

# Lower Thames Crossing

## 9.54 Comments on LIRs Appendix I – Tonbridge and Malling Borough Council

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# Lower Thames Crossing

## 9.54 Comments on LIRs

### Appendix I – Tonbridge and Malling Borough Council

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# 1 Applicant’s Responses to Tonbridge and Malling Borough Council’s Local Impact Report

**Table 1.1 The Applicant’s responses to Tonbridge and Malling Borough Council’s Local Impact Report (LIR) [REP1-299]**

LIR Reference	Local Impact Report Extract / Applicant’s Response
<p><b>Page 7</b> <b>Paragraph 4.4</b></p>	<p>Tonbridge &amp; Malling’s location bordering the authorities of Medway and Gravesham to the north, including its relationship to the M20 and M2 and interconnecting roads including the A229 and A228, gives rise to additional challenges associated with wider growth and the LTC project. This includes the impact of redistributed existing cross-Thames vehicular traffic, as well as additional traffic demand upon local roads, that will arise as a consequence of LTC once operational.</p>
<p><b>Applicant’s Response</b></p>	<p>The Applicant recognises that, as a result of the Project opening, some people will choose to make different journeys. In many places on the network, this will lead to beneficial impacts and in some cases will lead to adverse impacts. Overall, the benefits on the road network outweigh the adverse impacts, and this is reflected in the positive economic benefit of the Project within Tonbridge and Malling. The Applicant has identified the adverse impacts on traffic flows across the Local Road Network (LRN) and this assessment has been set out in the Transport Assessment [APP-529]. Each of these impacts has been assessed and considered against the requirements set out in the National Policy Statement for National Networks (NPSNN) (DfT, 2014) in Transport Assessment Appendix F: Wider Network Impacts Management and Monitoring Policy Compliance [APP-535]. The Applicant does not believe that the adverse impacts are unacceptable under this policy.</p> <p>The Applicant is proposing to monitor the impacts of the Project on traffic on the local and strategic road networks as set out in the Wider Network Impacts Management and Monitoring Plan (WNIMMP) [APP-545]. If the monitoring identifies opportunities to further optimise the road network as a result of traffic growth or new third-party developments, then local authorities would be able to use this as evidence to support scheme development and case making through existing funding mechanisms and processes.</p>
<p><b>Page 8</b> <b>Paragraph 5.4</b></p>	<p>In the north of the borough capacity issues on the road network are closely tied to growth and travel demand arising from Maidstone, the county town. Congestion occurs on the A20, and the A228 and A229 corridors. If approved the delivery of the LTC project will consume remaining capacity on key routes linking the M20 and M2, requiring mitigation including junction improvements at M2 jn3 and elsewhere which are not currently funded. The presence of strategic roads in the borough does bring pressure for additional lorry parking too. Currently lay-bys and wide slip lanes are used by hauliers, which is not always appropriate, this is likely to worsen without the provision of additional facilities for drivers and their vehicles.</p>

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<p><b>Applicant's Response</b></p>	<p>The Applicant recognises that, as a result of the Project opening, some people will choose to make different journeys. In many places on the network, this will lead to beneficial impacts on the network, and in some cases will lead to adverse impacts. Overall, the benefits on the road network outweigh the adverse impacts, and this is reflected in the positive economic benefit of the Project. The Applicant has identified the adverse impacts on traffic flows across the Local Road Network (LRN), and this assessment has been set out in the Transport Assessment [APP-529]. Each of these impacts has been assessed and considered against policy requirements as set out in Transport Assessment Appendix F: Wider Network Impacts Management and Monitoring Policy Compliance [APP-535]. The Applicant does not believe that the adverse impacts are unacceptable under this policy.</p> <p>The Applicant is proposing to monitor the impacts of the Project on traffic on the LRN and strategic road network (SRN). If the monitoring identifies opportunities to further optimise the road network as a result of traffic growth or new third-party developments, then local authorities would be able to use this as evidence to support scheme development and case making through existing funding mechanisms and processes. This process is set out in the Wider Network Impacts Management and Monitoring Plan (WNIMMP) [APP-545], which provides information about the proposed traffic monitoring and monitoring locations. The M2 junction 3 is included as a monitoring location in the WNIMMP, so data collected at this location as part of the traffic impact monitoring scheme can also be used to inform the investment decisions on the SRN. The Applicant will be required to consult on the operational traffic impact monitoring scheme prior to implementation, and so Tonbridge and Malling Borough Council (TMBC) will have further opportunity to inform the development of the monitoring regime, in consideration of the traffic flows on the network prior to the opening of the A122 Lower Thames Crossing.</p> <p>The Applicant is working with Kent County Council (KCC) on a Kent Wider Network Impact study, funded by the Applicant, which will further the joint understanding of how the network performs in the future with the Project. These outputs will be discussed with KCC and TMBC.</p> <p>The Applicant will continue to engage with relevant authorities in accordance with the licence obligations and work with others to align national and local plans and investments, balance national and local needs, and support better end-to-end journeys for road users.</p>
<p><b>Page 8-9 Paragraph 5.5</b></p>	<p>The Council has commissioned consultants Jacobs to undertake Visum modelling to support the development of the Local Plan, using the Kent Model. This will include future growth scenarios up to 2040/41 as well as an LTC sensitivity test, which will provide an understanding of the combined impacts upon local roads. Unfortunately, at the time of writing report, this work had not been completed due to the current stage of the Local Plan. Once available we will wish to make the ExA aware of this work as soon as possible during the Examination.</p>
<p><b>Applicant's Response</b></p>	<p>The Applicant notes the comment made in the LIR from TMBC. National Highways will continue to work with the Council and developers in order to agree the evidence base to support the Local Plan and/or applications and to identify any required network interventions.</p>

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<p><b>Page 10-12</b>  <b>Paragraph 6.1 to 6.8</b></p>	<p><b>LOWER THAMES AREA MODEL</b></p> <p>The Lower Thames Area Transport Model (LTAM) was built to inform the LTC project, following the principles and processes set out in the Department for Transport's (DfT) Transport Analysis Guidance. Growth within the transport model is capped in line with DfT traffic forecasts (TEMPro) and adjusted locally to account for developments close to the project that are under construction, have a live planning application or planning permission (as of 30 September 2021). This comprises the LTAM core scenario, however, the council considers that this is unlikely to reflect accurately the future spatial distribution of local growth, given that TEMPro housing growth assumptions are understood to be lower than those derived from the standard method used for planning policy purposes. TMBC understand that the LTC 2030 opening year assumptions are being rolled forward to 2032, given the announced ministerial delay to the project.</p> <p>The DfT traffic forecasts do not reflect the full scale of Tonbridge &amp; Malling's and neighbouring authorities' objectively assessed housing and employment needs. Their use presents a challenge in terms of the highway assumptions which have informed the project, and for Local Plan making too, requiring additional scenario/sensitivity testing to fully understand combined impacts of the project and future local growth.</p> <p>As set out in 'Appendix C – Transport Forecasting' of document 7.7 Combined Modelling and Appraisal report, the core scenario forms the primary evidence for the appraisal of the project. Alternative low and high growth scenarios have been considered, these consist of growth increments applied within the model which only takes account of 'near certain and more than likely developments' (Table 4.2) as at the September 2021. This involves adding/subtracting a proportion of the base year traffic to/from the demand from the core scenario.</p> <p>Plate 4.4 shows developments in the LTAM study area that have been identified within Maidstone, Medway and Tonbridge and Malling. It is clear that a significant number of major development sites are absent, which comprise the circa 4000 new homes and 164,000sqm of employment floorspace that TMBC expect to be delivered by 2032 within the Medway Gap area of the borough. The application of the high growth increment is generically applied and therefore problematic, as it does not take account of the expected spatial distribution of development within Tonbridge &amp; Malling borough over the next 8+ years, this being predominantly with the Medway Gap area.</p> <p>Local authorities are best placed to advising National Highways on the location and scale of growth in their area which has a good degree of certainty in terms of delivery by 2030/32, the anticipated LTC opening year. This can sometimes be a complex matter, especially where a local authority does not have an up-to-date Local Plan or a full 5-year housing land supply in place, as is the case for TMBC currently. As such, we remain concerned that the LTAM core scenario, which is used to inform all assessments within the DCO, under represents the extent and severity of the combined impacts of local growth and an operational LTC upon local roads.</p> <p>We understand that all host and neighbouring lower tier authorities in Kent (for the purposes of the LTC DCO) currently intend to meet in full their objectively assessed housing and employment needs. We appreciate that local planning authorities are all at</p>

