26 We wouldn't break it down by month, but it is by timeline.

**Kirsty McMullen** 23:28 No, no. OK. Well, there's no dates in the Localised Modelling Report.

**Tim Wright / Helen Bowkett** 23:36 No, but there are in this table.

**Kirsty McMullen** 23:36 There's no. In which table? Sorry.

**Tim Wright / Helen Bowkett** 23:45 The one I'm sharing on the screen.

**Kirsty McMullen** 23:47 I can only see my screen because I'm sharing the screen. Sorry, let me move out, OK.

**Tim Wright / Helen Bowkett** 23:59 So we set out the ones that we did 2017 to 18. How they inform the design and then we go on to 2018 to 2020. How that informed design and then 2020/21.

**Kirsty McMullen** 24:25 OK, so effectively, did your effectively your response to this is refer back to Table 3.1, OK?

**Tim Wright / Helen Bowkett** 24:34 Yes.

**Chris Stratford** 24:38 How far? How late does it go on to so basically, there's been nothing since 2021. Tim, is that right?

**Tim Wright / Helen Bowkett** 24:49 So yes. So the final changes were the ones that we made to Orsett Cock.

**Chris Stratford** 24:55 Right.

**Tim Wright / Helen Bowkett** 24:56 Inform the Community Impacts Consultation.

**Chris Stratford** 24:59 So there was nothing at the LRC.

**Chris Stratford** 25:17 I thought there were a couple of things at the LRC.

**Tim Wright / Helen Bowkett** 25:20 I mean, it's always a little bit of a grey area because obviously you know there's modelling work that goes on through time. This is a simplification, but yes.

**Chris Stratford** 25:33 So OK, so you're essentially saying all those models, whilst they weren't publicly available, affected the design.

**Tim Wright / Helen Bowkett** 25:48 Yes, or didn't in some cases.

**Chris Stratford** 25:50 OK, so what did you get OK?

**Tim Wright / Helen Bowkett** 25:51 I mean, one of them, we did a value management exercise and didn't end up affecting the design.

**Chris Stratford** 25:56 Simon has his hand up.

**Simon Tucker** 26:03 Sorry, can I just clarify that and so the, the Orsett Cock modelling that I saw last year was dated August 22, and that one you've got on the table there finishes in just to pick up Chris's point in 2021.

**Tim Wright / Helen Bowkett** 26:23 So we've got two different sort of sets of models in a sense. We've got the models that we've prepared internally, which is where that table 3.2 question is really coming from. The ones that we used for development of the scheme design, we've also got models that you've seen is the one that we prepared in collaboration with Thurrock Council to more explore and understand how Orsett Cock was behaving given the nature of the flows through it.

**Tim Wright / Helen Bowkett** 26:52 So it wasn't an integral part of the scheme design that model, it was actually scoped out and developed specifically with Thurrock Council to assist them with understanding the nature of the flow through the junction.

**Simon Tucker** 27:04 Sure, but that has now been submitted, hasn't it formally to the examination at D2?

**Tim Wright / Helen Bowkett** 27:09 Yes. That comes in a different section of. the localised junction modelling Report Table 3.2 of the Localised Junction Modelling report refers back in certainly in terms of the scheme models to the models that we prepared and set out here, there are some additional ones in 3.2 which relate to other models that have also been submitted in, but I think the question really relates to these models. OK.

**Kirsty McMullen** 27:51 Phil you put your hand up.

**Phil Hamshaw** 27:54 Thank you. Sorry, it's not really related to Orsett Cock but just for clarity, again, there was nothing done on Asda before that time then.

**Tim Wright / Helen Bowkett** 28:03 So these are models that were developed during the scheme design we didn't model and Asda no as part of that process.

**Phil Hamshaw** 28:10 OK. Thank you. Thank you.

**Tim Wright / Helen Bowkett** 28:18 If I give the screen back to you.

**Kirsty McMullen** 28:28 OK and so in terms of, I was going back to the actions and the action related to this that was agreed to, was a map showing all of these models, a lot of which we weren't aware existed and how they and geographically the geographic scope of those and which was agreed to be provided by the end of September and how they relate to each other.

**Tim Wright / Helen Bowkett** 29:02 Yes, I got to admit that one slipped the net a little bit. Helen, you're having the team look at that now, aren't you? (Helen) Yes, we're producing that

at the moment so we should make it to the end of September. (Tim) Do you think we can do it by that? OK, let's put Friday for that one too.

**Chris Stratford** 29:17 OK, great.

**Kirsty McMullen** 29:19 OK.

**Chris Stratford** 29:20 Two out of three, good.

**Kirsty McMullen** 29:25 OK, let me just share my screen again. And the next lot of actions and three of which been completed, I understand, and 1 outstanding, which is to provide a program, a provision of additional information set out in this action list aligned with examination deadlines and circulate to stakeholders. I mean effectively that's what we're doing now, so.

**Tim Wright / Helen Bowkett** 29:59 Like, that's what we're doing now, yeah.

**Kirsty McMullen** 30:00 Yeah. Sorry I what we will do following this meeting and is then so effectively sorry these are the three that we've just been discussing. I am we're saying those two would be Friday. So 2.1 and two so 2.2 and two, sorry 1.2 and 1.4 are the 29th September.

**Tim Wright / Helen Bowkett** 30:26 Yeah.

**Kirsty McMullen** 30:28 And 1.3 is no further information beyond the localised modelling report.

**Chris Stratford** 30:35 Tables 3.1 and 3.2.

**Tim Wright / Helen Bowkett** 30:38 It's 3.1 of Appendix H.

**Kirsty McMullen** 30:46 OK. And effectively 1.8 is this meeting and to agree the dates.

**Tim Wright / Helen Bowkett** 30:53 Yep.

**Kirsty McMullen** 30:56 And the 2.1 I'll just check with everybody that I'm right that these have been completed, and is NH provide flow difference plots between CS67 and 72 and CM45 and 49. I think that's complete at 2.2 reference to the use of CS72 instead of CS67 in the traffic forecasting report. I think that's complete and 3.1, so it's provide yourselves with information about key changes between the August, September 22 and D1 submission of VISSIM models, which I think is complete.

**Tim Wright / Helen Bowkett** 31:38 Yeah. I think that last ones for us to confirm and yes, we agree we've done that.

**Kirsty McMullen** 31:40 OK. Yeah. OK, so 3.1 NH to confirm.

**Tim Wright / Helen Bowkett** 31:51 So I'll confirm now.

**Kirsty McMullen** 31:52 Oh, right. OK, great.

**Tim Wright / Helen Bowkett** 31:53 We're happy that you've done it, yes.

**Kirsty McMullen** 31:55 OK, right. OK. And 3.3 and NH demonstrate increased traffic on localised roads and then listed roads as a result of traffic seeking to avoid congestion at Orsett Cock and this was agreed to by National Highways but the timescale given was October.

**Tim Wright / Helen Bowkett** 32:21 So that comes to re-reviewing some of these actions and I've I think that this is actually the, if I understand what is intended here, the end outcome so isn't that entire proposal on the table here in terms of the relationship between VISSIM and LTAM to effectively demonstrate what the changes in traffic flows would be, so isn't this jumping to the end or am I missing the point?

**Kirsty McMullen** 32:51 No, I'm I, yeah, I understand that and Tim, you're right in terms of, I suppose what we've got at the moment is a VISSIM, a forecast VISSIM model that is not agreed yet so and then there's different flows between LTAM and VISSIM so we do need to then go through this process of agreeing the models for you to then demonstrate the increase in traffic on these approaches.

**Tim Wright / Helen Bowkett** 33:27 So I suggest we move past this one and then come back at the end to see whether it's still required or whether it's covered by the other actions.

**Kirsty McMullen** 33:30 Yeah, I OK yeah, that's fine with me if everyone else is happy with that.

**Simon Tucker** 33:40 Yep.

**Kirsty McMullen** 33:41 OK. And 3.4 to provide, for Thurrock to provide comments on the VISSIM forecasting models was done at D3 and we provided the VISSIM model with updated coding so that's complete, and 3.5 and to run sensitivity tests to address latent demand, again, I think we need to probably come on to that as part of the discussion because this will be an action arising or maybe an update that you'll provide as part of the VISSIM forecasting model so we can then come back to this one so we can come back to 3.3 and 3.5 if you're happy with that and based on the more technical discussion later.

**Tim Wright / Helen Bowkett** 34:32 Yeah, I'm happy with that. The one thing I'll say here is I think in our view it isn't a sensitivity test. I thought what we'd agreed around the table was that once we've actually extended it out, that would be the model.

**Kirsty McMullen** 34:42 It, I agree, yes.

**Tim Wright / Helen Bowkett** 34:47 So I want to reduce the number of models that we've got on the table.

**Tim Wright / Helen Bowkett** 34:52 So let's not call it a sensitivity.

**Kirsty McMullen** 34:53 I agree. I think that was you're right and I think when we had the previous meeting and you had identified on the 16th of August and said we've run a sensitivity test on the side to look at latent demand and you put some tables on, so you're right, it's just it was using that technology and from that previously from that meeting.

**Tim Wright / Helen Bowkett** 35:08 Yeah.

**Kirsty McMullen** 35:15 But you're right that this is an issue that needs to be resolved within the modelling, and that becomes then the agreed forecast model.

**Tim Wright / Helen Bowkett** 35:23 Yeah so I suggest we just change the words on that action.



**Kirsty McMullen** 35:25 Perfect we can, I agree.

**Chris Stratford** 35:31 Kirsty, can I just ask 3.3 what was the date, I think I might have missed it.

**Kirsty McMullen** 35:37 No. So what we said is that it's effectively an outcome from, so what we're wanting to understand is, what is the increased traffic on local roads as a result of the LTC and congestion at Orsett Cock, until we've got an agreed position with the modelling and there's little point in National Highways providing that information to the stakeholders because it would be on the basis of an unagreed set of models.

**Chris Stratford** 35:49 Yep OK.

**Kirsty McMullen** 36:08 So we're going to come back to 3.3 and 3.5 because effectively that's part of the wider discussion on what needs to happen with the models.

**Chris Stratford** 36:09 OK. OK. Yep.

**Kirsty McMullen** 36:22 OK and final few, so 3.6. this is about, this was sensitivity tests on Rectory Road in terms of reallocating proportion of Rectory Road traffic onto the A128 and closing Rectory Road to all traffic. I am, this is what we will need to do is as part of the next agenda item, which is an update on the VISSIM forecasting model, I think it would be helpful if we set out what the final stages or action or what the actions are and the program of those actions in order for us to agree and finalise the forecasting VISSIM model.

And there's a number of elements of that latent demand is one of them these sensitivity tests and weaving lengths and discrepancy between the modelling and the design and making sure that the LTAM matrices and the updated matrices are fed back into the VISSIM modelling. So again, not wanting to, I think it's probably better that this one is discussed as part of that modelling discussion, as opposed to if you have actions.

**Tim Wright / Helen Bowkett** 37:42 Alright so just breaking that down and I think most of it, I agree with the, it's sort of feels like there's the first third of the way is the sorting, the technical details about then there's this sensitivity analysis, which I agree we agreed to. The one question I've got about this is when you actually get to your Deadline 4 submission, there was a sort of statement that the scope of this needs to be agreed in advance and I thought that's what we have on the table there is the scope, so it's probably worth a check in to say is there more that you see that we need to agree I thought we had the core assumptions there and then the final point is on feeding, what I understood you were saying, there was that you wanted to then take the SATURN outputs and feed them back into VISSIM and I don't think we have agreed to that, we've agreed to take the VISSIM and feed them into SATURN, but not to go round that loop.

**Kirsty McMullen** 38:58 I think and so there's a few bits there and what we were wanting is that as part of the modelling exercises or the modelling exercise that we're going to come on to, we would like to as local highway authority and interested parties to agree the scope

of those actions so that we reduce any abortive work and given the tight timescales of the examination that's not specific to action 3.6 that's in general.

**Tim Wright / Helen Bowkett** 39:39 OK.

**Kirsty McMullen** 39:41 And so I think we've defined the scope of 3.6 based on the discussion on the 16th of August, I suppose the concern on this one is that if we, it links back into latent demand and the latent demand addressing that and the way to address that would be to extend the approaches to Orsett Cock say that we've got more visibility of the extent of queuing on the approaches and that they're incorporated into the network statistics, by doing that currently in terms of Orsett Cock we don't have any route choice so there's no Orsett village isn't included within that, which effectively is what we're saying here is the purpose of this sensitivity test, so it's whether there is a need to include Orsett village in that once we've addressed the latent demand or whether there's an alternative approach to do modelling whereby we reallocate the traffic from Rectory Road back onto the A128. Our concern is that would that automatically just route through Orsett because of the level of congestion on the A128.

**Black, Colin** left the meeting

**Tim Wright / Helen Bowkett** 41:15 But I think that's the whole point of the test, isn't it? I thought the whole purpose of the test was to move that traffic from Rectory Road onto the A128 to see what that did to the junction performance, the fact that it is currently running through and down Rectory Road is a function of that, so I thought that was the whole purpose of that test.

**Kirsty McMullen** 41:42 It is, but the VISSIM model as it currently stands wouldn't then allow us to understand that kind in a detailed way that route choice. I think what we need to do is do the test that we've set out in the scope of 3.6 and we'll review it but I agree with you that the we've provided that scope that we discussed before, what we're saying generally is that we would like to agree the approach to the modelling actions that we're discussing is more well defined.

**Tim Wright / Helen Bowkett** 42:21 So fine, that's not a problem.

**Kirsty McMullen** 42:23 OK.

**Tim Wright / Helen Bowkett** 42:24 It is quite clear in your submission that you do want to agree this before it happens, so might be worth checking that wording, but we can make it clear in the joint position statement how this works. That's fine.

**Kirsty McMullen** 42:36 OK, that's fine. Alright, so we haven't got a timescale for this, I think again, so on the 3.6 and when we set out the steps that need to be done in terms of VISSIM and LTAM, we'll need to put a program together because that's what we think should be included in the joint paper so that we can understand what's going to be provided by which deadline of the examination.

**Tim Wright / Helen Bowkett** 43:02 Yes. I agree with that.

**Kirsty McMullen** 43:08 And you know Rectory Road so at the moment, we've parked 3.3, 3.5 and 3.6 to incorporate into that modelling program so we can come back to dates on those. So the next one again that we will.

**Chris Stratford** 43:26 OK, let's say before you do that, I just wanted to understand for those with us who are not modellers, Tim perhaps you could explain when you said you're perfectly willing to feedback the VISSIM results into LTAM. Am I right in thinking that the normal approach would then be to feed it all the way around back in from LATM back into VISSIM again, to see?

**Tim Wright / Helen Bowkett** 43:51 No, so the normal approach would not be to feed the VISSIM results into LTAM.

**Kirsty McMullen** 43:53 I, can we, sorry.

**Chris Stratford** 44:01 Really.

**Tim Wright / Helen Bowkett** 44:01 That, sorry.

**Kirsty McMullen** 44:03 So I'm what I'm keen to do is just get through the actions, but then and then actually talk about the do it in stages because I think we've got to have a detailed discussion on that model iteration.

**Tim Wright / Helen Bowkett** 44:04 I think.

**Chris Stratford** 44:08 Sure.

**Tim Wright / Helen Bowkett** 44:08 I agree that you're.

**Chris Stratford** 44:09 OK for this, yeah. Yeah. OK I just didn't want to lose it.

**Kirsty McMullen** 44:19 Yeah.

**Chris Stratford** 44:19 That's OK, if that's fine.

**Kirsty McMullen** 44:20 No, no, no, we've, I've, we've, set aside a whole hour for model iteration, so it will be discussed.

**Chris Stratford** 44:22 OK, good, joy.

**Kirsty McMullen** 44:28 Yeah. So hold on, Chris, the fun is all yet to come.

**Chris Stratford** 44:33 I'll get my armchair.

**Kirsty McMullen** 44:34 I'm yeah, exactly. So 3.8 is the is this point it's about this model iteration so again, let's discuss the program and the scope of model iteration. I'm making note of these it will come back to 3.8 if you're happy with that.

**Tim Wright / Helen Bowkett** 44:55 Happy with that.

**Kirsty McMullen** 44:57 I have 3.9, is to review tables 4.5 to 4.8, of report 9.15, and explain why flows from point 6, A13 eastbound to point 5 and eight to zero and to provide updated tables, so this is a comment by Simon at the previous meeting.

**Tim Wright / Helen Bowkett** 45:29 So I think we've provided that. Simon's puts hand up.

**Kirsty McMullen** 45:37 I said I can't see any hands by the way so you'll have to, somebody have to let me know.

**Simon Tucker** 45:39 Sorry.

**Tim Wright / Helen Bowkett** 45:39 All components then.

**Simon Tucker** 45:43 But I don't think you have, I mean the question there was that that those tables would look seeking to compare journey times, weren't they between LTAM, sorry get my English better, between the outputs of LTAM and the outputs of the VISSIM and it was missing what we considered were the key movements basically around the junction, so I don't think I have seen that, Tim and if I have, I apologise, but pretty I sure haven't.

**Tim Wright / Helen Bowkett** 46:11 They suppose, probably what wasn't clear when we wrote it up that we've taken the routes as they were defined in the do minimum model, not in the do something model.

**Simon Tucker** 46:20 Yeah.

**Tim Wright / Helen Bowkett** 46:22 So we can fill out the routes and the do something model in a way like have another table on supplementary to the table that we issued and that should resolve that point for you and.

**Simon Tucker** 46:34 Yeah, I understood, I understood you had confirmed that before Helen, that, that, that was why they weren't there because it was the do minimum, I suppose.

**Tim Wright / Helen Bowkett** 46:39 Yeah. So what I was going to say is what I'd intended to do was revise those tables completely when we got the new model upgrade.

**Tim Wright / Helen Bowkett** 46:49 And then in that include that expanded table so that it was all there and clear in one place.

**Simon Tucker** 46:57 Ultimately from I think from my perspective the bit that and it probably comes into model iteration a bit, Kirst, doesn't it, is that once we do we have comfort and confidence that the two models converge to the appropriate degree of satisfaction, and that that's what those tables purported to do at Deadline 1 but what they didn't do because they didn't assess the do something situation, so perhaps when we get to the discussion a bit later on, we need to just agree and it's part of the iteration point is what we're actually getting to give us comfort that the two are appropriately aligned or converged or whatever terminology we want to use.

**Kirsty McMullen** 47:45 I agree, so I think it's really important that we need to be very clear before, of the scope of that model iteration and how we will determine and agree that acting reasonably and that we're very clear you know, we're not asking for complete convergence and but that there is a level of alignment, a reasonable level of alignment between the models and so we need to discuss that in terms of how we're going to determine that.

**Simon Tucker** 48:23 Yeah what's the test for the panel's question was.

**Kirsty McMullen** 48:25 Yes.

**Simon Tucker** 48:30 Focus should be on narrowing areas of disagreement, specifically to reconcile identified differences between LTAM and VISSIM, while recognising always be a degree of divergence and local highway authorities shouldn't be unreasonable in that

respect so actually understanding how we're going to answer that question, that's what that's about and it might not that might not be the right way of doing it and updated table 4.5 to 4.8 but we need to have an agreed way of deciding whether they are converging to a whatever they said and acceptable degree or whatever.

**Kirsty McMullen** 49:07 OK, so we can incorporate 3.9 into the discussion on model iteration and what output we will be using to make judgements on the level of alignment of the models.

**Chris Stratford** 49:24 Tim has his hand up.

**Simon Tucker** 49:25 Or what?

**Simon Tucker** 49:26 What metrics we're comparing, I would say Kirsty.

**Kirsty McMullen** 49:26 Sorry, exactly. Yeah.

**Tim Wright / Helen Bowkett** 49:31 So in terms of the action, I agree with that.

**Kirsty McMullen** 49:31 Tim.

**Tim Wright / Helen Bowkett** 49:33 I think that's best, I think you know it it's fundamentally about communication of information, isn't it. I think it is worth putting a marker down though that you know our position is not that we should be trying to get convergence in these models and we've set out that to the Examining Authority and that's not what we're trying to achieve and I recognize that the Examining Authority have used those words and set out what they would like us to achieve but we've been very clear that we'll go through this exercise of sharing some information with you to understand why, to what level that divergence might affect certain flows. I'm choosing my words carefully and hoping that Helen will correct me if I'm wrong, but that we don't agree that we should be iterating to a point of convergence fundamentally here.

**Simon Tucker** 50:29 No, that didn't.

**Simon Tucker** 50:30 That's clear. That's understood.

**Tim Wright / Helen Bowkett** 50:35 But yes, in terms of these, so I think we have provided that explanation. I think the outcome though is that, yes, in terms of the next round of information sharing, let us work together and agree the detail of what will be provided so that it is as informative as it needs to be it.

**Simon Tucker** 51:02 My point was supposed was that there's no point Helen's team spending time doing that. If we all agree around this table that the better way of assessing how the two models are showing differently is a different output altogether, and then that becomes relevant in that table.

**Kirsty McMullen** 51:16 Yes.

**Simon Tucker** 51:17 That's fine. That was my point.

**Tim Wright / Helen Bowkett** 51:18 And it's really welcome that discussion, because we tried it several which ways around.

**Simon Tucker** 51:23 No I'm sure you have had it in there.

**Tim Wright / Helen Bowkett** 51:24 So yes, welcome.

**Kirsty McMullen** 51:27 OK and so what we need to add on to the model discussion is how we're comparing the models.

**Tim Wright / Helen Bowkett** 51:37 Yes.

**Kirsty McMullen** 51:38 OK so that's 3.9 that we can discuss and set the program for and the final one in terms of the ones that were agreed, conscious of time because we need to move on to the actual modelling discussion, and provide details of traffic congestion on the approaches to Orsett to determine what impact this might have on route choices such as rerouting back via M25, Junction 30.

**Black, Colin** joined the meeting

**Tim Wright / Helen Bowkett** 52:09 Isn't this just the outcome of the exercise again, it feels like it's the third time this has come up.

**Kirsty McMullen** 52:14 Yes, so this is similar to point 3.3, which was about traffic increases on the local roads as a result of Orsett Cock and LTC.

**Tim Wright / Helen Bowkett** 52:23 Yes.

**Kirsty McMullen** 52:29 This is a similar one, so once we've gone through the modelling exercises and we've got an agreed set of models, we then need to have the information provided to enable judgements to be made and so we can, this is the output of that process. Agree?

**Tim Wright / Helen Bowkett** 52:47 So it's almost like we've got a couple or three different objectives for the SATURN output that are reflected by these different actions. One is local roads, one is the sort of more strategic junction choices, and those are all objectives for what we're trying to achieve with providing an output for SATURN. They're almost input statements to the SATURN output. It comes to the point of agreeing the metrics and the reporting to make sure that it captures the impacts on the SRN as well as the LRN.

**Kirsty McMullen** 53:28 So I didn't quite hear that, sorry.

**Tim Wright / Helen Bowkett** 53:32 So I'll come closer to the speaker.

**Tim Wright / Helen Bowkett** 53:34 It comes back to Simon's point really and your point of agreeing the output, particularly because of the time pressures we're under it to make sure that the outputs provided provide the information on the SRN as well as on the local roads.

**Kirsty McMullen** 53:39 Yes. that's fine. OK and if we can just move on, cause it when I was doing some timings then I was hoping by 2 o'clock would be getting on to the VISSIM forecasting model. There's three slides on modelling, modelling actions not agreed, there's for all these, so it says for all these actions, the scope and method must be agreed with the Councils as local highway authority and, well effectively, and the stakeholders prior to issuing and then that was not agreed that you wouldn't agree to the modelling scope.

**Tim Wright / Helen Bowkett** 54:35 I think let's go through the items on the scope, but the fundamental point here is, you know we can't iterate around and around in seeking

agreement, there may be a point that we come to disagree on the modelling scope and we just have to accept that. Let's go through the modelling actions or, you know we've got a list of responses to your comments, many we will accept some we don't.

**Kirsty McMullen** 55:01 OK.

**Tim Wright / Helen Bowkett** 55:04 So I think we need to have that discussion.

**Kirsty McMullen** 55:04 OK, OK, that's fine, understood, 1.5 clarify that for National Highways to clarify whether it is prepared to share the A13 corridor model and the A122 LTC micro simulation model, we've got your response back saying that they won't be provided or it was to provide a formal request I think we have now provided a formal request in writing via the D4 submission and it's whether that still stands or not.

**Tim Wright / Helen Bowkett** 55:50 So I think to be clear, there is no A13 corridor model, if you look at that localised modelling report Appendix H, you'll see a series of different bits from an earlier stage, so that remains no. In terms of the A122 LTC, Helen, I think you're having the team look at whether they can package it up (Helen) Yes, we'll put it together (Tim) so I thought you're likely to be a yes, but we I just need the team to confirm what that actually means.

**Kirsty McMullen** 56:16 OK.

**Tim Wright / Helen Bowkett** 56:23 The A13 corridor model was actually a small model that was built on part of the A13 to calibrate the driver behaviour, that wasn't a full cordon model of the A13, and it was mentioned in the local model validation report for the A122 complete model.

**Kirsty McMullen** 56:47 OK. But the A122 sounds like that could be packaged up OK.

**Tim Wright / Helen Bowkett** 56:55 Yes.

**Kirsty McMullen** 56:57 Thank you. 1.6 this was to see whether it's prepared to share the M25 corridor model and to enable Council to better understand on some forms of junction 31 and 30, I think that was not agreed and we'll just put it as action to remain as not agreed unless there's an update.

**Tim Wright / Helen Bowkett** 57:22 Well, it's just that factual information, it was a small model that was created during the design development phase to look at the possible value engineering idea along the M25, which was then not taken forward so it's years old, it wasn't, it was just some part of one link on the M25.

**Kirsty McMullen** 57:43 OK.

**Tim Wright / Helen Bowkett** 57:43 It's not possibly what people thought when they said, M25 corridor model that we had a VISSIM model of the whole of the M25.

**Kirsty McMullen** 57:54 Yes.

**Tim Wright / Helen Bowkett** 57:54 No, that wasn't what it was.

**Kirsty McMullen** 57:56 I think it probably will help with this map if being able for you to able to say all of these models and the extent of that you know what they covered. I think

that would probably put some provide clarity on this which is one of the other actions that I think.

**Tim Wright / Helen Bowkett** 58:11 We'll have a look at that and see if we can make it any clearer.

**Kirsty McMullen** 58:20 OK, so then this is again just going back to, it overlaps with the discussion that we've just had before, which is 1.3 about just having its not exact date, it's just a timeline just to show the process that you've gone through because we're in the dark on internally what's how the modelling has been used to inform design and decisions.

**Tim Wright / Helen Bowkett** 59:00 So that's I mean, refer you to table in Appendix H again.

**Kirsty McMullen** 59:06 OK remember, I can't see any hands, so if anyone has a hand up, you have to tell somebody. Thank you.

**Tim Wright / Helen Bowkett** 59:18 OK.

**Chris Stratford** 59:19 None so far.

**Kirsty McMullen** 59:20 OK, 2.3 and this was about providing turning movements information, so we have got the select link analysis that's provided at ISH4 issue specific hearing four and I don't believe we've got an update on turning counts which just requested by Simon, is that is that being provided?

**Tim Wright / Helen Bowkett** 59:47 Is that information we're putting for Deadline 4 turning counts? Do you mean the 2016 count data?

**Kirsty McMullen** 59:57 I think it was more for the forecast modelling, wasn't it Simon.

**Simon Tucker** 1:00:01 So sorry, so I have got that data now you sent that to me last Friday I think Helen or someone did from your side.

**Tim Wright / Helen Bowkett** 1:00:03 Yes

**Kirsty McMullen** 1:00:08 OK.

**Tim Wright / Helen Bowkett** 1:00:08 Yes, last Friday.

**Simon Tucker** 1:00:10 Thank you.

**Tim Wright / Helen Bowkett** 1:00:13 And that was to help Simon because he hadn't been involved in all these workshops, everything and hopefully it helped him to understand how the matrices have been built up.