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	<p>different stages in their plan making, and as such may not have been able to provide information regarding up-to-date future growth requirements including spatial strategies and strategic site allocations, during the period prior to the submission of the DCO to inform modelling work undertaken by National Highways. This has been the case for TMBC, we undertook our regulation 18 Local Plan consultation in late 2022 and have yet to publish a preferred spatial strategy and site allocations.</p> <p>Discussion was had with National Highways before the DCO application was submitted to the SofS, regarding the potential for National Highways to commission additional LTAM modelling scenarios which don't rely upon TEMPro growth, but adopted and emerging spatial strategies and site allocations, this was never progressed. We understand that concern regarding local modelling is a matter of live discussion for most local authorities engaged in the DCO Examination.</p> <p>Subsequently, we are pleased that National Highways has agreed to fund additional evidence work which is being progressed by local authorities to fully understand the potential local highway impacts outside of the DCO boundaries. This includes work referenced in preparing this report, as well as a Local Plan LTC sensitivity test to inform the emerging Tonbridge &amp; Malling Local Plan. TMBC has not however been able to complete this work in time to inform this report.</p>
<p><b>Applicant's Response</b></p>	<p>The Applicant's transport model has been produced in line with DfT guidance (Transport Analysis Guidance) as set out in the Combined Modelling and Appraisal Report [<a href="#">APP-518</a>]. It should be noted that overall growth within the transport model is in line with DfT traffic forecasts as set out in the National Trip End Model and published as TEMPro 7.2 traffic growth forecasts. The Uncertainty Log provides information on the assumptions used within the Applicant's transport model regarding planned developments (under construction, have a planning application or planning permission (as of 30 September 2021)) and transport schemes (also as of 30 September 2021) in the vicinity of the Project and provides the basis for additional spatial definition for the location of some of the growth within the model.</p> <p>The Uncertainty Log (both for developments and highway schemes) used within the Project's transport model has been developed following DfT's Transport Analysis Guidance Unit M4, as is set out in Chapter 4 of the Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [<a href="#">APP-522</a>].</p> <p>Alternative scenarios (high and low growth), in line with Transport Analysis Guidance, have also been modelled using LTAM. Chapter 4 of the Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [<a href="#">APP-522</a>] includes details of the high and low growth scenarios, the results of which are presented within Chapter 7 of the Transport Assessment [<a href="#">APP-529</a>]. The high growth scenario therefore assesses the impact of the Project on the road network with a higher level of growth than is present in the core scenario.</p> <p>The Applicant has offered to model alternative scenarios to each of the local authorities, however, it does require inputs from local authorities (including an understanding of any additional highway infrastructure). The Applicant remains willing to offer these model runs and will continue to discuss with TMBC.</p>

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<p><b>Page 13-14</b> <b>Paragraph 7.4 to 7.5</b></p>	<p><b>WIDER NETWORK IMPACTS</b></p> <p>LTC DCO document 7.9 Transport Assessment [<a href="#">APP-529</a>], Section 7.5, Traffic forecasts for the wider road network, identifies traffic impacts of the LTC. In conformity with the views of Kent County Council, TMBC consider that the negative traffic impacts of the LTC tend to occur to the east of the LTC junction with the A2, as the LTC would cater for traffic travelling between north of the Thames, east and mid Kent as well as the channel ports once operational.</p> <p>There are likely to be positive traffic impacts of LTC but with the exception for flows west of junction 4 M20, most of these are identified in other boroughs. Key negative highway impacts for Tonbridge &amp; Malling include those affecting the A20 London Road and A227 Gravesend Road at Wrotham, the A228 between M20 Jn4 and M2 Jn2, and the A229 Blue Bell Hill between M20 Jn6 and M2 Jn3.</p>
<p><b>Applicant's Response</b></p>	<p>Please see the Applicant's response to Page 7, paragraph 4.4 above.</p> <p>The Applicant is proposing to monitor the impacts of the Project on traffic on the local and strategic road networks as set out in the Wider Network Impacts Management and Monitoring Plan (WNIMMP) [<a href="#">APP-545</a>]. If the monitoring identifies opportunities to further optimise the road network as a result of traffic growth or new third-party developments, this can be used as evidence to support scheme development and case making through existing funding mechanisms and processes. The WNIMMP already identifies M2 junction 2 and M2 junction 3 as monitoring locations. Relevant highways authorities (including Tonbridge and Malling Borough Council) will be able to propose additional locations for inclusion through Requirement 14 in Schedule 2 of the draft DCO [<a href="#">REP1-042</a>], which requires the preparation of an operational traffic monitoring plan, which must be approved by the Secretary of State following consultation with the relevant highways authorities.</p> <p>The Applicant is working with KCC on a Kent Wider Network Impact study, funded by the Applicant, which will further the joint understanding of how the network performs in the future with the Project. These outputs will be discussed with KCC and TMBC, and the Applicant will continue to engage in accordance with the licence obligations to work with others to align national and local plans and investments, balance national and local needs and support better end-to-end journeys for road users.</p>
<p><b>Page 13-14</b> <b>Paragraphs 7.4 to 7.6</b></p>	<p>Kent Transport Model (KTM) testing undertaken by KCC identifies the following negative impacts of LTC upon key motorway junctions within and adjacent to Tonbridge &amp; Malling's boundary.</p> <ul style="list-style-type: none"> <li>• M2 J3 (A229) is forecast to approach capacity in Opening Year 2030 PM Peak, with the volume to capacity (V/C) ratio for the M2 southbound off-slip increasing from 78% without LTC to 93% with LTC. This movement exceeds capacity with LTC in the Design Year 2045 PM Peak. Similarly, the A229 northbound off-slip approaches capacity in Opening Year 2030 PM Peak, with the V/C ratio increasing from 90% to 96% with LTC; the movement then exceeding capacity with LTC in the Design Year 2045 PM Peak.</li> <li>• M2 J3 (A229) is forecast to approach capacity in Opening Year 2030 PM Peak, with the volume to capacity (V/C) ratio for the M2 southbound off-slip increasing from 78% without LTC to 93% with LTC. This movement exceeds capacity with LTC in the</li> </ul>