**Kirsty McMullen** 1:00:19 Yes.

**Simon Tucker** 1:00:23 Yeah, I don't think, I don't think I've got the select link, I know I've got those, you gave me those on the, those came with the actual hearing didn't know, so I'm pretty sure I got all of that.

**Kirsty McMullen** 1:00:32 There at the hearing.

**Simon Tucker** 1:00:35 Now, thank you here.

**Kirsty McMullen** 1:00:39 OK, 3.2 and mostly about the differences I think we've covered this one if I'm wrong and find especially about differences I don't know, so I think this was



about, I think this has been superseded, to be honest, so there we had a there was a forecast VISSIM model and of September 22 and then the D1 submission and you're going to provide an explanation the differences between those and because we didn't have a model log, but actually we've now provided you with an updated forecast model at D3. So this, these were, we were thinking that these two models that are referred to in action 3.2 are now no longer, that they're now redundant effectively and the model, we'll wait and hear what you say about the forecasting models and that we were envisaging that the model you would take forward would be the updated model provided to you at D3 by Thurrock Council.

**Tim Wright / Helen Bowkett** 1:01:47 So we have a fundamental issue with that in terms of we're not going to just adopt your model into our process. We are going to fundamentally update our models, I mean that model that you provided is helpful in a way to understand how you've brought out some of those changes and what you see as you would like but fundamentally, we will update our own model and run that way. There is a separate conversation to be heard about whether we have prior agreement on the preparation of new models, but that's a PPA discussion, which isn't necessarily one for this audience.

**Kirsty McMullen** 1:02:33 So then maybe this actually does still stand then in in that case, so, which model will you be updating. Are you taking forward to your D1 submission and updating it?

**Tim Wright / Helen Bowkett** 1:02:52 Now it will take forward the one that we, yes sorry, the D1 submission.

**Kirsty McMullen** 1:02:56 D1 submission.

**Tim Wright / Helen Bowkett** 1:02:57 Yes, that's correct. Yes.

**Kirsty McMullen** 1:03:02 OK.

**Tim Wright / Helen Bowkett** 1:03:03 Marius, we need to get your version controlled around because D1 submission is a terrible way to refer to a model, so we need to get your version number on the table so that we can all deal with deal with it properly.

**Kirsty McMullen** 1:03:14 Please yes.

**Le Roux, Marius** 1:03:15 I mean, it's if I could just really quickly say essentially what has been submitted August, September last year is version 1, D1 submission is version two. So from now on, we can refer to version one and version 2 and we will build on that. Subsequent to further discussions in terms of version three and versions and so on, but the two that we have at the moment, version one and version two. So hopefully that's clear.

**Kirsty McMullen** 1:03:46 OK, I think I suppose from our perspective that will slow down this process and so we'll need to factor that into the program because if we're not moving forward with the version that was provided at D3, that means that we will need to do a further review of your version three to see which of the changes you have made and which you haven't made, so we really will need a clear model log that goes with version three that sets out the changes that you have made and the reason for those changes and we will then

need time to review it, so I suppose you know, we were obviously hopeful that we could speed up this program but that doesn't look to be the case so we'll need to incorporate that into the program discussion. OK. So in terms of 3.2, but I don't think we've ever, so this was a model log between what we were requesting here was a model log between version one and version 2.

**Tim Wright / Helen Bowkett** 1:05:07 So we'll provide that alongside the model so you'll get it with the update and I think we want to talk through some of those changes so that you'll have sight today of if we can.

**Le Roux, Marius** 1:05:13 Correct.

**Tim Wright / Helen Bowkett** 1:05:24 Squeeze it into the agenda, which I think is next anyway.

**Kirsty McMullen** 1:05:24 OK. Final, this is the final slide and let's then we can talk about I'll switch my screen off and talk about the VISSIM model and so just the final couple was, NH to provide a zoomed in version of plates 3.25 to 3.27 and the TA for Orsett Cock and Manorway and explain differences between these and VISSIM outputs.

**Tim Wright / Helen Bowkett** 1:05:54 So I think we've agreed to that way one since last month and Manorway because they have this happening and they're coming out this week yeah, so put Friday down.

**Simon Tucker** 1:06:11 Is that going to include Orsett Cock as well, Helen?

**Tim Wright / Helen Bowkett** 1:06:14 So you just ask for Manorway, I mean it's sort of irrelevant because you've got, everybody's got the SATURN models, they've got the VISSIM models, the purpose of the plates in the TA was just a metric that we set up looking at the V/C ratios to give the reader an idea of where the impacts would be on the network.

**Simon Tucker** 1:06:39 Sure.

**Tim Wright / Helen Bowkett** 1:06:39 So they're sort of superseded by the fact that you've got the detailed modelling output, but you did ask in the meeting for zoomed in version of Manorway.

**Simon Tucker** 1:06:48 So sorry, what data from SATURN have I got for that.

**Tim Wright / Helen Bowkett** 1:06:54 Well, so I got the SATURN cordon models and got the shape files that have all the V/C data in it.

**Simon Tucker** 1:07:03 I don't work for Thurrock, unfortunately, Helen so I haven't got that.

**Tim Wright / Helen Bowkett** 1:07:07 Has Simon not got that, I thought you had this.

**Simon Tucker** 1:07:10 The point of the question, sorry I wasn't meant to be the, point of the context of that discussion was that you've got pictures in the TA or plans in the TA which show those junctions at different states of having an adverse impact, which isn't reflected in the outcome of the VISSIM modelling and we debated that and you said, Helen, that that's because there zoomed out, you need them zoomed in because you can't tell which links they are on the plans so it wasn't meant to be a complicated request.

**Simon Tucker** 1:07:43 It was just a matter of whatever screen you printed off, the ones that you've got in the TA, just to zoom them into those two junctions so that we can compare that with the VISSIM.

**Tim Wright / Helen Bowkett** 1:07:45 But it's not comparable with the VISSIM because if you look at the explanation of.

**Simon Tucker** 1:07:58 That's my point there, isn't it, that's 100% my basic objection, to that.

**Tim Wright / Helen Bowkett** 1:08:01 But because now we're now moving on and we're working on the VISSIM and so the two things are completely different, one's a matrix that was based on looking at the V/C ratios at LTAM and VISSIM is a quite different beast that doesn't report V/C ratios anyway, so I don't quite know where we are going with this, I think. Let's step back let's not talk about the use of it. Simple fact is we have some zoomed in plates for Manorway which we can share this week, yes, the information for all sectors.

**Simon Tucker** 1:08:45 Are you? You're not going to provide them for Orsett Cock?

**Tim Wright / Helen Bowkett** 1:08:49 We can, if we're asked, but we haven't been asked in the meeting to do that, or if, hold on, isn't the point here that we actually the.

**Simon Tucker** 1:08:51 You have been asked for.

**Tim Wright / Helen Bowkett** 1:09:00 I'd have to remember them, but the plates for Orsett Cock are already zoomed in in the TA, it's that Manorway sat outside of the area of focus.

**Simon Tucker** 1:09:11 There are the same scale to on the same plan.

**Tim Wright / Helen Bowkett** 1:09:11 No, how hard is it to produce some for Orsett Cock, not hard, but we can do it then let's do it, and let's just move on.

**Simon Tucker** 1:09:22 OK.

**Kirsty McMullen** 1:09:23 OK, the final one was about mitigation, but we've set that out and early in terms of mitigation so we'll come to that one when we've got modelling, I'm going to unshare my screen because we need to move on to the actual purpose of the of the workshop which is discussed. I think the next bit was the forecast VISSIM model. So we just touched on that in terms of just say that everyone's clear we so there was a, let's get the versions right, there was a an updated version provided by National Highways version one, in September 22, then there was a version provided version two at Deadline 1 and at Deadline 3, Thurrock Council provided, and was based on version one, the September 22 version, an updated VISSIM forecast model that had provided changes to the network coding based on the model audit that had been undertaken by Stantec that was with a Technical Note that set out the changes that had been made, so I think said, so effectively we've got version two currently from National Highways perspective, the latest National Highways model is version 2, submitted at D1. There is one model that was provided by the Council at Deadline 3. So if you're able to set out where you're at with the forecasting model, we can then have a discussion on it.

**Tim Wright / Helen Bowkett** 1:11:19 So, Marius, I think the best thing here is if you can

bring up your table, of what we've done is taken each of your comments and considered it and prepared a response.

**Le Roux, Marius** 1:11:40 That's fine, I'll share it now.

**Kirsty McMullen** 1:11:52 So just before we do this, we'll obviously share our slides after this workshop, are you able to share these things as well?

**Tim Wright / Helen Bowkett** 1:12:01 Yes.

**Kirsty McMullen** 1:12:02 Thanks.

**Le Roux, Marius** 1:12:02 Yes, no problem, so as I said before, the note essentially just captures a bit of a version control, essentially, before we provide the detailed version look as we agreed earlier in this meeting, but essentially version 1.5 issued in September and in version two was provided in Deadline 1, some of the main changes has sort of highlighted that as well that we made between the version one and version two of the model. Some of these are captured within the comments as well, so I'm not going to spend too much time on that now and it's also confirmation what version two was based on in terms of the LTAM ID runs as well, so that that's set out at the beginning of the note and then the rest is essentially going through each of your comments. We've taken those comments that you've provided just put it into a table so that we can neatly put next to it what our response to each of those comments were. Now, the comments were written in a way that, as you explained Kirsty, it was changed, it was made to the model that we submitted all version one of the model we submitted, so, we've just captured that and provided a response next to those. And if I go through this line by line, I think that's probably the best way to go through this to demonstrate we have.

**Kirsty McMullen** 1:13:37 Yes.

**Le Roux, Marius** 1:13:39 You know, we've looked at those. The first one I think there was it, it was picked up. There was too many edges and again there was one of the changes that we've made between version one and version two. So that first comment that's already been addressed in the version that was submitted in Deadline 1 and the next comment is to do with the flare lengths that was picked up in version one. Again, we did a comparison between the model that was provided by yourself and that we have and some of those are fairly small differences in terms of the flare lengths.

And so the key thing is we didn't have an as built drawing associated with the work that we completed when the model was in development. The construction was still ongoing, so we can have a look at those flare lengths at those locations. A13 West-East and also the A28 Stou Brentwood Road. And compare that to the actual drawing and then make the changes if necessary.

**Tim Wright / Helen Bowkett** 1:14:46 But so the core here is we don't actually have as built drawings for Thurrock for Orsett Cock roundabout. Do you now have as built that you can share with us?

**Kirsty McMullen** 1:15:05 I wouldn't be able to answer that, I don't think Colin's on the line and we might have to get back to you that on that Tim and confirm.

**Chris Stratford** 1:15:13 I did ask a few months ago and I was told this takes a little bit of time, it's perfectly reasonable, request Tim and I will check with Colin and others and get back to you as soon as we can with an answer.

**Tim Wright / Helen Bowkett** 1:15:29 Because, you know, at the end of the day, I know I'm not a traffic modeller, but 20 centimetres. So and I appreciate one of them is a little bit higher at 70 centimetres, but what is the right answer here we don't actually know what the right flare length is without as built drawings.

**Chris Stratford** 1:15:48 Sure. OK, leave it with me. I'll try and get an answer this week, one way or the other.

**Simon Tucker** 1:15:57 Great. Chris, for reasons that I can't quite recall, I think Trevor's got a copy of those.

**Chris Stratford** 1:16:04 Really.

**Simon Tucker** 1:16:04 But if you're struggling, and if you drop me and him an email, I'll see if I can find them as well.

**Chris Stratford** 1:16:10 OK and once Colin comes back, he's at the dentist at present, but once Colin comes back, I will ask him to pursue as well, just to make sure that we got the right ones.

**Le Roux, Marius** 1:16:26 Thank you. So point 3 is so in the similar vein and the previous one again there was a comment in regards to the lane circulatory lane allocation on the circulatory to match the as built and some of the thinking if we have the as built drawings then we can obviously change the models associated with lane markings on the as built drawings. And point 4 is it is one of those which we feel that we, you know, there was a comment made about the lane behaviour that was requested to change from urban merge to urban motorised, however we feel that urban merge was applied to allow for smoother, more cooperative lane behaviour change and you know, not resulting in vehicles sticking to one lane and then at unrealistic long time waiting and unrealistic long time to change lanes. So in this particular point, we don't agree to change the model, or taking on board to change that Thurrock has made within the model that they submitted.

**Tim Wright / Helen Bowkett** 1:17:40 But before we move on from that, I think we need to have the conversation about that, Marius.

**Le Roux, Marius** 1:17:41 Yes.

**Tim Wright / Helen Bowkett** 1:17:47 So I mean fundamentally, as I understand it, we think that this is the best thing to represent driver behaviour in this location and I have got to admit, having taken a couple of taxis around that roundabout recently, that seems right to me, by the way people drive. Is this a fundamental concern from your team, Kirsty, or is that one that you understand and accept our position on?

**Kirsty McMullen** 1:18:20 Sorry, I think before we have to take some, these are the first time we've seen these, so let's run through them if you can provide them, the updates to us and we can go back to the VISSIM modelers and do a very quick review and then come back to you and we'll do that quickly.

**Tim Wright / Helen Bowkett** 1:18:44 Yes.

**Tim Wright / Helen Bowkett** 1:18:45 Carry on then, Marius.

**Le Roux, Marius** 1:18:46 OK. Thank you. Thanks, Kirsty. Five and six if you can group them together with, you know again relates to locations of merge and diverge locations and how that's been coded within the VISSIM model.

**Le Roux, Marius** 1:19:03 And again, the way we've coded it, we feel that that's representative of the area and how traffic behaves and we've discussed this internally with a number of colleagues within our modelling and micro simulation team as well, again, we felt that what we have currently in our model is adequate. So again, for those two, we're not going to agree to make those changes in the model that we currently have. So it might be Kirsty, that might be a couple that you might need to take back to your VISSIM modellers as well. And when we provide this so you know we can, we can see what they say as well.

**Kirsty McMullen** 1:19:43 OK. Thanks.

**Le Roux, Marius** 1:19:48 Moving on to point 7, change of reduced speed areas on the slip roads and I think it was a comment there within the document there was three slip roads that was highlighted where the speeds need to be reduced. Again, two of those was already picked up in version two, so we've changed the speed from LTC south-northbound to the A13 was changed from 40 miles an hour to 30 miles an hour, and also from the A1089 to the A13 from 40 to 30 so that was captured within our version two of the model. However, we do not agree with a Thurrock view to change the sliproad from the A1089 to LTC south to 30 miles an hour because there's an advisory speed limit of 50 miles an hour, which is we saw it posted so we're going to stick to that. Some of these you will take away anyway we will provide this. You going to take it anyway? You could have a discussion with your VISSIM modellers to listen to in any case. So and then you know we can work collaboratively to see what the best outcome is. Signals on the circulatory again, that was changed to VISVAP, which is essentially a vehicle actuated signal control, and that's dependent on traffic demand. How we coded as we had fixed timings and the reason why we do not agree to change that to VISVAP is that fixed timings provide that coordination between upstream and downstream signals whereas VISVAP based on the demand you can change the signal timings so, we felt it's better to have the coordination between the stop lines if you like, in order to get traffic through. So again, that's one of the ones we would not agree to change and we'll stick to the fixed timings purely for that coordination between the signals. I mean, we know the demand is quite heavy at the roundabout in any case, but that's our reasoning for not changing that.

**Kirsty McMullen** 1:22:04 OK.

**Le Roux, Marius** 1:22:06 I think 9 is link resolution and accuracy, changed links to match as built design across the whole model and these are very minor discrepancies, but essentially, yes, we will change those by you know it, it has very little impact so I don't think we need to discuss spend a lot of time, but nine as itself. 10 is probably linked to the latent demand where we agreed to that we will extend the some of the links and again within version 2 or the latest version that we have, we've extended that particular link the A13 eastbound approach. We've also extended the entry of Rectory Road and also the A128 north approach within the latest model that we have. Don't think there's any sort of, you know, disagreement to that, you know, I think we all agree on that particular item. And point 11 is very similar to point 5 and six, that I've highlighted above in terms of the driving behaviour in terms of how they merge. So again, don't want to spend too much time on that, but probably one of the other you know, if they review five and six if they can also incorporate within that same review but at the moment, we're not going to change that on our behalf. Then 12 is just to reduce the speed area lanes to avoid them running through connector start and end points. We've picked it up so that occurs at three locations at the A128 north entry, A13 East and A128 south entries so we will change that so I think that's all agreed. So it just three locations. 13 as well you know, then include a diverge point, we'll be happy to add the diverge point to node 119 in our next version. 14 not really strictly required but as noted by your VISSIM team, again we will add nodes to the 9 diverge point in the next version of the model. 15 is the one we have picked up with in between our internal checks between versions one and version 2 that was submitted at Deadline 1 and that has already been incorporated in version 2 and then the last point is I think there's mention of a Pegasus crossing, which I've been and we don't have any details about that so again, if there is an as built drawing that can be provided, we will include that within our model so I don't know what the detail is on that.

**Tim Wright / Helen Bowkett** 1:25:09 Honestly, we're not aware of that Pegasus crossing.

**Tim Wright / Helen Bowkett** 1:25:12 That's new on us.

**Kirsty McMullen** 1:25:13 This is your Pegasus crossing, my understanding.

**Tim Wright / Helen Bowkett** 1:25:16 No, yours.

**Le Roux, Marius** 1:25:19 We don't have here. We don't have a Pegasus crossing in our LTC design drawings, and that's probably the main reason why we haven't included this originally.

**Kirsty McMullen** 1:25:24 It's referenced in the TA, but it's not on the design drawings.

**Tim Wright / Helen Bowkett** 1:25:36 Not sure.

**Kirsty McMullen** 1:25:39 Well, we can send through.

**Tim Wright / Helen Bowkett** 1:25:41 I think I suggest we both take a look at that.

**Le Roux, Marius** 1:25:43 Yes

**Kirsty McMullen** 1:25:43 We'll send through further information on that.

**Tim Wright / Helen Bowkett** 1:25:46 Yes.

**Le Roux, Marius** 1:25:47 Yeah. And that's the extent I think they were 16 comments that was provided within the document, your response, Thurrock's response, and if I've heard correct me if I'm wrong Tim, we will also share this note which I've just prepared with the with Thurrock.

**Tim Wright / Helen Bowkett** 1:26:08 Well, so I think, I mean we can move on to the next bit I think this note needs to go to Thurrock as soon as possible, so I suggest we just, Helen and I take a final look at it and then get it out this evening.

**Tim Wright / Helen Bowkett** 1:26:25 I think because clearly there's some stuff that Kirsty's going to need to take away with the team there.

**Kirsty McMullen** 1:26:30 Yes.

**Tim Wright / Helen Bowkett** 1:26:34 So that's where we are now. So we're obviously in the process of doing the modelling to reflect those changes where we agree to them. I noticed Nadia put hand up. Sorry, perhaps I'll let Nadia jump in.

**Lyubimova, Nadia** 1:26:53 Yes. Thank you. Just before we move on to another subject, just in relation to this microsimulation model within D3 submission, within one of the annexes to Appendix E, we raised a number of requests for clarification of the changes made to the VISSIM version 1 to version two, or are you working on addressing those as well?

**Le Roux, Marius** 1:27:27 Because that the Version log, is that right which you will understand what the changes is between version one that was submitted in Sept, August, September.

**Lyubimova, Nadia** 1:27:35, It's understanding what the versions were and why.

**Le Roux, Marius** 1:27:38 Yes, that would be.

**Lyubimova, Nadia** 1:27:40 Why were those network changes were implemented?

**Le Roux, Marius** 1:27:43 No fair enough yes, I think that will be captured within the version log that's going go out this week.

**Tim Wright / Helen Bowkett** 1:27:48 You tell me if they're in the version log. I've said it's going out this week.

**Le Roux, Marius** 1:27:54 They will be. They will be there. I can confirm that they will be within the version log, so you will understand why, what changes have been made and why they have been made between version one and two.

**Kirsty McMullen** 1:28:04 And that's between. OK. That's between one and two. And then obviously what you've just run through is a note to set out what you are planning on or in the process of changing between version two and three.

**Le Roux, Marius** 1:28:08 Exactly.

**Tim Wright / Helen Bowkett** 1:28:19 That's right, yes.



**Le Roux, Marius** 1:28:20 Exactly, so that you will get the log between one and two. We will just add to that you know when we create version three so it tells the full story at the end of it.

**Kirsty McMullen** 1:28:21 So if you're able to, Tim, if you're able to issue the note that Marius has just put on the screen and tonight, that would be really helpful, because then that will allow us to quickly review that and provide any comments back so Nadia will be able to do that maybe this this week, can we commit to that?

**Lyubimova, Nadia** 1:28:55 Yes.

**Kirsty McMullen** 1:28:57 And then at the same time you're providing this, so this week you'll be providing, by the end of the week the model log with the changes and the reasons for those changes between versions one and two. So it allows that process to be complete this week between the two teams, OK.

**Tim Wright / Helen Bowkett** 1:29:11 That's right, yes.

**Le Roux, Marius** 1:29:17 Correct, correct.

**Kirsty McMullen** 1:29:18 Then in terms of, so you obviously in the process of making those changes, Marius, and what's your timescales for being able to issue a version 3 model?

**Tim Wright / Helen Bowkett** 1:29:30 So I think Marius, we were talking the back end of next week, is that right?

**Le Roux, Marius** 1:29:30 Yes, that's correct. Yes, absolutely. Right. I'm just about to say that back of next week.

**Kirsty McMullen** 1:29:43 OK.

**Tim Wright / Helen Bowkett** 1:29:48 So obviously that's contingent on your view on what Marius has just set out because you know if you agree with those positions, then what we put out in the back end of next week will be something that we all agree on.

**Kirsty McMullen** 1:29:56 Exactly.

**Tim Wright / Helen Bowkett** 1:30:06 But if you don't agree with those positions, then we may have iterations of discussion, but I guess the one thing to caution on is at the moment we haven't made any of the changes to reflect as-builts.

**Kirsty McMullen** 1:30:13 OK, no. No.

**Tim Wright / Helen Bowkett** 1:30:25 Which you know, we agreed to change. If we get as builts, well, that might slow it down a bit. That's the only issue. The question I guess, is how significant are those? I mean, some of them are small, some of them are slightly larger. I think the largest one you showed was 70 centimetres, so.

**Kirsty McMullen** 1:30:45 Yes, let's. And we we've put in a request while we're at this meeting for the as built drawings. So let's come back to you on that and then we can take a view in terms of their availability and make a judgment on that. So that's fine. And just in terms of, I am going back to the this, this modelling, obviously we don't submit the models. Sorry, Nadia. You go.

**Lyubimova, Nadia** 1:31:13 Sorry, go ahead first.

**Kirsty McMullen** 1:31:15 Now, as you say, we don't submit the models to the examination, but we are going to be, so next week's obviously Deadline 5. So we will be then, so I think from a Deadline 5 perspective, it's this joint paper is the outcome of this workshop that we'll submit and that we'll have a program. So we can then summarise the status of the models and a program for resolution as part of that, and that's what we would be concentrating on this week with you and we'll just need to use this modelling process, I suppose what we need to make sure is that we're providing updates that what we don't want is that the deadlines, we have to provide things only coincide with deadlines in terms of transfer of information. We should be transferring information as quickly as possible, but providing updates at the deadlines is what we're hoping.

**Simon Tucker** left the meeting

**Tim Wright / Helen Bowkett** 1:32:14 Yeah.

**Kirsty McMullen** 1:32:17 So we don't want to wait for deadlines and the program to be dictated around those deadlines, but that we're able to provide status updates at those deadlines.

**Tim Wright / Helen Bowkett** 1:32:27 I agree with that. I think, I mean to be honest, I suspect the Examining Authority would prefer it altogether if we didn't submit a vast amount of new information in and rather provided them with our positions on it.

**Kirsty McMullen** 1:32:45 Agree. OK. Just in terms of what you were discussing for version 3, Marius, so it can, there's a few things. So latent demand, I think that was mentioned in your table. So I know you've been looking at this at the August time on the previous version or version 2. So effectively you're extending the approaches and can you say what would be very helpful in terms of forecasting reports? There's no at the moment. National Highways haven't provided any analysis of latent demand, and so what we've requested at deadline 4 and in our submission.

**Kirsty McMullen** 1:33:36 And is that all forecasting reports do report on latent demand because it's so key to understanding whether network statistics that are being reported include you know, obviously you understand the status of the, the importance of latent demand and making sure that we're not underreporting queuing and delay.

**Le Roux, Marius** 1:33:49 Yes, correct.

**Kirsty McMullen** 1:34:00 And so if we can make sure that all forecasting reports that get issued include latent demand and delay summaries that would be helpful, that's not just for also that's for all models.

**Le Roux, Marius** 1:34:14 Yes.

**Kirsty McMullen** 1:34:14 And I another element is the weave length that we discussed at ISH 3 so that the model, the VISSIM model, had been updated and extended. And in terms of the weave length as between LTC and the eastbound LTC departing LTC and the off slip of

the A13 eastbound and that weave length in the design is around 90 metres, but in the model had been extended but wasn't even sufficiently extended in in the model.

**Le Roux, Marius** 1:34:43 Yes

**Kirsty McMullen** 1:34:53 So can we have just a discussion in terms of version three of how that's being dealt with because that is a residual issue?

**Le Roux, Marius** 1:35:02 We can make sure that that's captured within the version 3 forecasting report. I've had, you know, the highways team is aware of that change we've made in the model. So and you know that could possibly be one of the things that they will pick up in the next design stage. But yes, we will make sure that's, you know discussed. I think it is highlighted within the forecasting report we've provided that we've extended that but linked but we can spend more time in version 3 on that and describe that a bit better if that makes sense.

**Kirsty McMullen** 1:35:36 It's whether it's been, so there's the two points, it's whether it's been extended sufficiently to actually address the issue. And then the second point is that that's quite a considerable extension and currently the model does not align with the general arrangement drawing. So we don't think it's appropriate that there's a misalignment between modelling and general arrangement drawings and we would expect the general arrangement drawings to be updated to reflect the model design change.

**Tim Wright / Helen Bowkett** 1:36:18 So if I can pick up that one, we obviously have a different position to that because our view is that that is a matter of detailed design. So I would suggest that's a separate question to this modelling whether we should update the drawings.

**Chris Stratford** 1:36:33 Tim going from 95 metres to 200 metres.

**Chris Stratford** 1:36:44 That's quite a difference. Why wouldn't you show that?

**Kirsty McMullen** 1:36:46 And the 200 meters isn't sufficient to address the issue, so it might need to be more than 200 meters.

**Chris Stratford** 1:36:52 The how is that a matter of detailed design?

**Tim Wright / Helen Bowkett** 1:36:58 All I'll say is we set out our position and we've been asked a question on that as well, which we provided an answer to at the last deadline, so I think we could go into a long discussion about this, but frankly it's a distraction from the modelling question and I asked whether we wanted to talk about monitoring and mitigation, which I see this could potentially fall into and we're suggested not.

**Kirsty McMullen** 1:37:23 This isn't a mitigation, this is that your modelling should align with your design because you are using the modelling to inform your design. This isn't mitigation, this is your design and your modelling needs to align.

**Tim Wright / Helen Bowkett** 1:37:42 OK. But regardless, that I think it's we set out that we consider it's a matter of detailed design. We think it's within the limits of deviation and is appropriate to be handled in that way.

**Kirsty McMullen** 1:37:58 OK. We will have a look at your response. So you've put a response in, I'm assuming to this, at Deadline 4, have you?

**Tim Wright / Helen Bowkett** 1:38:11 It was one of the written questions we put our response in.

**Kirsty McMullen** 1:38:14 OK.

**Tim Wright / Helen Bowkett** 1:38:15 I can't top of my head tell you what the number is I'm afraid.

**Kirsty McMullen** 1:38:16 No. Wouldn't expect that.

**Chris Stratford** 1:38:19 So Tim, are there other areas of discrepancy between modelling and design that drop into this bucket of detailed design?