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	<p>Design Year 2045 PM Peak. Similarly, the A229 northbound off-slip approaches capacity in Opening Year 2030 PM Peak, with the V/C ratio increasing from 90% to 96% with LTC; the movement then exceeding capacity with LTC in the Design Year 2045 PM Peak.</p> <p>Transport Assessment Appendix B Journey Time Changes 2030, and Appendix C Journey Time Changes 2045 indicate an impact of LTC implementation on journey times on the section of the M2 between Junction 1 (A289) and Junction 4 (A278) in both Opening Year 2030 and Design Year 2045. These increased journey times may lead to a negative impact of encouraging traffic to find alternative routes (rat runs) on unsuitable local roads e.g. A227, especially so if preferred options are blocked.</p> <p>Negative traffic impacts of the LTC on the local road network have been identified by KCC. It was agreed between National Highways and KCC to review these impacts together in more detail, and to develop mitigations to the level of pre-Strategic Outline Business Case (SOBC) in the Wider Network Impacts (WNI) study.</p> <p>The WNI study has confirmed the following key corridors of negative impacts of the LTC project that directly affect Tonbridge &amp; Malling.</p> <p><b>A227</b> –The A227 between the A2 and the M20: Implementation of the LTC leads to significant increases in heavy goods vehicle (HGV) traffic on alternative routes between the A227 / Green Lane and A2 to access the LTC, with implications for communities in the north of Tonbridge &amp; Malling, including the villages of Wrotham, Fairseat and Stansted.</p>
<p><b>Applicant's Response</b></p>	<p>The areas of impacts noted above are also the areas identified by the LTAM and reported in the Transport Assessment [APP-529], although the exact changes in traffic flows and changes in volume/capacity ratios will vary between the two models (the LTAM and the KTM).</p> <p>The Applicant acknowledges TMBC's comments related to the Kent County Council Wider Network Impacts study submitted as an appendix to TMBC's LIR and wishes to reserve the right to provide further comment on this appendix at a later date in the examination.</p> <p>The Applicant is proposing to monitor the impacts of the Project on the local and strategic road networks. If the monitoring identifies opportunities to further optimise the road network as a result of traffic growth or new third-party developments, then this can be used as evidence for case making and investment decisions. The proposed monitoring locations, which include M2 junction 1 to M2 junction 4, are detailed in the Wider Network Impacts Management and Monitoring Plan (WNIMMP) [APP-545]. Relevant highways authorities, including Tonbridge and Malling Borough Council, will be able to propose new locations for inclusion through Requirement 14 in Schedule 2 of the draft DCO [REP1-042], which requires the preparation of an operational traffic monitoring plan, which must be approved by the Secretary of State following consultation with the relevant highways authorities.</p>

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<p><b>Page 15-16</b>  <b>Paragraph 7.11</b>  <b>to 7.14</b></p>	<p><b>A228</b> –The A228 between the M2 and the M20: Table 7.4 in the KCC study (Annex 1) outlines the corridor impacts for the A228 between M2 and M20 junctions. Within Tonbridge and Malling, the A228/Malling Road junction is forecast to experience an increase in HGV traffic for all four scenarios. 2030 AM shows an increase from 187 Do Nothing (DN) to 332 Do Something (DS), 2030 PM from 140 (DN) to 258 (DS), 2045 AM from 332 (DN) to 367 (DS), and 2045 PM from 258 (DN) to 282 (DS). Junctions north of Malling Road along the A228 are forecast to see significant increases in traffic too in the with-LTC scenario; particularly HGV traffic flows along the A228 increasing by up to 160 vehicles per hour.</p> <p>These and other results outlined for the corridor, validate concerns shared with KCC regarding rat running of HGVs as well as other traffic between the A229, A228 and A227 to connect between the M2/A2 corridor and the M20/A20 corridor. Many of these roads are unsuitable to accommodate HGV traffic due to their narrow width, tight bends and routes through village centres and will be negatively impacted. The roads that see an increase in vehicles or HGVs between the DS and DN include Village Road, Birling Road and Rochester Road. This will impact negatively upon communities in the Medway Valley, including Snodland, Wouldham and Aylesford.</p> <p>Additional traffic movements associated with LTC will have a significant negative detrimental impact on the A228 corridor with a forecast increase in traffic congestion at some junctions and significant increases in HGV traffic. This will impact upon all road users, leading to a deterioration in air quality and increased road safety risks for residents too, which may increase KSI incidents. Journey times and the reliability of bus services 151 and 71 which operate on the A228 north of M20 Jn4 are likely to be negatively impacted by an increase in traffic. The study recommends that the mitigation for the A228 should focus on reducing HGV traffic flows, whilst not displacing this on to the A227. At this time no mitigation for the negative impacts from the LTC is proposed or funded for the A228.</p>
<p><b>Applicant's Response</b></p>	<p><b>Traffic movements</b></p> <p>The Applicant recognises that, as a result of the Lower Thames Crossing opening, people will choose to make different journeys. In many places on the network, this will lead to beneficial impacts on the network, and in some cases will lead to adverse impacts. Overall, the benefits on the road network outweigh the adverse impacts, and this is reflected in the positive economic benefit of the Project. The Applicant has identified the adverse impacts on traffic flows across the LRN, and this assessment has been set out in the Transport Assessment [<a href="#">APP-529</a>]. Each of these impacts has been assessed and considered against policy requirements as set out in Transport Assessment Appendix F [<a href="#">APP-535</a>], and the Applicant has concluded that the adverse impacts are acceptable under these policies.</p> <p>It should be noted that the LTAM does not forecast an increase of 160 HGVs an hour on the A228. The greatest increase is for 77 HGV in 2045 in the AM peak hour. The Applicant is working with KCC on a Kent Wider Network Impact study, funded by the Applicant, which will further the joint understanding of how the network performs in the future with the Project. These outputs will be discussed with KCC and TMBC, and the Applicant will continue to engage in accordance with the licence obligations to work</p>

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	<p>with others to align national and local plans and investments, balance national and local needs and support better end-to-end journeys for road users.</p> <p>The Applicant is proposing to monitor the traffic impacts for the scheme during its operational phase to identify changes in the performance on the surrounding LRN, MRN and SRN. The Wider Network Impacts Management and Monitoring Plan (WNIMMP) [APP-545] sets out how this traffic impact monitoring scheme will be implemented (to be approved by the Secretary of State and implemented by the Applicant) pursuant to Requirement 14 in Schedule 2 of the draft DCO [REP1-042]. In line with Requirement 14, this document sets out an outline methodology for undertaking the monitoring and assessment work.</p> <p>The data and data analysis would set out to identify traffic conditions following the Project coming into operation, as well as provide analysis on wider network changes that are not as a result of the Project. The data will then be available to local highway authorities as evidence to inform their intervention case making.</p> <p>In summary, in the context of wider network impacts, the WNIMMP [APP-545] defines what would be undertaken as a requirement of the draft DCO, and separately what will be undertaken as part of the ongoing role of the Applicant, under licence to the Secretary of State, as the highway authority, traffic authority and street authority for the SRN.</p> <p>Kent County Council, the local highway authority, is named in the WNIMMP [APP-545] as a key stakeholder. The Applicant would consider and have due regard to any representations from local highway authorities before submitting the monitoring scheme to the Secretary of State for approval. Consultation with KCC as the highway authority would incorporate the Gravesham, Dartford, Sevenoaks, Tonbridge &amp; Malling, and Maidstone local authority areas.</p> <p><b>Air Quality</b></p> <p>This air quality aspect of this matter is addressed with the Statement of Common Ground [REP1-110] item 2.1.15 as follows:  <i>'The air quality assessment has been updated and completed for the Environmental Statement [ES Chapter 5: Air Quality APP-143] and no potential for likely significant effects was identified for human health and compliance with Limit Values. As such, no essential mitigation measures are required for these effects.</i></p> <p><i>However, it should be noted that measures to reduce the operational impact of the Project on the A228 have been investigated where there are predicted exceedances of the annual mean NO<sub>2</sub> Air Quality Strategy objective and deterioration in annual mean NO<sub>2</sub> concentrations as a result of the Project. Whilst exceedances in annual mean Air Quality Strategy objectives are predicted in both Medway and TMBC, the receptors located in the administrative boundary of TMBC are predicted to experience beneficial impacts on air quality as a result of a reduction in HGVs on the A228 between Leybourne Way and Junction 4 of the M20.'</i></p> <p><b>Safety</b></p> <p>The Transport Assessment [APP-529] reflects the operational modelling that forms the basis of the DCO application. Discussions relating to the operational protocols will continue through until Project opening and then beyond as the Applicant continues its statutory duty to operate the SRN.</p>

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	<p>Chapter 9 of the Transport Assessment presents a collision analysis using the DfT's COBALT software. This analysis showed that over the study area as a whole there is predicted to be a decrease in the number of accidents per vehicle kilometre driven, but due to the increase in the total number of vehicle kilometres driven as a result of the Project there is predicted to be an overall increase in the number of accidents.</p> <p>Whilst it is forecast that there is likely to be an increase in collision numbers as a result of more traffic in the area appraised, there would be a reduction in the collision rate (collisions per vehicle mile travelled) as a result of a managed, less congested network. This is further detailed in Combined Modelling and Appraisal Report Appendix D: Economic Appraisal Report <a href="#">[APP-526]</a>.</p> <p><b>Public Transport</b></p> <p>Journey time impacts on public transport, including bus services, are considered at Section 7.11 of the Transport Assessment <a href="#">[APP-529]</a>.</p>
<p><b>Page 16-20                      Paragraph 7.15                      to 7.30</b></p>	<p><b>A229</b> –The A229 Blue Bell Hill is a strategically important link providing the shortest and most direct route between the M2 and M20, critical for interchange between the motorways, for accessing and serving the Channel ports, and for connecting the County town of Maidstone, conurbation of Medway and settlements in Tonbridge &amp; Malling, including Walderslade and Blue Bell Hill.</p> <p>One of the most negative traffic impacts of the LTC on the local / major road network in Kent is that on the A229 Blue Bell Hill (including M20 J6 and M2 J3), as identified in the Applicant's DCO documents as well as in KCC analysis of the LTAM and KTM models. This impact has been identified and re-iterated in KCC's and TMBC's previous consultation responses. Both authorities have requested at every opportunity, that mitigation measures for the impacts on A229 Blue Bell Hill are included in the Project or otherwise funded separately by the DfT.</p> <p>A229 Blue Bell Hill was excluded from the WNI study (Impact B) as it is subject to separate Strategic Outline Business Case (SOBC) development as part of the DfT Large Local Majors (LLM) funding programme. The DfT is still to make a decision as to whether it proceeds to the next stage in the funding application process (anticipated summer 2023). It is only after completion of OBC that a decision will be made by DfT on funding or scheme delivery and even if successful, funding from LLM is only for 85% of the scheme costs, this would leave a funding deficit that would need to be addressed. Therefore, at this time it must be assumed that no improvement scheme is committed and that there will be no mitigation for the negative impacts from the LTC.</p> <p>Existing traffic conditions at M2 Junction 3 and M20 Junction 6 are poor at peak times with queues and delays experienced by all road users. Traffic on the A229 is forecast to increase significantly from the 2019 DfT manual count of 69,336 annual average daily traffic (AADT) with local growth and once the Lower Thames Crossing is opened.</p>

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	<p>KCC's comparison of the with-LTC and without-LTC traffic model scenarios indicates that the LTC has a significant impact on A229 Blue Bell Hill and its motorway junctions. The DCO documents indicate the following negative impacts of the LTC on the A229 Blue Bell Hill:</p> <ul style="list-style-type: none"> <li>• Changes in traffic volumes: Transport Assessment [APP-529] Plates 6.2 to 6.4 show that the A229 Blue Bell Hill already takes as much traffic as parts of the M2 and M20. Plate 7.10 indicates a forecast increase in AM Peak traffic volumes of between 501 and 1,000 vehicles northbound on the A229 with LTC in Design Year 2045; and between 101 and 250 southbound. Plate 7.14 indicates a forecast increase in PM Peak traffic volumes of between 251 and 500 vehicles northbound and between 101 and 250 southbound.</li> <li>• Scale of impacts: Plate 7.28 indicates adverse impacts of the LTC in the AM Peak of Opening Year 2030 according to the Applicant's scoring system based on V/C ratio changes with and without LTC. The figure indicates major adverse impacts of the LTC at the A229 intersections with the M2 and M20. Plate 7.29 indicates minor and moderate adverse impacts of the LTC at these intersections in the inter-peak. Plate 7.30 indicates a large number of minor and moderate adverse impacts of the LTC along the A229; together with one major adverse impact at the A229 intersection with the M2 in the PM Peak.</li> <li>• Changes in traffic journey times: Table 7.11 indicates the A229 journey times between the M2 and M20 would increase by 1.6 minutes (+26.8%) northbound and 1.4 minutes (+13.2%) southbound in the AM Peak Opening Year 2030. A slightly reduced journey time is forecast for the PM Peak core growth, yet both the High and Low growth complementary scenarios show increases in journey times.</li> <li>• Impacts on public transport: Table 7.14, Bus journey time impacts, does not cover bus routes 101 (Maidstone –Gillingham), which is expected to be adversely impacted by increased traffic and delay on the A229 on implementation of the LTC. Plate 7.38, Bus/coach routes considered in analysis, indicates the A229 lies just outside the scope of the analysis.</li> </ul> <p>KCC has informed that the following additional negative impacts of the LTC on the A229 Blue Bell Hill are apparent from the LTAM model shapefiles:</p> <ul style="list-style-type: none"> <li>• Changes in HGV volumes: LTAM HGV flow plots indicate increases on northern sections of the A229 of approximately 100 HGVs with LTC in the AM and PM Peaks, although in the AM Peak the model appears to assign significant HGV traffic (100) to Warren Road. This route is a narrow, steep single carriageway which is signed as unsuitable for HGVs. It is therefore expected that the HGVs assigned to this road in the model would use A229 Blue Bell Hill given that they are parallel routes. This is therefore, giving an increase in HGV traffic on A229 of approximately 200 in the AM peak.</li> <li>• Changes in traffic volume to capacity ratios at intersections: LTAM V/C ratio plots at Taddington intersection (M2/A229) indicate both northbound and westbound approaches to the roundabout are taken over capacity in the PM Peak with-LTC scenario. Similar impacts are shown for Running Horse intersection (M20/A229) for the eastbound M20 on-slip; the westbound M20 off-slip; and the northbound connector between the two roundabouts.</li> </ul>