**Tim Wright / Helen Bowkett** 1:38:33 No, it's just this one, Chris.

**Chris Stratford** 1:38:36 Just that one, OK.

**Kirsty McMullen** 1:38:53 OK. Well, that is an area of disagreement and so in another element is, two more elements I wanted to come to in this version three, and one is demand versus actual flows and we would consider that you should be using demand flows for this and the other element that's linked to this is displaced traffic. So we've looked at the select link analysis that you provided at ISH4 and when you add up the difference between do something and do minimum is, sorry, there's the difference between those is around 700 vehicles. sorry I haven't got this is also out in Appendix ISH4. Haven't got the note on me, but effectively what it's saying is that the difference between when you add up all the demand at Orsett Cock in terms of do minimum and the do something, the difference between those is around 700 vehicles and Nadia might be able to know the exact numbers. And so when you look at the total number of exiting vehicles from LTC that are then wanting to route through Orsett Cock that's double that. So it's about it was around 1400 vehicles and so therefore the LTC, we've concluded is displacing around 700 do minimum Orsett Cock vehicles and based on LTAM that are not then able to route through Orsett Cock. They are routing elsewhere because that LTC demand is taking up that capacity.

**Tim Wright / Helen Bowkett** 1:41:23 Don't think you can let us safely assume that, Kirsty, because we've got VDM and area wide rerouting so too simplistic a train of thought.

**Kirsty McMullen** 1:41:37 Sorry you cut out then, Helen say you've got what was the first bit that you said?

**Tim Wright / Helen Bowkett** 1:41:39 So I think alright, let me move the speaker close.

**Kirsty McMullen** 1:41:47 Thanks, sorry.

**Tim Wright / Helen Bowkett** 1:42:05 I'll be back.

**Kirsty McMullen** 1:42:06 Yes.

**Tim Wright / Helen Bowkett** 1:42:06 Can you hear us?

**Chris Stratford** 1:42:07 Yes.

**Tim Wright / Helen Bowkett** 1:42:08 So we moved the speaker to be a bit closer to where

we are. I need to take that away, but my first reaction, I think that's probably too simplistic conclusions, because if you look at the SATURN model, you have quite a big VDM response and significant area wide rerouting. So, for instance, traffic that's from up to the northern end of the A128 changes its routes significantly. So rather than coming down Orsett Cock it's going along the A127 and joining LTC up at the north. So there's a lot going on over the wider area. So I don't think I would necessarily take one number from another and say that's what's been removed from Orsett Cock, so. So something it's not quite as simple as been laid out in that sequence of steps that you just suggested.

**Kirsty McMullen** 1:43:06 I think what we're concerned about, Helen, is that Orsett Cock should function well for the existing demand before LTC is it, and then when LTC is in place, it should continue to function well for that do minimum demand and that's what we're looking for.

**Tim Wright / Helen Bowkett** 1:43:33 Surely you know the do minimum should just represent how the network performs. We can't artificially make the do minimum work if it, the forecasting doesn't demonstrate that it works.

**Kirsty McMullen** 1:43:50 What we're saying is that there's a demand in the do minimum and then there's a displacement effect or reassignment effect away from Orsett Cock in the do something.

**Tim Wright / Helen Bowkett** 1:44:06 But some of that is positively choosing, so if you let me give an example, you've got HGV that are coming down the A13 and at the moment what's happening and say come off at Orsett Cock because they won't avoid junction 30, they go north up the A128 along the A127 but with LTC in place, they'll be able to come straight off the A13 onto the LTC northbound and not the M25 bypassing the A128 and the A127. So those vehicles would no longer appear at Orsett Cock, but actually they've got a better route. They're not displaced because of congestion. They're taking advantage of the scheme. (Helen) I'm just saying that I think your logic is too simplistic. So we can have a conversation about this, but I'm just not accepting that it's as you're laying out that Orsett Cock should be able to accommodate everything that's using it in the do minimum plus anything else that might want to use it as well as because LTC will result in traffic in the area, some of it choosing to take different routes and therefore not use the Orsett Cock.

**Kirsty McMullen** 1:45:04 And I think that's where we just need to understand where those routes were appropriate or not. So we need to understand, go through the modelling effect and we need for you to quantify those changes.

**Tim Wright / Helen Bowkett** 1:45:34 Isn't that effectively what the TA does though? Yes, modelling still. OK, I can take it away, but I don't see how we can supply any more information on rerouting than we've already provided, except we could select a random selection of points and show the routes with and without LTC from even more journeys, but I'm not sure where this is going to get us. With LTC, we've got lots of maps in the TA you get

a real change in how a lot of trips travel through the area because of the provision of LTC.

**Peter Ward** left the meeting

**Kirsty McMullen** 1:46:26 That is the concern in terms of. Is that rerouting as a result of congestion at Orsett Cock or is it rerouting, as a as a result of choosing a better route, is that an appropriate route.

**Tim Wright / Helen Bowkett** 1:46:44 So with LTAM, we've looked at the impact on junctions across the whole area and then the traffic chooses the best route to the trip it wants to make. So maybe if your concern is going back down to, has the congestion that Orsett Cock causes traffic to reroute I think this is again coming back to what we're looking at as an output from this modelling process.

**Kirsty McMullen** 1:47:13 So the concern is, is that the congestion will cause rerouting.

**Peter Ward** joined the meeting

**Kirsty McMullen** 1:47:27 And when we're talking or when we get on to be able to talk about mitigation and it's the, we are, there is a mitigation scheme for the right level of demand and the we need to just be careful and consider that rerouting of traffic and whether that's appropriate rerouting or not.

**Kirsty McMullen** 1:47:52 And if it's not that, that inappropriate rerouting should be accommodated within mitigation within Orsett Cock. And rather than acceptance of inappropriate rerouting, so it's just making sure that we understand when we get on to it in terms of the mitigation and the scope of that mitigation.

**Kirsty McMullen** 1:48:17 The scope for that mitigation is discussed in terms of the traffic that we're trying to mitigate for.

**Tim Wright / Helen Bowkett** 1:48:27 I think we need to have a separate conversation about that. I mean fundamentally our position is clear, the network needs to function. I mean if we, potential. I mean, whether or not there's people are rerouting in different ways if we simply provide sufficient capacity at Orsett Cock roundabout in a, and I say this in an without prejudice and notional sense.

**Tim Wright / Helen Bowkett** 1:48:58 It's just going to lead to changes in demand across the area. You know, we get into the predict and provide situation which is essentially what the National Policy Statement tells us we can't do. So I agree, you know this is a valuable discussion to have in terms of how the junction performs.

**Tim Wright / Helen Bowkett** 1:49:21 I think the Examining Authority, and that's the reason why we have the Ports at the table is, is minded of the importance of this junction for the access into and out of the ports. So I think that's a key understanding to go through, but I'm really concerned that we could turn this into all things to all people and end up with something that is vastly disproportionate to what is needed.

**Kirsty McMullen** 1:49:55 Phil you got your hand up.

**Phil Hamshaw** 1:50:02 Sorry, couldn't find the mic button and yes, I mean I think Kirsty, I

get your point. But I think to some extent, given time and the focus of this meeting, isn't that something you want to take offline really.

**Kirsty McMullen** 1:50:16 Yes.

**Phil Hamshaw** 1:50:17 To be honest and I think that the one thing I just want to say at this stage is what's still that modelling has to be taken place in the next version assuming called version 3, presumably you're going to provide all the additional assessment that went with it.

**Phil Hamshaw** 1:50:32 Obviously, from our perspective, journey times is quite a key one through Orsett Cock and therefore we're very keen and you will have seen our submission at the recent deadline in terms of making sure we cover all the various routes because we're particularly keen to see how that would impact those journey times because that's of particular importance to us. So just to confirm, that once you've done that modelling, you will be producing the same outputs in terms of reporting, is that correct?

**Tim Wright / Helen Bowkett** 1:51:00 So I think that is probably something that we should have a conversation around. Actually, you know the priority for me, I think in the next step is to get that model resolved and reported on and key to getting that model resolved and reporting on it is agreeing the scope of what's reported. I think the answer is yes, Phil.

**Phil Hamshaw** 1:51:23 Or hopefully yes, because you've reported on it previously. So it'd be strange that you didn't report on it again.

**Tim Wright / Helen Bowkett** 1:51:26 Let's just get the agreement on what is being asked for across the board. What we could do is in parallel with doing the updated model is right out the outputs that we propose to publish. So this is what we picked up with Simon Tucker's comment earlier about agreeing the metrics that we're going to report. So we could run that as a parallel workstream, if you're happy.

**Kirsty McMullen** 1:51:52 The metrics for which models, for LTAM and VISSIM?

**Phil Hamshaw** 1:51:53 Yes.

**Tim Wright / Helen Bowkett** 1:51:58 Yes, for the moment.

**Tim Wright / Helen Bowkett** 1:52:00 Let's focus on VISSIM in the first instance. So, and they wanted to see how they would do the comparison with VISSIM and LTAM.

**Kirsty McMullen** 1:52:09 We'll take the displaced traffic offline because we have only got an hour left and then and we can discuss that separately Helen. But effectively what we're saying is that there will be, and let's move on to trying to align, if everyone's happy, trying to align version three of the VISSIM model with LTAM or better align version three and if it's in the terms.

**Chris Stratford** 1:52:44 Before you do that, Kirsty. Can I just see if I got the understanding right that obviously the ports are quite interested in understanding how, when this version 3 comes out, the journey times to their port and from their port are not affected deleteriously for both ports, and that involves obviously Orsett Cock in both cases, Manorway in one case and Asda in another case perhaps, and we're concerned about the delays at and the capacity

take at Orsett Cock that may then affect future growth prospects and assuming we get a updated version three model with all the outputs and inputs and all the rest of it clear where we can identify those three different things, we can then move forward, is that correct?

**Tim Wright / Helen Bowkett** 1:53:44 No, this is a lot more complicated than that, Chris. These three models will come up with a forecast, a revised forecast of delays and queue lengths in the VISSIM model, but that in and of itself won't change anything in LTAM.

**Tim Wright / Helen Bowkett** 1:54:03 And then that's why we're going on to have this discussion about, whether and how and if, to bridge the gap between the two models and hence the need for iterations and balance etcetera, which all come onto in the agenda.

**Chris Stratford** 1:54:22 OK, alright. OK, I was just as simple guy trying to express a bit of understanding here. That's all.

**Kirsty McMullen** 1:54:32 I think, yes, I think in in order to get all of those answers, Chris, you need the VISSIM and LTAM effectively, but Phil?

**Phil Hamshaw** 1:54:43 I was just to conclude before you move on to the sort of aligning the models, and I might have missed it, but are we clear in terms of the timescale and the outputs.

**Phil Hamshaw** 1:54:54 I mean, Helen mentioned quite rightly the metrics can be agreed as we go along and I agree with that. But my, our, starting point would be the same metrics as before, otherwise it would seem a bit, well we wouldn't have anything to compare it with, but in terms of time frames for this, have we discussed that or are we coming back to program?

**Kirsty McMullen** 1:55:11 I said the end of next week.

**Phil Hamshaw** 1:55:17 End of next week for what.

**Tim Wright / Helen Bowkett** 1:55:18 So let's be clear that what we think will do is we provided tables before that did an alignment of this with LTAM, a comparison, and we will provide those tables again updated with the new VISSIM, but retaining the original LTAM to go alongside with the issue of the VISSIM model.

That right, Helen? Yes, unless Simon and [indistinct] people suggest a different way of comparing the outputs of the two models as Simon raised earlier as a possibility, we're open to listening to other suggestions, but if we don't receive those then the default we'll issue the same tables as we did before but updated with the new VISSIM results.

**Kirsty McMullen** 1:56:08 Just in terms of other time scales, and we've said that it's just purely on the VISSIM and before we talk about the VISSIM and the LTAM, we've said that you'll provide Marius's note today that he presented in terms of v3 by the end of the week.

**Tim Wright / Helen Bowkett** 1:56:26 Yes.

**Kirsty McMullen** 1:56:30 We will provide comments back to you on that and by the end of this week, you'll provide a model log back, setting out the changes and reasons for those changes between versions one and two. And by the end of next week. And I'm caveating that you haven't seen our comments on what Marius sends or you send tonight in terms of



Marios's note on version three, but the intention is by the end of next week that you issue version three of the model.

**Tim Wright / Helen Bowkett** 1:57:01 That's right. But with the journey times that Phil is seeking alongside it, is that right, Helen, if that's what Phil was asking for, I thought Phil was asking for an update of the times from the VISSIM model, which will be the time to Orsett Cock.

**Kirsty McMullen** 1:57:02 OK.

**Phil Hamshaw** 1:57:09 Alright. You've done a journey time. Yeah, you've done both. I think the date.

**Tim Wright / Helen Bowkett** 1:57:26 Can you give us the reference of where you're finding information that you found helpful, though, and then?

**Phil Hamshaw** 1:57:29 Well, I think it was in your local traffic modelling report, localised traffic modelling.

**Tim Wright / Helen Bowkett** 1:57:35 OK, fine. Yeah, that's cool.

**Phil Hamshaw** 1:57:36 So essentially, if you can recreate that and the other thing I think it was one of two journey times missing and I can't remember off the top of my head which ones they were, but we have noted them to you previously.

**Tim Wright / Helen Bowkett** 1:57:46 OK.

**Phil Hamshaw** 1:57:47 But if we once we've got that full comparison, then that's I think that's most helpful in terms of understanding the implications of Orsett Cock and if that's by the end of next week then that's fine.

**Kirsty McMullen** 1:57:58 So from our perspective, if we will send through comments, Helen and just in terms of and we can circulate those to everybody in terms of what we think would be helpful in terms of that comparison and the metrics to compare because we did have some comments on that. We're just concerned that that the comparison was in some respects or some aspects comparing apples and pears and it was difficult to provide that comparison. So we did have some thoughts on that that we can send across and I'm just thinking could have put Nadia on the spot. When can we send that through Nadia, agreeing timescales.

**Lyubimova, Nadia** 1:58:49 What is it? It's Monday today. I think we're going to send something through by the end of this week, but in, in terms of initial thoughts.

**Lyubimova, Nadia** 1:58:58 I think we just probably need to compare inputs and outputs in terms of inputs. Probably just look at the flows and things like signal timings and saturation flows and then in terms of outputs, I know that you previously presented journey times, which we had some concerns about which we expressed at D3 submission.