LIR Reference	Local Impact Report Extract / Applicant’s Response
	<p>TMBC has yet to fully understand the impacts of LTC upon the local road network south of the M20, and hope that the Tonbridge &amp; Malling Local Plan scenario and sensitivity testing provides further clarity on this. TMBC is concerned about the potential for additional traffic on the A228 between the junctions of the B2015 and A228 (Seven Mile Lane), and junction 4 M20 as cross-Thames traffic is redistributed away from the A21, M25 and Dartford Crossing, as a consequence of the option to use LTC. The known pinch-points at A228 Malling Road and A26 Mereworth, are likely to require widening and junction improvements.</p> <p>Medway Council has shared their Lower Thames Crossing Impact Assessment with TMBC. This is based upon the Lower Thames Area Model (LTAM) and the Medway Aimsun Model (MAM). The overall network in MAM is organised into subnetworks to cover areas in Medway that are expected to come under pressure from traffic growth. Subnetworks 1 to 8 were previously contained in the model, SYSTRA developed a new subnetwork 9 as a part of the LTC assessment.</p> <p>The study concludes that <i>“Subnetwork 9 was developed to include a stretch of A228 on the western edge of Medway from Cuxton in the north to Snodland in the south, as the Council expects adverse impacts associated with traffic generated by the LTC on this section of the A228”</i> (paragraph 2.2.3).</p> <p>The following junctions were analysed from the MAM interrogations undertaken by Systra and are of relevance to Tonbridge &amp; Malling, these have been given level of service scores (LoS) between A-F based upon their performance under a range of scenarios with and without Lower Thames Crossing. A=Free flow and F=Forced flow (congested and queues fail to clear). Negative impacts upon these junctions have been identified</p> <p>Subnetwork 5 –M2 junctions 2 to 4</p> <ul style="list-style-type: none"> <li>• SN5-J1 –Bridgewood Roundabout (situated in Tonbridge &amp; Malling). With Local Plan growth and LTC the junction level of service is E (am) and F (pm) –Forced flow (congested and queues fail to clear) at 2030.</li> <li>• SN5-J2 –Lord Lees Roundabout (situated in Tonbridge &amp; Malling). With Local Plan growth and LTC the junction level of service is E (am) and F (pm) –Forced flow (congested and queues fail to clear) at 2030.</li> <li>• SN5-J5 –Taddington Roundabout (situated in Tonbridge &amp; Malling). With Local Plan growth and LTC the junction level of service is <b>D</b> (am and pm) –Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding).</li> </ul> <p>Subnetwork 9 –A228 Cuxton &amp; Halling</p> <ul style="list-style-type: none"> <li>• SN9-J3 –Peters Bridge Roundabout (situated on the boundary of Tonbridge &amp; Malling, on the A228). With Local Plan growth and LTC the junction level of service is F (am and pm) –Forced flow (congested and queues fail to clear) at 2030.</li> </ul> <p>The study concludes that the ‘Local Plan growth with LTC’ and ‘core growth with LTC’ scenarios show the most adverse impacts in most of the subnetworks. At the present time Medway Council and its neighbouring authorities are committed to meeting objectively assessed housing growth in full, as such the Local Plan with LTC is the most relevant scenario in terms of identifying future impacts upon the local road network. In the ‘core growth with LTC’ scenario the modelled A229 junctions continue to</p>

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	<p>perform poorly, the exception being the Peters Bridge roundabout which has an LoS of A (free flow), under this scenario. We maintain that the core scenario does not adequately reflect the location of committed and expected local growth up to and beyond the LTC opening year.</p> <p>The Systra work stops short of recommending road and junction improvements for all of the above junctions but does suggest improvements at Bridgewood roundabout to change lane markings at southern and western arms to allow entrance onto the roundabout from 3 lanes instead of 2. This work does not take account of the LLM scheme proposals which have been progressed by KCC for Blue Bell Hill related junctions.</p> <p>With the exception of traffic signals recommend for the junction of the A228 and Bush Road, Cuxton, which could slow the flow of traffic towards the Peters Bridge Junction, the proposed mitigations have no positive benefit upon the modelled junctions of the A229 within Tonbridge &amp; Malling. A worsening of the junction LoS at Taddington Roundabout under the 'core growth with LTC + Mitigation' scenario to E (Unstable flow) is suggested and at Bridgewood Roundabout the LoS is identified to worsen from E to F (Forced flow).</p> <p>The study makes no further recommendations for junctions associated with the A229 at Blue Bell Hill in Tonbridge &amp; Malling. The Systra evidence further indicates that LTC has significant negative implications for the junctions, this further supports the case to approve the Strategic Outline Business Case for the improvement of the A229 and related junctions between M20 Jn6 and M2 Jn3, that KCC has submitted to the DfT. Further funding is also required for local highways mitigation on the A228.</p>
<p><b>Applicant's Response</b></p>	<p>The Applicant recognises that, as a result of the Lower Thames Crossing opening, people will choose to make different journeys. In many places on the network, this will lead to beneficial impacts on the network, and in some cases will lead to adverse impacts. Overall, the benefits on the road network outweigh the adverse impacts, and this is reflected in the positive economic benefit of the Project. The Applicant has identified the adverse impacts on traffic flows across the LRN, and this assessment has been set out in the Transport Assessment [<a href="#">APP-529</a>]. Each of these impacts has been assessed and considered against policy requirements as set out in Transport Assessment Appendix F: Wider Network Impacts Management and Monitoring Policy Compliance [<a href="#">APP-535</a>].</p> <p>The Applicant is working with KCC on a Kent Wider Network Impact study, funded by the Applicant, which will further the joint understanding of how the network performs in the future with the Project. These outputs will be discussed with KCC and TMBC, and the Applicant will continue to engage in accordance with the licence obligations to work with others to align national and local plans and investments, balance national and local needs and support better end-to-end journeys for road users.</p> <p>The Wider Network Impacts Management Plan has been submitted as part of the application which sets out the proposed approach for the monitoring of traffic impacts for the scheme during its operational phase, to identify changes in the performance on the surrounding LRN, MRN and SRN. The monitoring data would be made available to all the local and highway authorities.</p> <p>The DCO requires the Applicant to produce an operational traffic monitoring scheme that complies with this plan prior to the tunnel opening, and that local highway authorities will be consulted on.</p>

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	<p>As such, the Applicant does not agree that interventions via upgrades are necessary in order to successfully deliver the Project's benefits, nor does the Applicant consider it appropriate to use the draft DCO for the Project to secure interventions to further optimise the operation of the road network in place of the existing framework for managing investment in the road network.</p> <p>The Applicant acknowledges TMBC's comments related to Medway Council's traffic study submitted as an appendix to TMBC's LIR and wishes to reserve the right to provide further comment on this appendix at a later date in the Examination.</p>
<p><b>Page 21-22</b>  <b>Paragraph 8.1 to 8.7</b></p>	<p><b>Noise</b></p> <p>8.1 The EIA Methodology is based upon the LTAM core scenario, as such our concerns regarding the combined impact of local growth and LTC once operational, are of relevance to our concerns regarding traffic related noise and air quality impacts. As such our review of the DCO documents in this regard leaves uncertainty regarding the assessments undertaken.</p> <p>8.2 At Para 12.4.55 of Chapter 12: Noise &amp; Vibration (which is part of the section looking at existing noise levels in affected unaltered traffic links outside of bypassed area) states that no surveys have been undertaken in the TMBC area. Assessment of noise has presumably relied solely upon calculation of existing and future noise levels. This is not ideal as real-world levels may differ significantly and result in unidentified negative impacts.</p> <p>8.3 At Para 12.6.174 (which looks at noise along the A2 east of the M2/A2/Lower Thames Crossing junction incorporating the M2 and the A228) it lists roads that are predicted to be impacted in the do something opening year scenario. Unhelpfully, these are listed alphabetically with no indication as to which area/locality they're in (e.g., Halling, Snodland, Cuxton, etc).</p> <p>8.4 More specifically at Para 12.6.175, b, i – is a list of roads that are predicted to experience a short-term minor adverse impact due to road traffic noise in the do something scenario. The roads listed are from letters A-H, with none beyond that point of the alphabet. The full negative impacts on roads within TMBC are therefore hard to gauge.</p> <p>8.5 At the same Para, roads further away from the A228 within TMBC (i.e., Covey Hall Road) are listed as having negative effects, whilst closer roads are not. They are not included in the later sub-sections that refer to moderate or major adverse impact either.</p> <p>8.6 At Para 12.6.192 the reports states that the A229 has speed limit of &lt;75kmh. This is incorrect as the stretch between the M20 and the Common Road overbridge has a national speed limit. If this incorrect speed limit has been entered on the noise modelling program, there may be further negative impacts arising from those given due to real world increased speeds on that road. The same para says that noise barriers would not be suitable due to countryside views. However, these are already in use along a section of the A229.</p> <p>8.7 In the drawings for noise in Section 6.2, Figure 12.3 shows the roads predicted to have a negative impact and experience an increase in noise &gt;1dB. This highlights Rochester Road, Station Road and Hall Road, but doesn't include all of A229 between the M20 and M2. Whilst there is a significant throughput of vehicles on the A229, and raising noise levels by 1dB would take quite a number of additional vehicles, there is no clear justification as to why all of the A229 between Blue Bell Hill village and the</p>