**Lyubimova, Nadia** 1:59:25 I don't know if you've maybe looked at delays at stop lines. For example, instead. Or maybe you know journey time routes need to be more aligned between LTAM and VISSIM.

**Tim Wright / Helen Bowkett** 1:59:43 Who discussed this earlier? As you know, the issue is the junctions are coded up as they are, so the links are different lengths, which is why we reported the different distances in the table so. If you want, if you consider they were apples and pears, at least we would we were trying to show the true shape of the apples and the pears, but I'm not. We can't really go back and redesign the models now so that the link lengths are exactly the same in both of them, so there's inevitably going to be those differences. We welcome your comments if you can get them through to us, we'll have a look and we'll see what we can do.

**Lyubimova, Nadia** 2:00:24 OK.

**Kirsty McMullen** 2:00:26 OK.

**Tim Wright / Helen Bowkett** 2:00:26 But as I say, we did try several ways. We're trying to get comparisons and we couldn't come up with anything perfect. So just tried to be open in what we've done?

**Kirsty McMullen** 2:00:38 OK. So I'm just writing that down as an action that we will send any comments through to Helen.

**Tim Wright / Helen Bowkett** 2:00:50 So we're open to suggestions, but I suggest what we actually agree is that we'll provide what we did before. And if there are suggestions, we'll have a look at them but can't commit to doing that by the end of next week, but to keep the conversation moving, I think we should just keep moving, submitting information into the discussion next week, which includes the information we provided before anyway. And if you have different ways, we'll take them on board and think about them separately.

**Kirsty McMullen** 2:01:25 OK. And that will be a comparison of version three and LTAM and the LTAM is the.C72.

**Tim Wright / Helen Bowkett** 2:01:35 Application model.

**Tim Wright / Helen Bowkett** 2:01:38 Yes, it's the C72 that's in the application.

**Kirsty McMullen** 2:01:44 OK. And so everyone's OK to move on just to this alignment point and so and what we're obviously keen is to make sure that the queuing and delay and constraints that are presented within VISSIM are replicated broadly in LTAM and at the moment they don't they don't appear to be from the review that we've made. And so what we were requesting was that once we had an agreed forecast model was that the parameters from that VISSIM model in terms of saturation flows and signal timings were fed back into LTAM and LTAM rerun. And then to complete the iteration loop for the flows from LTAM that to be fed back into VISSIM.

**Tim Wright / Helen Bowkett** 2:03:00 OK, so take that in two separate. Let's talk about getting the flows from VISSIM into LTAM. Helen, can you? You know, I think what they're now talking about..

**Tim Wright / Helen Bowkett** 2:03:18 And I think I think this will clarify things.

At the last meeting they've spoken about request to take the delays shown in the VISSIM

model and hard code them into SATURN to see what happened then on to the redistribution of traffic if you'd had those size of those delays at Orsett Cock. Now in this meeting, the conversation has slightly changed and it might be to what they've intended had been intended to say at the first meeting. I don't know. Anyway, what I'm hearing now is there a request to take signal timings from the VISSIM model, put those into LTAM, re run LTAM then put the changed flows back into VISSIM. Which is slightly different because even if you change the signal timings in the LTAM model, it may still then forecast different delays and queues as in the VISSIM model. So can I just check, Helen is, is that what you intended, Kirsty?

**Kirsty McMullen** 2:04:35 I'm going to refer to Nadia to summarise the process, it's probably easier for Nadia and Helen to speak on this.

**Lyubimova, Nadia** 2:04:47 That's fine. So essentially the issue is that we identified by comparing the results of VISSIM version one and strategic modelling results so that there are significant differences in terms of what different models have at Orsett Cock in terms of congestion. So the idea is to sort of reconcile for this and align the two models, and. I appreciate you know that these are different types of models, so LTAM is the strategic model and VISSIM is a microsimulation model and there will never be a sort of a perfect match between the two, but our thinking has been to at least check, start by checking that saturation flows, for example, that are produced by the microsimulation model compare align well with the saturation flows that have been used to code the network in the strategic model and also check that the signal timings between the models align. So at least you know we look at the inputs first, and another input that is worth considering is depends on how you look at it, input and output traffic flows and just to check that the traffic flows are broadly sort of similar between the two models, I believe this probably needs to be done in the base year first because of the way the forecast matrices in VISSIM are produced. So what once this sort of.

**Tim Wright / Helen Bowkett** 2:06:45 That said.

**Lyubimova, Nadia** 2:06:46 Yes. Sorry, Helen.

**Tim Wright / Helen Bowkett** 2:06:48 So I think this is quite a fundamental point about the traffic flows. So the LTAM traffic flows are based on our 2016 base model then forecast up to 2030-2045 using TAG. The VISSIM model that we took those 2016 matrices and then you asked the fact, no. No, put that aside. The VISSIM matrices are fundamentally different, so the 2016 VISSIM matrices are based on a one day set of counts taken at Orsett Cock. Then we take the forecast changes in the LTAM model between our 2016 matrices to cover the whole of the area and our 2030 forecast. Then we take those differences and then apply those to the 2016 turning count matrix that is used in the VISSIM model. So the flows in LTAM and VISSIM model are different and always will be different. What we could do is take the LTAM matrices and model them in VISSIM so you could see just the difference that's

coming about from the different modelling approaches. While other than the fact that difference that's coming between the difference in flows.

**Tim Wright / Helen Bowkett** 2:08:29 So we did set this out in all the presentations that we did with you over the past few years, how these matrices have been built up.

**Lyubimova, Nadia** 2:08:42 And the approach aligns with the industry best practice, which is just fine.

**Lyubimova, Nadia** 2:08:48 But what I don't think we've seen is the comparison between base year LTAM flows and base year VISSIM flows. It would be good to have some understanding on how different these are.

**Tim Wright / Helen Bowkett** 2:09:08 So they are all in presentations that we've shared, but we can we share those with you.

**Lyubimova, Nadia** 2:09:09 It would be useful.

**Tim Wright / Helen Bowkett** 2:09:14 Let me know something.

**Lyubimova, Nadia** 2:09:16 Yes. Thank you.

**Tim Wright / Helen Bowkett** 2:09:19 What we share that with you?

**Lyubimova, Nadia** 2:09:22 Thank you.

**Kirsty McMullen** 2:09:24 What if that's already available? Helen. How, when could that be shared?

**Tim Wright / Helen Bowkett** 2:09:30 But the clearest would be to send the spreadsheet we sent through to Simon Tucker will send that through to you. If not already sent it to you, so that's the Council.

**Kirsty McMullen** 2:09:43 OK, alright. So you've already said this is the information you've already said and does that compare, does that compare LTAM and VISSIM in terms of flows at the base year?

**Tim Wright / Helen Bowkett** 2:09:47 Yes. It shows how the matrices all got built up as well.

**Phil Hamshaw** 2:10:00 And can we see that as well.

**Kirsty McMullen** 2:10:01 OK.

**Phil Hamshaw** 2:10:01 Please.

**Tim Wright / Helen Bowkett** 2:10:04 Yeah, yeah.

**Kirsty McMullen** 2:10:05 Yeah. I think when we say shared, we'll just make sure that what yes, that would be very helpful.

**Phil Hamshaw** 2:10:05 Thank you.

**Tim Wright / Helen Bowkett** 2:10:06 And everything we share, I think it's to everybody, sorry.

**Phil Hamshaw** 2:10:11 OK.

**Tim Wright / Helen Bowkett** 2:10:12 So.

**Kirsty McMullen** 2:10:14 Yeah. OK.

**Lyubimova, Nadia** 2:10:14 So have you been through the same exercise with regards to

signal timings and saturation flows? Maybe not for the base, but for the forecast year. If not, it might be worth doing this as well to align the two models.

**Tim Wright / Helen Bowkett** 2:10:33 Well, we can pull off a comparison of the signal timings in LTAM with the signal timings in VISSIM, but you wouldn't necessarily put exactly the same across. The saturation flows I've had to bring in Marius on that because that's not really quite how VISSIM works.

**Le Roux, Marius** 2:10:54 Yes, that's right. You need the bit of a calculation and it'd be carried out in order to get to a saturation flow and such from VISSIM it. It is not something that we normally do, but we can't calculate that there's not a direct output from VISSIM. As you say that it could very well be a check that we carried out, but you know obviously requires a bit of.

**Tim Wright / Helen Bowkett** 2:11:16 Input into SATURN but that's not an input into VISSIM.

**Le Roux, Marius** 2:11:18 Yes, that's right.

**Tim Wright / Helen Bowkett** 2:11:18 What I'm showing sharing with Tim is that saturation flows are an input into SATURN, but they're not an input into VISSIM models, so it's not, it's not in any way.

**Le Roux, Marius** 2:11:26 Correct.

**Kirsty McMullen** 2:11:27 But they can be calculated.

**Tim Wright / Helen Bowkett** 2:11:29 It could be calculated.

**Tim Wright / Helen Bowkett** 2:11:33 I understood that time as well. We can look into it and get back to you.

**Kirsty McMullen** 2:11:36 I think, I mean, this goes back to Helen. At the moment there's a lack of confidence between the parties in terms of we don't think that, there's a mismatch between what LTAM is saying and what VISSIM is saying, that's fundamentally the issue here.

**Tim Wright / Helen Bowkett** 2:11:53 Yes.

**Kirsty McMullen** 2:11:54 So the purpose of this workshop is how can we reconcile that difference in a proportionate way and a reasonable way? We are all here to act reasonably but we need to agree steps and timescales for making sure the level of difference between LTAM and VISSIM can be realigned or reduced. So if we can agree what will be done. I think that's the most helpful thing. So we've already said that you can provide a comparison in terms of base model VISSIM and LTAM flows. So we can understand the difference between the base models because obviously they're created from different sets of data and so it's very helpful for us understand how different those base models are from which the forecast models are created, so if that's already been, yes, go on, Helen.

**Tim Wright / Helen Bowkett** 2:13:06 But I do also think if you're seriously trying to get to grips with the difference in forecast delays between SATURN and microsim that you need to do a run of the microsim models with the LTAM flows in it, because otherwise you're

complicating too many things.

**Tim Wright / Helen Bowkett** 2:13:30 The difference in modelling approaches with the difference in flows, which is quite substantial on some of the arms.

**Lyubimova, Nadia** 2:13:40 I agree it can be part of the process.

**Kirsty McMullen** 2:13:44 OK, so one action is to provide VISSIM and LTAM base flows - comparison and I think because that's been provided you're saying you could circulate that tomorrow?

**Tim Wright / Helen Bowkett** 2:14:01 And it's not just for the base, that will be for the forecast years as well. Because the process of adjusting the VISSIM matrices and the SATURN matrices, yes, Nadia is correct. We've all followed industry process, but it does tend to exacerbate some of the differences, particularly when you're going quite a few years into the future.

**Kirsty McMullen** 2:14:31 I. OK. So the next action would be for the VISSIM model to be run with LTAM flows, so that we can see it based on a different set of flows rather than, would that be the forecast or, it's not the base, is it? So that would be the forecast.

**Tim Wright / Helen Bowkett** 2:14:52 Would be the forecast, for even the base is different, but let's do it for the forecast.

**Kirsty McMullen** 2:14:56 Yes. So rather than at the moment you're approach is that you've, you know, effectively you've got the base model and then you've just forecast it based on the difference in LTAM, haven't you?

**Tim Wright / Helen Bowkett** 2:15:09 Yes, if applied, the difference in LTAM to the base VISSIM matrices.

**Kirsty McMullen** 2:15:09 So, by running VISSIM forecast based on LTAM flows effectively, you're disregarding the VISSIM base model, am I right?

**Lyubimova, Nadia** 2:15:29 Parts of it, yes.

**Tim Wright / Helen Bowkett** 2:15:30 Yes.

**Kirsty McMullen** 2:15:32 I'm just trying to work out how that actually works.

**Tim Wright / Helen Bowkett** 2:15:42 It wasn't a traditionally fully calibrated based model though wasn't it Marius, so we just had turning movement counts, 2016 for the model.

**Le Roux, Marius** 2:15:52 Now I like to think it's fully calibrated we did, we did calibrate it with flows but also did validate it against journey times. So we did have journey times.

**Tim Wright / Helen Bowkett** 2:16:03 OK.

**Le Roux, Marius** 2:16:04 So it is a fully calibrated validated model, correct.

**Tim Wright / Helen Bowkett** 2:16:06 And they do have. And Phil's hand up.

**Phil Hamshaw** 2:16:13 That that's alright. So fine, it was just. I hear what you're saying, Helen, and it makes a lot of sense in terms of understanding the situation. But how does that bring us closer to the fundamental point that Kirsty was making in terms of the concern that there's such a difference at the moment between the two models?

**Phil Hamshaw** 2:16:32 And that is just a case of which one do we rely on most because they're showing quite dramatically different results as far as I can tell. And I understand more information gets a better-informed decision or more informed picture of it. But are those steps all necessary to understand better, and are they going to bring us to a closer position between or better understanding of the difference between the models?

**Tim Wright / Helen Bowkett** 2:17:03 Don't think there's anything that we could not do, I mean. It's not going to be a quick and simple exercise to understand the differences between the two modelling approaches and also to, well, which one to pick up the word reconcile. But I think they will always end up being differences between the two model outputs just by the very nature of the different tools, but one part of it will be because of different flows that are going into both of the models.

**Phil Hamshaw** 2:17:47 Yes.

**Tim Wright / Helen Bowkett** 2:17:53 That's right. Nadia speak because she's got a hand up.

**Lyubimova, Nadia** 2:17:57 Thank you.

**Tim Wright / Helen Bowkett** 2:17:58 And then.

**Lyubimova, Nadia** 2:18:00 My point is related to what Phil has just said. I think we're probably just need to think one step ahead. We might conclude at the end of this exercise that there are differences between the models that cannot be resolved and with LTAM showing low levels of delay, significantly lower levels of delays in comparison with the microsimulation model. And I think it's probably just worth discussing. What do we do next after that? And as Phil said, what model will be used as the basis for the evidence base for mitigation, for example.

**Tim Wright / Helen Bowkett** 2:18:49 What I'm going to suggest, and I appreciate you've got your hand up, Chris, is can I have 5 minutes with Helen? Just talk this through and pick through it.

**Chris Stratford** 2:18:59 Can I, before you do, Tim, if I could just make my quick point then, because I mean obviously I'm not following all of this as it's been apparent from my comments, but nevertheless what I do seem to think is that we seem to have a number of actions and what we don't yet have is any narrowing of areas of disagreement, which I think is the point Phil was trying to make.

**Chris Stratford** 2:19:22 And if we don't, if we don't have some narrowing of areas of disagreement this week, and we've only got 40 minutes left of this meeting, I think the Examining Authority is going to come down on all of us, frankly.

**Chris Stratford** 2:19:39 And it, it seems that you want to have further conversations and you want to do this and you want to do that? But it all of it just pushes it further down the road and I don't. I think we're getting to the end of the road. Is that all I'm getting at. So just think about that when you're having a chat to Helen, please.

**Tim Wright / Helen Bowkett** 2:19:55 No worries.

**Kirsty McMullen** 2:19:57 And so just one final point, I agree with all of that and I suppose it's just one final point that it is about what you know what's next beyond this and mitigation, et cetera and what we would do to form those judgments.

**Kirsty McMullen** 2:20:11 But it's also recognizing that the reason why this is important to us as well is about understanding wider understanding impacts or further impacts in terms of Orsett Cock that if it's not right within LATM then we don't have an understanding of wider repercussions and consequences there are within that strategic model? So you know, it's at the moment, we have journey time and information on LTAM and we're concerned that because it's not replicating sufficiently what's being shown in VISSIM and we don't have that confidence and the journey time and consequences of LTC within Thurrock and we can come on to Asda and other stuff we're focusing on also.

**Tim Wright / Helen Bowkett** 2:21:04 Yes.

**Kirsty McMullen** 2:21:08 But we've got the same concerns at other junctions as well. So if we do a 5 minute break or 3:30 and come back and I think we need to really clearly, because we haven't got long now, then set out exactly what the steps are to reconcile the differences and agree the steps in the program of those.

**Tim Wright / Helen Bowkett** 2:21:31 Yep, that sounds good to me.

**Kirsty McMullen** 2:21:32 OK. Alright, thanks. See you all at half three.

[BREAK]

**Kirsty McMullen** 2:28:23 So we've got half an hour and at the moment I think we haven't even discussed what the scope of the note is. But to date it's going to be a progress update and actually what it needs to be is what steps are being taken to reconcile the model. So we're going to have to really ramp it up now and then say exactly what steps are going to be taken by when in order to reconcile the models.

**Tim Wright / Helen Bowkett** 2:28:57 Yes. But my note of caution on that, but so I had a quick chat with Helen. I think our concern about saturated flows is that while that's a perfectly reasonable, feasible and possibly technically better way of doing it, it's going to take a long time to actually extract that data. I mean, Marius is right, it's feasible, but it won't, mindful of Chris's point, which I think is actually quite pertinent, that is also yours Kirsty. What are we actually trying to achieve here? So my proposition is what we're trying to achieve is to understand if Orsett Cock doesn't flow as well in the SATURN model. What impact does that have on the network? What I suggest we do is we take the signals. Fair enough. Take the signals and put them in and then, and correct me if I get this wrong, Helen, we take the delays on each arm feeding into Orsett Cock and apply that as a fixed delay to vehicles moving through that junction in the SATURN model. Is that the right



representation? Yes. What I'm thinking of doing for Nadia's comment. The other workshop I've put in the delays in ways that we could look at the delay that the SATURN model is forecasting on each arm. Look at the delay in the VISSIM model. Take the difference and add that difference on as a fixed time penalty to SATURN, so that SATURN would see a delay on those approach arms, similar to the delay that's forecasting in the VISSIM model, and then it would reroute traffic and the VDM would come in as well. And then you could see then how the traffic would be rerouting onto other roads if the delays at Orsett Cock were as they were in the VISSIM model, that's what I.

**Tim Wright / Helen Bowkett** 2:31:03 I thought that's what you wanted to see. I mean it and talking about our timescales as well.

**Tim Wright / Helen Bowkett** 2:31:08 I just think that that might be, quicker and clearer way of getting some understanding of where would the traffic go in LTAM if it had the delays that were in the VISSIM model. So it'd be a little bit, worst case, because presumably the delay would reduce if traffic chose not to go through there, but even if quick and dirty it would get what we're looking for.

**Kirsty McMullen** 2:31:22 So we're OK with that approach? I don't know if others have got comments?

**Phil Hamshaw** 2:31:44 It sounds sensible, but I just suppose the caveat is it depends because I haven't seen the difference in the flows because that will make quite a big difference to whether that penalty has an effect on anything. So there's quite a low flow through there anyway. Then the penalties are not really going to affect much traffic, is it?

**Tim Wright / Helen Bowkett** 2:32:06 Yes, but this is quite high flow.

**Phil Hamshaw** 2:32:06 In your LTAM - I mean it seems a sensible option.

**Phil Hamshaw** 2:32:15 Yeah. I mean it seems a simple approach and I agree with that in terms of simplicity of it, rather than trying to reconcile two models which are never going to be identical, and I appreciate that. But I mean, I don't have a better idea of the top of my head, to be honest, and I think it's a good step. And if Thurrock are happy with that step, I don't know about DP World.

**Richard McCulloch** 2:32:40 Well it seems practical, just in terms of concern was obviously that there's more constraint in the model at Orsett Cock and that it will go somewhere else. So the question you're directly trying to answer, the question is where would it go? Presumably that delay would be extracted from the VISSIM model for the respective scenarios and apply to the equivalent scenarios and the LTAM.

**Tim Wright / Helen Bowkett** 2:33:11 What proposed would be take the delays out of the updated VISSIM model. We could send out a note saying these are the delays you've got in LTAM at the moment. These are the delays that we're proposing to add into the SATURN run, so that everybody, so the idea is to keep it sort of open and understandable.

**Richard McCulloch** 2:33:33 Yes.

**Tim Wright / Helen Bowkett** 2:33:35 So it is simple, but I think it would be insightful. It would provide us insights with what's what, what could happen. So I think what's important is that we couch and perhaps this is looking a little bit of the joint note, Kirsty, is what is our perspective on that exercise and that's where we may disagree. In other words, we might agree that we do that exercise, but from our perspective, you know we've been clear that we don't think that this is the right route to go down in order to actually demonstrate the correct traffic flows in the modelling. I think the basis on which we do it is to say, OK, this is a worst-case scenario. What, where would that traffic reroute and what would the consequences be on certain junctions around the area on the local roads and the strategic road network? You might have a different view on the purpose and what that modelling data is showing, but if we can agree that that is a useful model to run then we can then each argue a case around, then you know that I think would be sensible.

**Phil Hamshaw** 2:34:52 That seems sensible to me. I think just coming back to the sort of purpose of the workshop. It's a slightly different approach to reconciling the model isn't it. It's more an approach to trying, well, if reconciled is the right word anyway in the first place, but it's more an approach to try and create a scenario in LTAM that is more closely aligned I suppose with the output of VISSIM is that right?

**Tim Wright / Helen Bowkett** 2:35:24 I I'd have to dig over those words and decide whether that's right or not, but I agree that, you know, we've got a fundamental position that we don't think that it's appropriate to go through an exercise, to reconcile needs to, but we understand the nature of the discussion is to look at the sort of, I call it the outlier cases. But you may call them differently to understand the impact on the network. And so yeah, you know, I think it won't reconcile the two.

**Tim Wright / Helen Bowkett** 2:35:58 But that's not something we agreed to. It will help the conversation move forward.

**Tim Wright / Helen Bowkett** 2:36:05 My thinking is it might get us quicker to a position where we could have a discussion on what would be the impact on the local road network and on the SRN that sort of question that we had at the beginning, Kirsty, one of the action points, it would get this quicker to having a discussion.

**Tim Wright / Helen Bowkett** 2:36:23 What would be the impacts if the delays are Orsett Cock were greater than predicted in LTAM?

**Kirsty McMullen** 2:36:33 So I don't understand why it's a worst case scenario. Tim, what we're saying is, is that the VISSIM model is a very detailed model setting out the delays and it's validated you know as Marius says it's been validated and calibrated. So, and I think we've all accepted, it's been agreed in terms of the base model and for VISSIM and so to then try and use those or to replicate delays in LTAM that are being shown within VISSIM. I don't understand why that would be a worst case.

**Tim Wright / Helen Bowkett** 2:37:20 So can I explain what I mean by that and I might be

wrong?

**Kirsty McMullen** 2:37:22 Yeah.

**Tim Wright / Helen Bowkett** 2:37:23 I didn't agree, agree those words with Helen.

The reason I'm saying that is if we take a fixed delay, let's say we've got a 120 second delay on a specific arm. Now as I understand it, the argument that's being put forward is because of that delay or because SATURN doesn't have 120 seconds delay on that arm traffic might be going through that arm that would otherwise reroute. So if you increase that delay to 120 seconds, the variable demand model might reduce the amount of traffic going down that arm. If you then rerun that through VISSIM, you would find that you didn't have 120 seconds delay. Maybe you only had 100 seconds or an 80 second delay and you put that back into SATURN and then you'll find more traffic going through there. So there's a first iteration that is naturally going to be a worst case scenario because it puts a maximum delay in without allowing for any sort of balance in the flows. That's all, but I guess. Yeah, I've seen. What you're getting at Tim, it's like it would be an iteration one, because when you run it, SATURN will have traffic, probably using some other modes as well, as Orsett Cock. So therefore the flow at Orsett Cock would be lower. So if you then put that back into the VISSIM, you'd get different delays. But we're not suggesting doing the iteration to get the convergence. We're suggesting, I'm suggesting doing it to get an insight into, would traffic with that amount of delay that's in the VISSIM model, in the 1st order effect, move on to other roads. So which traffic and which roads? So it would help bring that conversation on rather than getting caught up in a modelling morass. But let's not let's not hang on the worst-case phrase that I used.

**Kirsty McMullen** 2:39:29 OK, fine.

**Kirsty McMullen** 2:39:31 OK. No, that's fine. So just in terms of say, conscious of time, so what were then saying is that you will be putting in the signal timing and delays, was that right, Helen, into LTAM, based on the version three of the VISSIM model?

**Tim Wright / Helen Bowkett** 2:39:47 Yes..

**Kirsty McMullen** 2:39:59 You're version three. Yes, exactly. So I'm only using your versions now and that you will provide us with a summary of the delays in LTAM forecast model before you do this.

**Tim Wright / Helen Bowkett** 2:40:02 Yeah.

**Kirsty McMullen** 2:40:13 And then the delays you're proposing to add from version through the visit model.

**Tim Wright / Helen Bowkett** 2:40:19 Yes, that's what I'm suggesting.

**Kirsty McMullen** 2:40:20 And then in terms of output, what output do we then get?

**Tim Wright / Helen Bowkett** 2:40:27 We could give you a cordon of the SATURN model so you could see the traffic rerouting, we could give you some P1X plots. You might like to think about how you'd like us, what output you'd like us to give it to you in.

**Kirsty McMullen** 2:40:40 Nadia. You able to confirm?

**Lyubimova, Nadia** 2:40:51 Probably need to have a think what outputs are required from this, but in the first instance probably flow differences, delay differences.

**Chris Stratford** 2:41:03 I just wonder about the cordon though, because as we've mentioned before, as you know, Helen and Tim, we're restricted to the cordon around the borough boundary. I'm sure Gary and Jim said they would be interested in anything that gets pushed beyond the boundary into Essex, so they may need a cordon as well.

**Kirsty McMullen** 2:41:23 Yes.

**Chris Stratford** 2:41:31 And of course, we can't share.

**Tim Wright / Helen Bowkett** 2:41:31 If the impact even extends into Essex, but yes.

**Kirsty McMullen** 2:41:36 But I suppose we need that evidence or Essex would need that evidence. But if you're able to provide global statistics on traffic delay so that we can understand, beyond Thurrock if there are any further impacts?

**SOHEILI Jamshid** 2:41:53 Yeah.

**Gary Macdonnell - Network Programme Manager** 2:41:56 Yeah. I mean, of course, I mean this is opening up the cordon model.

**SOHEILI Jamshid** 2:41:57 Yeah.

**Tim Wright / Helen Bowkett** 2:41:58 Yeah. Yeah, that's fine.

**Gary Macdonnell - Network Programme Manager** 2:42:00 You know, we weren't particularly, you know, we're going back many, many years, but the whole cordon of the modelling is a major issue for us and yes, we of course we want to see evidence of anything that is produced going forward.

**Tim Wright / Helen Bowkett** 2:42:19 I think in the first instance what I'm wary of is a time because it does take a little while to produce the cordons doesn't it? Yes. And I was just thinking like shape files take time to produce as well. So I'm just trying to think of how we can, so I wonder, how we can prioritise possibly the shape files, the GIS. Yes. That would give the flow differences. In a way I'd like to look at the run and see how far afield the impact is. But I do think we need a base agreement on what we're going to turn over first. So Phil and Richard from the Port perspective, you've seen the journey time material we've produced before. Would that be appropriate for you? Is that what you'd be after?

**Phil Hamshaw** 2:43:18 Definitely what we'd need in the first instance. Yeah, the journey times is the important aspect of it. But I think the flows alongside that to make sure we understand it. And I think, as Helen said, your terms of the journey times you've done the comparison before because they're not identical. You put in the distances as well. The lengths. So just to something that's enables a direct comparison with what we've previously had, that that's the simple thing. Then we can, you know, understand the difference, essentially.

**Tim Wright / Helen Bowkett** 2:43:50 I guess the question to you is, is it about Orsett or is

it about from the port on to points on the network?

**Phil Hamshaw** 2:43:58 It's about the journey time to and from the port, and that includes, as part of LTC via Orsett Cock now. So you know that's important to us, but that's important in terms of understanding.