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	<p>M20 isn't listed as showing the same &gt;1dB negative impact. On a positive note, the predicted effects on Warren Road are unlikely to materialise, as Warren Road is a narrow steep single carriage way unsuitable for HGVs and is likely to have been assigned in error, where the A229 would be the most appropriate road.</p> <p>Section 6.2, Figure 12.8 (DSFY minus DMOY) also fails to recognise the negative impacts by changing the scale for the noise contours, presenting the impression that there is zero negative noise impact predicted within the Borough.</p>
<p><b>Applicant's Response</b></p>	<p>The response relating to noise and vibration covers a number of concerns raised by TMBC. The Applicant will address each in turn in the following section.</p> <p>Paragraph 8.1 in TMBC's LIR relates to the traffic model used. Please see the Applicant's response to Page 10-12, Paragraphs 6.1-6.8 above. Concern is raised in paragraph 8.2 relating to the lack of survey data in the council area. The use of baseline noise monitoring in the assessment of noise from the Project is mainly confined to the construction noise assessment, used primarily to define the construction noise significance threshold levels. As no construction works are predicted to occur within TMBC, existing baseline noise levels were not specifically required to conclude the Design Manual for Roads and Bridges (DMRB) LA 111 assessment. Operational impacts are assessed based upon predicted road traffic noise levels in the Project's opening year of 2030 and 15 years after opening in 2045. As these are in the future it is not possible to monitor realistic baseline noise levels, especially as they are not specifically required within the scope of the assessment methodology.</p> <p>With regard to the issues raised within paragraphs 8.3, 8.4 and 8.5, the Applicant accepts that the ES presents a large amount of information and has tried to be as clear and concise as possible in the production of such. However, it is acknowledged that the interpretation of this information may be difficult, so for clarity the assessment of operational noise impacts within the council boundary is presented below considering the local areas.</p> <ul style="list-style-type: none"> <li>• Within Tonbridge and Malling there are a total of 13,326 residential dwellings and 48 other sensitive receptors (OSRs) which have been considered.</li> <li>• Short-term impacts have been predicted to occur:                         <ul style="list-style-type: none"> <li>– Daytime: 11,056 dwellings and 32 OSRs; Night-time: 11,312 dwellings and 34 OSRs predicted to experience no change or a negligible change in road traffic noise level.</li> </ul> </li> <li>• Daytime: 2,203 dwellings and 16 OSRs; Night-time: 2,000 dwellings and 14 OSRs predicted to experience a minor adverse change in road traffic noise level.                         <ul style="list-style-type: none"> <li>– Daytime 1,693/Night-time 1,527 occur at dwellings within Snodland along the A228 corridor.</li> <li>– Daytime 439/Night-time 421 occur at dwellings within Aylesford along the Rochester road, Station Road and Hall Road corridor.</li> <li>– Daytime 57/Night-time 40 occur at dwellings within Blue Bell Hill and along Warren Road</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>– Daytime 14/Night-time 12 occur at dwellings within Lunsford</li> <li>– There are no identified noise sensitive receptors (NSRs) which would experience a moderate or greater adverse change in road traffic noise levels</li> <li>– Daytime: 67 dwellings and zero OSRs; Night-time: 14 dwellings and zero OSRs predicted to experience a minor beneficial change in road traffic noise level.</li> <li>– Daytime 67/Night-time 14 occur at dwellings within Wrotham</li> <li>• There are no identified NSRs which would experience a moderate or greater beneficial change in road traffic noise levels.</li> </ul> <p>There are reported a total of 508 significant adverse effects of the Project above a SOAEL in the short term within Tonbridge and Malling. These are located along the A228 Corridor in Snodland, the Rochester Road, Station Road and Hall Road corridor in Aylesford, and within Blue Bell Hill and along Warren Road.</p> <ul style="list-style-type: none"> <li>• 219 dwellings which report a minor adverse change above a SOAEL during the daytime and night-time.                         <ul style="list-style-type: none"> <li>– 10 dwellings in Blue Bell Hill and along Warren Road</li> <li>– 145 dwellings along the Rochester Road, Station Road and Hall Road corridor in Aylesford</li> <li>– 64 dwellings along the A228 Corridor in Snodland</li> </ul> </li> <li>• 6 dwellings which report a minor adverse change above a SOAEL during the daytime only.                         <ul style="list-style-type: none"> <li>– 4 dwellings along the Station Road and Hall Road corridor in Aylesford</li> <li>– 2 dwellings along the A228 Corridor in Snodland</li> </ul> </li> <li>• 283 dwellings which report a minor adverse change above a SOAEL during the night-time only.                         <ul style="list-style-type: none"> <li>– 9 dwellings in Blue Bell Hill and along Warren Road</li> <li>– 129 dwellings along the Rochester Road, Station Road and Hall Road corridor in Aylesford</li> <li>– 145 dwellings along the A228 Corridor in Snodland</li> </ul> </li> </ul> <p>There are reported a total of 11 significant beneficial effects of the Project above a SOAEL in the short term within Tonbridge and Malling. These are located along the M20 corridor within Wrotham.</p> <ul style="list-style-type: none"> <li>• 2 dwellings which report a minor adverse change above a SOAEL during the daytime and night-time.</li> <li>• 5 dwellings which report a minor adverse change above a SOAEL during the daytime only.</li> <li>• 4 dwellings which report a minor adverse change above a SOAEL during the night-time only.</li> </ul> <p>Paragraph 8.6 raises a query relating to speed data assumed in the modelling. The reference in paragraph 12.6.192 to a speed limit of &lt;75kmh should have been to the modelled speed rather than to the speed limit, and this relates purely to the A229 at the</p>

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	<p>A229/M2 Junction 3 (Blue Bell Hill). In this area the speed quoted relates to modelled speeds along the slip road from the M2 onto the A229, and not the main A229 road. As a general point the speed data used in the noise modelling is applied directly from the traffic data which has been verified and checked. As such, the Applicant is confident that the speed information in the noise model is correct.</p> <p>With regard to noise barriers, this section of paragraph 12.6.192 within the ES is referring to the significant effects located on Rochester Road, where landscape views and access requirements would be affected due to the noise-sensitive receptors being located adjacent to the road.</p> <p>With regard to concerns raised in paragraph 8.7 relating to why the entire A229 between the M2 and the M20 is not reporting a change in noise of greater than 1dB. The Applicant notes that the entire length of the A229 is in the noise model, with the change in road traffic noise predicted from the traffic data as a result of the Project reporting a change in noise of less than 1dB along the main carriageway. This is as a result of the existing high vehicle flows on this road.</p> <p>With regard to the request for clarification relating to the scale implemented on Figure 12.8, the Applicant notes that the figure presents the change in road traffic noise in the future assessment year, 15 years after the opening of the Project and uses the long-term magnitude of change criteria from DMRB LA 111, which accounts for habituation of road traffic noise over time. As presented within Figure 12.8 the road traffic noise impacts in the vicinity of affected links within the Tonbridge and Malling area in the future assessment year would be negligible.</p>
<p><b>Page 23-24</b>  <b>Paragraph 9.1 to 9.4</b></p>	<p><b>Air Quality and Emissions</b></p> <p><b>Nitrogen</b> – Para 5.4.42 of Chapter 5: Air Quality, suggests that parts of the A228 (between M20 Junction 4 and M2 Junction 2) are already above the Nitrogen Dioxide (NO<sub>2</sub>) annual limit of 40µg/m<sup>3</sup>. This includes areas within TMBC's jurisdiction such as at residential receptors on Castle Way just north of M20 Junction 4. Furthermore, the EIA states that this area will see a small decrease in NO<sub>2</sub> levels between the do minimum and do something 2030 opening year scenarios. This is supposedly due to the rerouting of HGV's heading towards LTC turning northbound from Leybourne Way (para 5.6.47). TMBC have begun direct NO<sub>2</sub> monitoring at the residential receptors in this area, and to date there is no indication that the area currently exceeds the annual NO<sub>2</sub> limits such that an Air Quality Management Area (AQMA) need be declared.</p> <p>Whilst this may be seen as a positive, as mentioned earlier in this document (para 7.21) TMBC is yet to fully understand the impact of LTC on the local road network south of the M20. A portion of any additional flow will use the A228, therefore, whilst monitoring indicates annual NO<sub>2</sub> levels are unlikely to be exceeded there may still be negative impacts due to the questions which remain over accurate traffic modelling.</p> <p>Negative impacts on air quality at Blue Bell Hill village just off the A229/M2 Jn3 interchange are also a concern. Table 5.23 (6.1 Environmental Statement Chapter 5: Air Quality), already predicts a negative impact where increases in NO<sub>2</sub> levels of more than 2µg/m<sup>3</sup> are predicted between the do minimum and do something opening year scenarios at Maidstone Road, close to M2 Jn3 (although the exact receptor location could not be determined as no supporting maps could be found). This would bring the</p>

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	<p>receptor to almost within 10% of the annual objective level for NO<sub>2</sub>. As evidence supplied by Medway Council (referred to in Section 7 of this document and supplied in full at Annex 2) suggests, the level of service on the road network around M2 Junction 3/A229 interchange varies between E and F (where F = Forced Flow congested, and queues fail to clear) for AM/PM in the do something opening year scenario.</p> <p>As road speed is a key input point for the Emission Factor Toolkit which informs the air quality modelling, accurate input is important. It is unclear whether the significance of this queuing traffic (which creates more pollution than vehicles moving at a steady speed) has been considered in the LTC modelling. With the margin of predicted NO<sub>2</sub> levels for the do something opening year scenario being so close to the NO<sub>2</sub> annual objective level and given the proximity of properties close to this interchange, particularly those just off Common Road, 456-462 Maidstone Road and Toddington Crescent, it is critical that all transport data is fully considered to properly inform the air quality model.</p>
<p><b>Applicant's Response</b></p>	<p>The air quality assessment presented in the ES Chapter 5: Air Quality <a href="#">[APP-143]</a> concluded no significant effects for human health and compliance with Limit Values. And as such, no essential mitigation measures are required for these effects. However, it should be noted that measures to reduce the operational impact of the Project on the A228 have been investigated where there are predicted exceedances of the annual mean NO<sub>2</sub> AQS objective and worsenings in annual mean NO<sub>2</sub> concentrations as a result of the Project. These exceedances are predicted in both Medway and TMBC. The receptors located on the section of the A228 in TMBC are predicted to experience beneficial impacts on air quality as there is a reduction in HGVs on the A228 between Leybourne Way and junction 4 of the M20. The Applicant has noted the comment relating to additional monitoring indicating that there are currently no exceedances at those properties which is consistent with Medway Council's monitoring, which also indicates the air quality model on the A228 is likely to lead to pessimistic NO<sub>2</sub> predictions. At a meeting on 10 May 2023, the Applicant discussed the methodology used in terms of the uplift of the Defra results and noted its modelling results suggested that nitrogen dioxide concentrations are higher on the A228 than recent Medway monitoring data indicates. The Applicant's modelling is likely to be overly cautious and overestimate the pollutant concentrations on the A228. Monitored concentrations on the A228 have also fallen sharply since the air quality surveys that informed the Applicant's modelling were carried out, and in 2021 and 2022 monitored concentrations were well below air quality objectives.</p> <p>On the LRN south of the M20, the Affected Road Network extends along the A228 to the A20 (London Road). There is an improvement in air quality (at most receptors classed as imperceptible) and receptors are not predicted to exceed legal air quality thresholds.</p> <p>The receptors in the vicinity of Maidstone Road near to M2 junction 3 are displayed on Page 23 of ES Figure 5.6: Operational Phase Receptors and Results (2 of 4) <a href="#">[APP-181]</a>.</p> <p>The impact of queuing and congestion on road traffic emissions is included in the air quality model through the application of the Applicant's speed bands and the modelling of the different periods of the day. Further information on the modelling approach can be found in ES Chapter 5: Air Quality <a href="#">[APP-143]</a>, paragraphs 5.3.76 to 5.3.81. Sections of the A229 near M2 Junction 3/A229</p>

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	interchange (including adjacent to Common Road, 456-462 Maidstone Road and Toddington Crescent) are classified as heavy congestion or light congestion in the speed bands used for the air quality modelling in some or all periods of the day, which leads to higher emissions than under more free flowing conditions.
<p><b>Page 24</b>  <b>Paragraph 9.5 to 9.6</b></p>	<p><b>Carbon</b> – As set out previously both TMBC and KCC have declared a climate emergency and are working to help reduce carbon emissions locally. Whilst supportive of LTC, we are concerned about the impact of the project in terms of negatively increasing carbon emissions from vehicular traffic locally. We note that paragraph 5.17 of the National Policy Statement for National Networks (DfT 2014), requires that applicants provide evidence of the carbon impacts of their projects and assessment against the Government's carbon budgets. However, this also states that <i>“it is very unlikely that the impact of a road project will, in isolation, affect the ability of the government to meet its carbon reduction plans”</i>. Furthermore, we understand that there is no set significance threshold for carbon emissions set by the DfT.</p> <p>Whilst we appreciate the actions that National Highways are seeking to take to contribute towards next zero road user emissions by 2050 (para 15.2.26 6.1 Environmental Statement Chapter 5: Air Quality), the Government will need to take progressive steps at a national level in the coming years to reduce the carbon output from vehicle-based emissions, through incentivising use of ultra-low emission vehicles and sustainable transport modes, if it is meet the carbon budgets set out at Table 15.5 (6.1 Environmental Statement Chapter 15 – Climate), this being 57% below 1990 levels by 2030.</p>
<p><b>Applicant's Response</b></p>	<p>The Applicant notes TMBC's reference to the NPSNN (DfT, 2014) para 5.17. The Applicant considers that the Project is consistent with paragraph 5.17 (pages of 84-86) of the NPSNN policy as set out in Planning Statement Appendix A: NPSNN Accordance Table <a href="#">[APP-496]</a>.</p> <p>The document Net Zero Highways: Our 2030 / 2040 / 2050 Plan is referred to in ES Chapter 15: Climate <a href="#">[APP-153]</a>. Through its 'Lowest Carbon Strategy' presented in the Carbon and Energy Management Plan <a href="#">[APP-552]</a>, the Project aims to align with the targets and trajectories set out in the Net Zero Highways Plan.</p> <p>The Applicant has adopted the avoid and/or prevent, reduce and remediate hierarchy for greenhouse gas (GHG) emissions. This has been applied throughout the design process and has informed the assumptions used to develop the 'Do Something' scenario and the Project's carbon model.</p> <p>The measures that the Applicant has committed to implement in order to reduce and remediate GHG emissions are presented in Section 15.5 of ES Chapter 15: Climate <a href="#">[APP-153]</a>. These include measures which are embedded in the engineering design, good practice measures and essential mitigation relevant to GHG emissions.</p> <p>As stated in Table B.1 of the Carbon and Energy Management Plan <a href="#">[APP-552]</a>, the Applicant can influence but not control the emissions from road users (i.e., user traffic). Policies to deliver a reduction in operational emissions related to road users are being pursued at a strategic level by the DfT. This includes a range of non-planning policies which will help to reduce carbon emissions over the transport network, as a whole, over time (including policies to decarbonise vehicles and radically reduce vehicle emissions). Interventions, for example those published in the Transport Decarbonisation Plan (DfT, 2021), require a</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>consistent application to be successful and therefore fall outside what could reasonable be delivered by any individual scheme. Notwithstanding this, the Applicant has also set out the actions which it is taking to support the DfT across its SRN in the “Net Zero Highways: Our 2030 / 2040 / 2050 plan”, available at: <a href="https://nationalhighways.co.uk/netzerohighways/">https://nationalhighways.co.uk/netzerohighways/</a>.</p>
<p><b>Page 25-26</b>  <b>Paragraph 10.1 to 10.6</b></p>	<p><b>Nitrogen Deposition Mitigation</b></p> <p>Our concerns regarding the use of the core scenario to identify the impacts of the LTC at 2030 and 2045 within the DCO documents also applies to nitrogen deposition and proposed mitigation. The potential for increased nitrogen deposition associated with LTC could have potential negative impacts on the ecology of sensitive habitats including the Wouldham to Detling Escarpment SSSI, some parts of which are already in unfavourable condition, and the North Downs Woodlands SAC particularly areas in close proximity to the M2, A299 and A228. There is also the potential to negatively impact on the wider habitats within Kent Downs AONB. This chalk escarpment landscape has varied broadleaved, mixed and yew woodland, and calcareous grassland, and is home to rare species including the meadow clary. Proposals for compensation land within the scope of the DCO are however welcomed to create additional habitats.</p> <p>The Outline Landscape and Ecology Management Plan (oLEMP) application document 6.7, identifies the proposed areas of management south of the M2 in Tonbridge and Malling, comprising two areas of woodland at Blue Bell Hill (72.2ha) and Burham (9.7ha). TMBC has previously questioned the rationale for selecting the Burham site, as we don't consider it to be adjacent to affected local roads and junctions.</p> <p>TMBC responded to the minor refinement consultation undertaken by National Highways in May 2023, to support the removal of the proposed Burham site from nitrogen deposition proposals. We consider that the site would provide less ecological benefit given the existing stewardship arrangement here, as well as the proximity of the site to surrounding woodland and the M2. This being approximately 1.5km away in comparison to the Blue Bell Hill site which is situated approximately 100m from the M2. The potential adverse effects of tree planting upon Great Culand make this site less suitable too.</p> <p>The reduction in the proposed nitrogen deposition mitigation site at Blue Bell Hill to 43ha would still provide a strengthened woodland belt adjacent to the M2, enhancing ecological connectivity in this part of the Kent Downs AONB. We assume that National Highways will be updating the DCO documents accordingly to reflect the proposed minor refinements.</p> <p>Given existing land uses and the varied ownership and management of sites in the vicinity of the M2 and A229 at Blue Bell Hill, we appreciate that opportunities to secure nitrogen deposition mitigation sites may be limited. Sites in single ownership are less complex to secure through the DCO process vs sites in multiple ownership.</p> <p>If further nitrogen deposition sites are required as a consequence of updated transport modelling evidence and related assumptions regarding nitrogen emissions, these should be aligned to existing habitats in close proximity to the A229 between the M20 and M2.</p>