**Tim Wright / Helen Bowkett** 2:44:07 Yeah. Yeah.

**Phil Hamshaw** 2:44:11 Yeah, the whole operation of the junction as well. So I mean, the junction is part of a route that we're interested in and there's other junctions we're interested in is, you know, but I think we need to understand, but I think just coming back, I'm conscious of time.

**Tim Wright / Helen Bowkett** 2:44:17 Yeah.

**Phil Hamshaw** 2:44:28 We've got 10 minutes. We're coming back to the question and what we're going to put in this time next week or week tomorrow.

**Phil Hamshaw** 2:44:36 We need to quickly and maybe we need to just take it away after this meeting because, the question was, you know, how do we reconcile and how do we reasonably come to a situation where we can reach, I don't know a level of agreement. I don't know about that, but you, as you said, Tim, we've probably got respective positions, but at least we can do it from the same base information. Then we can argue our case without arguing about what the actual impacts are in terms of what the data shows and what the modelling shows. Because at the moment we are arguing about the modelling. If we can get that resolved in terms of, we've got enough information to put our respective cases forward and we're not arguing about what the detail of that is, then I think that's a big step forward and that's all, I think, that's probably all the Examining Authority are looking for in terms of their question at this stage, that we can get to a point where we're agreed that we've got all the base and not analysis, not all bases, the wrong word, all the analysis provided for modelling and then we can set out our respective positions based on that.

**Phil Hamshaw** 2:45:43 I don't know. I'm speaking for others, which I probably shouldn't do but.

**Chris Stratford** 2:45:46 I'm a little bit concerned. I mean, Tim, you've used the phrase quite a few times now. We need to have another conversation about this. I think we've run the clock out of conversations a bit. I mean, we had a year trying to get the Orsett Cock model sorted out and that failed. And I just worry that this joint paper, if there is such a thing, is going to be barely, a progress report and nothing else. With a whole series of actions that are incumbent on you and us to do. And actually it won't do the thing that they want, which is to narrow the areas of disagreement. All this is doing is putting it off yet again and I worry and it may be that we end up doing dissenting papers. I mean, I don't know. It just, it just seems that this meeting hasn't got to where it needs to get to. That's my assessment.

**Tim Wright / Helen Bowkett** 2:46:53 I not quite sure where you thought we'd go, Chris, cause clearly as far as I'm concerned, we've had half the conversations that are referenced.

We need to talk about how it's reported and all of that. Without actually you know, setting the SATURN modellers off and providing that data which you know I anyway. I'm not going to go there. Only what I suggest we do. I suggest we do a first draft of this setting out positions if we can share something by Wednesday, end of play, Wednesday, does that give people a couple of days to review and come back to us by Friday? And I suggest it will be a sort of composition of a fairly straightforward action. This is what we've agreed to do. This is the timing on what we're going to do about it.

**Tim Wright / Helen Bowkett** 2:47:52 And then leave a space for people to essentially write their dissenting opinions around stuff.

**Tim Wright / Helen Bowkett** 2:47:59 And I think you know a bit like a statement of common ground almost where you know we each put forward our point of view on the matter.

**Tim Wright / Helen Bowkett** 2:48:07 But we we're clear on the matters agreed, which is the actions that time permit and the scope.

**Chris Stratford** 2:48:15 OK. Colin is got his hand up and then Phil.

**Black, Colin** 2:48:20 Now I'm just following the conversation.

**Black, Colin** 2:48:23 So this afternoon I am just unclear as to what Tim, National Highways, think is necessary and it feels like we're doing this all as a bit of a favour to us, but we don't really need it. So I just it'd be helpful for my purpose if you could just clarify what it is you think is necessary in order for us to come to our common understanding of whether or not there are issues. I've not even clear at the moment whether National Highways are recognizing that they believe that there are any issues at Orsett Cock because if there was a recognition of issues, then surely some of this would be necessary. So perhaps just a quick clarification on what you think is necessary and why it's necessary would be really helpful because it does feel like we've gone around the houses on a bit of a technical journey this afternoon without, lost sight of the real key issue, which is you know we've got concerns that Orsett Cock hasn't been fully quantified and addressed as part of the application. And do you understand where we're coming from and why we're coming from and so what do you think is necessary in order for us to resolve those challenges?

**Tim Wright / Helen Bowkett** 2:49:57 So from our position, I mean in terms of the modelling, we think that it's robust and supports scheme. We do recognise that there are significant delays, let's say, for certain traffic using Orsett Cock and that there is potential to do further the work around that. That would sit in a monitoring and mitigation space for us or that discussion which I came open to have and put on the agenda.

**Black, Colin** 2:50:31 So, but Tim, I can't. I think kind of the key issue we have is how do you get to any conversation? This is where we started at the beginning of the day, we can't have conversations about mitigation if we haven't agreed the modelling. So in order for you to have that conversation about mitigation, would you not agree that it's necessary for us to be

on the same page with regards to the modelling?

**Tim Wright / Helen Bowkett** 2:50:57 No, I don't actually. I mean the VISSIM model shows queuing. I don't see the fundamental need to align the VISSIM and SATURN that's being pursued here, is my honest position, but the Examining Authority want us to explore this.

**Black, Colin** 2:51:13 So Tim, the bit I'm a little confused. It's kind of I've got, we've got specialists here from Essex, from Thurrock, Port of Tilbury and DP World to all share concerns about the performance of Orsett Cock. But you're saying we've all got it wrong, is that correct?

**Tim Wright / Helen Bowkett** 2:51:41 No, I'm questioning whether there's a need to bring further reconciliation of VISSIM and SATURN together, in order to take the conversation forward. We have a VISSIM model on the table that we've already said would form the basis of further discussion and design.

**Black, Colin** 2:52:03 Is that just not a long winded way of saying yes, we agree, we believe we've got it right and everybody else has got it wrong.

**Tim Wright / Helen Bowkett** 2:52:10 No, no, no.

**Black, Colin** 2:52:13 Because that's what it seems like.

**Tim Wright / Helen Bowkett** 2:52:13 No, no.

**Kirsty McMullen** 2:52:16 The issue there though, Tim, is that you know it's we can't rely on LTAM if the level of queuing and delay in VISSIM is not replicated to some extent within LTAM in terms of your journey time and comparisons of LTC and benefits and disbenefits and the economic case. So you know it's, to us its very important that that there is that alignment and because you are relying on LTAM and we think that it's underestimating the level of queuing and delay that will occur as a result of the project. And conscious Phil's had his hand up for a while. Just to fit, only 4 minutes left. But what we haven't got and what we need, so we have got some dates here, but we've just said in terms of the ability for you to put delay back into from VISSIM into LTAM and to provide inputs and outputs from that process. How long do you anticipate that to take?

**Tim Wright / Helen Bowkett** 2:53:39 So we'll need to, we will need to digest on that, but we think it probably be a couple of weeks from provision of the. VISSIM model.

**Kirsty McMullen** 2:53:58 2 weeks. So the provision of the VISSIM model is the end of next week.

**Tim Wright / Helen Bowkett** 2:54:04 So if we're saying 6th.

**Chris Stratford** 2:54:10 So that's just before Deadline 6.

**Tim Wright / Helen Bowkett** 2:54:10 20th.

**Kirsty McMullen** 2:54:14 So that would be the 20th of October.

**Chris Stratford** 2:54:17 Yeah.

**Tim Wright / Helen Bowkett** 2:54:18 Yeah.

**Kirsty McMullen** 2:54:20 And OK.

**Chris Stratford** 2:54:22 And that seemed.

**Kirsty McMullen** 2:54:23 And Deadline six is when. If you remind me, sorry, because we've got a hearing as well.

**Chris Stratford** 2:54:26 Deadline 6 is the 31st, but actually the key one which we might struggle, we might all struggle with the traffic and transport issue specific hearing which is on the 24th.

**Kirsty McMullen** 2:54:32 It's a transport hearing.

**Chris Stratford** 2:54:41 So we're not going to have the doc, the documents from you, Tim, until basically one working day prior to an issue specific hearing on transport and only about a week before Deadline 6 giving us virtually no time to actually analyse it all.

**Tim Wright / Helen Bowkett** 2:55:01 But we'll have made a lot of progress by then, because we'll have the updated VISSIM model out there for everybody who has reviewed, digested, including journey times.

**Chris Stratford** 2:55:03 Yeah.

**Tim Wright / Helen Bowkett** 2:55:11 So that will give a new set of information on the nature of the impacts of the scheme, and we'll be in a better place by then.

**Black, Colin** 2:55:23 This feels very kind of rushed and last minute, when we've had quite a long time to prepare this.

**Kirsty McMullen** 2:55:30 I'm wondering though, is why we need to, so you're doing this on version three and you haven't got a version 3 until the end of next week.

**Tim Wright / Helen Bowkett** 2:55:47 Yes. And then I've got to run LTAM with the new signal timings in it, to see what delays I would get in SATURN, then take the delays from VISSIM and add those into SATURN, then run it to the model and then produce the outputs. And write it up to share.

**Kirsty McMullen** 2:56:06 OK. It's going to be tricky to actually, how does this then get submitted into the examination ahead of the hearings as the issue.

**Black, Colin** 2:56:30 It doesn't feel like it can be.

**Phil Hamshaw** 2:56:30 Don't we just need to flag this?

**Kirsty McMullen** 2:56:32 Yes.

**Chris Stratford** 2:56:34 Yeah, we will. We have to at deadline 5.

**Phil Hamshaw** 2:56:35 That's just need, yeah.

**Kirsty McMullen** 2:56:36 At Deadline 5. So we'll need to kind of.

**Tim Wright / Helen Bowkett** 2:56:38 Yeah, I think this needs to be part of the note.

**Phil Hamshaw** 2:56:41 Yeah, exactly.

**Kirsty McMullen** 2:56:41 Yeah.

**Phil Hamshaw** 2:56:48 Is it is that the quickest you can do it? Sorry, Helen. To put you on the spot.

**Tim Wright / Helen Bowkett** 2:56:53 Once, I am a bit concerned that I've set myself too



harsh a deadline as it is.

**Kirsty McMullen** 2:56:59 OK.

**Phil Hamshaw** 2:57:04 Well, it's. It's written down now. Helen, you can't go back on it.

**Tim Wright / Helen Bowkett** 2:57:07 No, I'm. I'm not looking forward to the reaction when I tell the team.

**Phil Hamshaw** 2:57:15 OK, so I'm conscious of time and sorry to butt in Kirsty.

**Phil Hamshaw** 2:57:18 But you know, obviously if you can up the speed Helen, that would help. But I think you're right, Tim, don't we need to stay within the note. We've suggested a potential way forward, but I think we need to explain that reconciliation is probably something that...

**Chris Stratford** 2:57:38 Or narrowing.

**Phil Hamshaw** 2:57:40 Narrowing sorry.

**Chris Stratford** 2:57:43 No. They are both words are in there.

**Phil Hamshaw** 2:57:44 Yeah, I know. Yeah. It's just, it's something that we obviously we've agreed on a potential way forward, but essentially and as Colin was pointing out, we're probably fundamentally disagreed in terms of what is going to help. It's not going to narrow the issues between us. It's just going to narrow the data upon that we use for those issues. Really, the analysis, is that right?

**Tim Wright / Helen Bowkett** 2:58:09 Would it make sense?

**Phil Hamshaw** 2:58:09 Or is that unfair?

**Tim Wright / Helen Bowkett** 2:58:11 I. No, I think that's right. But I wonder if what we need to say is that you know, maybe what we're try need to try and achieve is actually agreement on the objectives of this exercise because is it reconciliation or is it that you have concerns, I mean, you know, there are differences between the VISSIM and the SATURN, and so is the objective on a precautionary basis, and I'm going to use my words and you can use your words, but on a precautionary basis, we are understanding if we increase the delay at SATURN to reflect the delays that VISSIM is showing, what the consequence would be on the network and actually that would be a way of framing, you know, that would be us getting agreement. It's a, you know, we would be looking at different flows on the network, wouldn't we at Manorway for example we've been looking at OK, so if there was a delay at Orsett Cock, would there suddenly be traffic U turning up Manorway or you know that type of question?

**Phil Hamshaw** 2:59:23 I don't think it's good to try and redefine the question this late in the day.

**Chris Stratford** 2:59:28 Or start setting objectives which are done at the beginning of an exercise and we are now two to three years into it.

**Kirsty McMullen** 2:59:30 No.

**Chris Stratford** 2:59:34 I mean come.

**Phil Hamshaw** 2:59:35 Anyway, I mean we we've got an exam question as it were to answer.

**Chris Stratford** 2:59:39 Yeah, indeed.

**Phil Hamshaw** 2:59:40 Reconcile and narrowing.

**Tim Wright / Helen Bowkett** 2:59:42 OK.

**Phil Hamshaw** 2:59:43 I think we've got to a point where you know, whilst we want to, whilst we recognize our respective positions, we can at least get some more informed analysis and data and modelling to inform that discussion, but it's unlikely we're ever going to reconcile or narrow the issues, particularly between us, other than in technical terms. So is that? Is that fair or is that that misunderstanding or misrepresenting?

**Tim Wright / Helen Bowkett** 3:00:11 I think in terms of this conversation, yes, I still think that there is room for a monitoring and mitigation type conversation on a without prejudice basis. But.

**Phil Hamshaw** 3:00:15 You started with that and we were all silent. Has your position changed then on a without prejudice basis?

**Tim Wright / Helen Bowkett** 3:00:30 I think that would be on a without prejudice basis an open conversation that I was hoping to have.

**Phil Hamshaw** 3:00:38 Can you start the conversation then?

**Tim Wright / Helen Bowkett** 3:00:42 I think we're over time.

**Tim Wright / Helen Bowkett** 3:00:45 I think it warrants a proper conversation.

**Kirsty McMullen** 3:00:45 So I'm going to come.

**Tim Wright / Helen Bowkett** 3:00:48 Is what I would say.

**Phil Hamshaw** 3:00:50 No, I agree with that.

**Chris Stratford** 3:00:50 Everything seems to.

**Kirsty McMullen** 3:00:54 Gareth, you've got your hand up.

**Gareth Protheroe** 3:00:56 Yes. On Tim's point I don't get drawn on it, is it worth setting up a separate meeting around that monitoring mitigation pretty quickly in the next couple of days or so?

[END]