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<p><b>Applicant's Response</b></p>	<p>The LTAM forecast demand has been developed in accordance with DfT's Transport Analysis Guidance (TAG) Unit M4 - Forecasting and Uncertainty. The Core scenario includes developments which were under construction or had planning applications or permissions as of 30 September 2021. The LTAM demand is constrained to TEMPro 7.2 forecasts to ensure that overall growth is in line with Government projections. The demand development process is described in detail in Chapter 4 of the Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [APP-522], and the full list of developments included is provided in Annex A in the Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package Annexes [APP-523]. A high growth scenario was also developed to understand the implications if travel demand exceeds Government projections. The high growth scenario is detailed in Section 8.6 of the Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [APP-522].</p> <p>The assessment of nitrogen deposition on designated sites is presented in ES Appendix 8.14: Designated Sites Air Quality Assessment [APP-403 to APP-406] and ES Appendix 5.6: Project Air Quality Action Plan [APP-350]). The air quality assessment is based on the Core traffic scenario, described in the preceding paragraph.</p> <p>The Environmental Impact Assessment (EIA) concerns the assessment of likely impacts. For the Project, this is based on guidance and assumptions in the traffic modelling, which form the basis of the air quality assessment and are undertaken in accordance with current published standards.</p> <p>This includes utilising the core traffic scenario (i.e. the most likely). DMRB LA 105 Air Quality states in paragraph 2.2:</p> <p style="padding-left: 40px;"><i>2.2 The air quality assessment shall be based on the most likely forecast traffic flows.</i></p> <p style="padding-left: 40px;"><i>NOTE: There is no requirement to model other traffic growth sensitivity scenarios for example high and low growth traffic scenarios.'</i></p> <p>The Applicant is therefore satisfied that the modelling and the assessment have been carried out in accordance with industry best practice, using appropriate tools and following appropriate guidance.</p> <p>The Applicant welcomes the comments made in the LIR from TMBC concerning nitrogen deposition compensation land and the updates proposed in the minor refinement consultation.</p> <p>The Applicant has taken a landscape-scale approach to nitrogen deposition compensation, to enable predominantly wooded, enhanced ecological connectivity, and this approach and the underpinning site selection methodology would be used if any further nitrogen deposition sites were required to be identified.</p>
<p><b>Page 27 Paragraph 11.1 to 11.4</b></p>	<p><b>Conclusions</b></p> <p>TMBC supports the LTC project, we recognise that the existing Dartford Crossing is operating over capacity and there are limited alternative options to cross the River Thames. We however remain concerned about the LTAM transport modelling assumptions which underestimate local growth within the Medway Valley in Tonbridge &amp; Malling, and elsewhere, which has informed the related assessment of impacts in the DCO documents.</p>

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	<p>As evidence prepared by KCC and Medway Council demonstrates, there are significant negative impacts arising from LTC once operational, for the local highway network in particular. We consider that without mitigating these impacts, the LTC will not fully achieve its intended benefits, due to inadequacies in the affected local roads.</p> <p>TMBC recognises that the project itself is mitigation for the Dartford Crossing and that the DCO is being assessed against the current National Policy Statement for National Networks, which does not require that local impacts of DCO projects are mitigated. The consultation on the revised NNNPS closed on 6 June 2023 and would change this position, the outcome of this is awaited. We would like the updated NNNPS to be taken into consideration by the ExA if published before the end of the Examination.</p> <p>TMBC requests that additional funding is made available by Government, so that local authorities can work with National Highways in a timely manner, to ensure that local highway and other mitigation is delivered. This is required to unlock the full potential of the project and minimise negative impacts for local residents and businesses.</p>
<p><b>Applicant's Response</b></p>	<p>The Applicant welcomes the comments made in the LIR from TMBC in support of the Project. The comments regarding the LTAM transport model and the effects on the LRN have been addressed above, and the other comments are noted.</p> <p>The Applicant submitted written comments on the draft revised NPSNN and, like TMBC, awaits the Government's response. However, in the meantime, the transitional arrangements set out at paragraphs 1.16 and 1.17 of the draft revised NPSNN make it clear that, <i>'for any application accepted for examination before designation of the 2023 amendments, the 2015 NPS should have effect in accordance with the terms of that NPS'</i>. While it is acknowledged that emerging draft NPSs are capable of being 'other important and relevant matters' to which the Secretary of State may wish to have regard under the provisions of section 104(2)(d) of the Planning Act 2008, the primary consideration is the designated NPSNN. Accordingly, the Applicant's analysis of the draft revised NPSNN is that it does not fundamentally alter the policy position in respect of the determination of the DCO application for the Project.</p>



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