

Lower Thames Crossing

9.54 Comments on LIRs

Appendix F – London Borough of Havering

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Appendix F – London Borough of Havering

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1 Applicant's Response to London Borough of Havering's Local Impact Report

Table 1.1 The Applicant's response to London Borough of Havering's (LBH) Local Impact Report (LIR) – [REP1-249]

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Paragraph 4.1.12 Page 17</p>	<p>4 National and Regional Plan Policies Mayor's Transport Strategy (MTS) 2018</p> <p>The MTS sets ambitious goals for a move away from the use of private cars including Policy 1:" The Mayor, through TfL and the boroughs, and working with stakeholders, will reduce Londoners' dependency on cars in favour of active, efficient and sustainable modes of travel...". Whilst it is recognised that National Highways are proposing some improvements for Non-Motorised Users including new footpaths and cycle ways across the scheme, the Lower Thames Crossing project is principally a road based scheme which will result in an increase in vehicle capacity on the strategic road network.</p>
<p>Applicant's Response</p>	<p>The Applicant's assessment of relevant policy from the Mayor's Transport Strategy is presented in Table C.20 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498].</p>
<p>Paragraph 4.1.28 and 4.1.29 Page 20</p>	<p>Climate Change Action Plan (CCAP)</p> <p>In November 2021 Havering's Climate Change Action Plan (CCAP) was formally adopted. The CCAP sets out the actions the Council is taking to reduce its carbon emissions with the goal of becoming a carbon neutral authority by 2040 or sooner. It is noted that National Highways assessed the Transport Strategies for Kent County Council, Essex County Council and Transport for London, however omitted the Havering Local Implementation Plan as part of this assessment. It is also noted that National Highways omitted to review LB Havering's CCAP and AQAP.</p>
<p>Applicant's Response</p>	<p>LBH's Climate Change Action Plan (CCAP) has been included within the assessment presented in Environmental Statement (ES) Chapter 15: Climate [APP-153] and ES Appendix 15.1: Climate Legislation and Policy, Table 1.4 [APP-480].</p> <p>With regard to the Air Quality Action Plan (AQAP), this was considered but it was not necessary for the Applicant to reference the AQAP as that would only be done where the Project may impact on measures within an AQAP to achieve the Air Quality Strategy (AQS) objectives. There are no exceedances of AQS objectives predicted in LBH as a result of the Project.</p>
<p>Paragraph 5.1.9 Page 21</p>	<p>5 Policy Compliance Local Plan Policy 16 Social Infrastructure</p> <p>This policy commits the Council to working with infrastructure providers to support the provision of essential new services and improvement of existing facilities in Havering. The policy seeks to ensure that new and existing residents have access to a range</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>of social infrastructure facilities. Paragraph 8.5.1 of the Local Plan defines social infrastructure as covering a variety of health, community, cultural, sports and leisure facilities. It encompasses burial spaces, places of worship, health and education facilities, social care facilities, nurseries, theatres, sports pitches, swimming pools, and many other uses that provide a social function. As is set out in the Topic Specific Issues section of the LIR, the Council remains deeply concerned over the impact the full closure of Ockendon Road will have on Upminster Cemetery and South Essex Crematorium. The closure of Ockendon Road will significantly impact on residents' ability to access the Crematorium with the diversion likely to lead to traffic delays. Furthermore, the closure will affect the operation of the Crematorium with the potential for funeral services to be disrupted and/or delayed due to potential traffic congestion in the area. The Council has discussed with the Applicant the potential for compensation for the Crematorium, however this is not something that National Highways consider appropriate. Until satisfactory mitigation measures are agreed with National Highways to negate the impact the road closure will have on the Crematorium and Cemetery, the scheme will continue to be considered non-compliant with Policy 16 of the Local Plan.</p>
<p>Applicant's Response</p>	<p>Policy 16 of the Local Plan is not specifically addressed in Appendix C: Local Authority Policy Review of the Planning Statement [APP-498] as it is framed in terms of the Council working with infrastructure providers to bring forward new services and facilities alongside residential development and ensuring residents have access to a range of services. Nonetheless a response on the matter raised by the Council in respect of Upminster Cemetery and the South Essex Crematorium is addressed in the section of this table below responding to the Council's detailed point on this matter set out at Paragraphs 9.2.2 to 9.2.5 (Page 116) of its LIR.</p>
<p>Paragraph 5.1.11 to 5.1.14 Page 21</p>	<p>Local Plan Policy 18 Open Space, Sports and recreation</p> <p>The Council seeks to ensure that all residents of Havering will have access to high quality open space, sports and recreation facilities. To achieve this, the Council will continue to protect the borough's designated open spaces from development unless it can be demonstrated that replacement provision of equivalent or better quantity and quality will be made in a suitable location. In addition, the Council will support proposals that improve the quality of and access to existing open space. The scheme will result in a loss of Open Space at Folkes Lane Woodland in Havering, with a narrow section of land being permanently acquired for the project. There is also a loss of open space in Thames Chase Forest. It is noted that Open Space is being replaced in Thames Chase Forest and that the loss of Open Space in Folkes Lane Woodland is, in part, being replaced in the Borough of Brentwood, where a new woodland site is being created at Hole Farm. The Council recognises that there will be an overall net gain of Open Space in the borough as a result of the area of new Open Space that will be delivered to the north and south west of the existing Thames Chase Forest Centre site. However, access arrangements so residents can safely and conveniently get to the new Open Space at Hole Farm in neighbouring Brentwood borough remains unresolved at this stage. LB Havering continues to work with National Highways to secure safe and convenient access to Hole Farm from the Non-Motorised User footbridge over the</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	A127. Should such access arrangements be secured to the Council's satisfaction, the project will be considered compliant with Policy 18.
Applicant's Response	<p>The assessment of relevant policy from the adopted Havering Local Plan 2016–2031 is presented in Table C.17 of Appendix C of the Planning Statement [APP-498]. A commentary on Policy 18 is provided on pages 154-156 of Appendix C.</p> <p>With respect to the Council's concerns about access to replacement open space at Hole Farm, the Applicant would refer to the answers provided to paragraphs 10.1.2 to 10.1.6 and 10.1.8 to 10.1.11, below, including the ongoing dialogue between the Applicant and the Council.</p>
Paragraph 5.1.22 to 5.1.25 Page 22 and 23	<p>Local Plan Policy 22 Skills and Training</p> <p>Major development proposals will be expected to submit an Employment and Skills Plan for agreement with the Council to detail how these targets will be met. This must include the proportion of apprenticeships offered and the opportunities given to local businesses within their supply chains. The Employment and Skills Plan needs to comply with the Mayor of London's Economic Development Strategy. The Council would want to see jobs, apprenticeships, work experience and careers talks to local schools and colleges during the construction phase of the scheme, with job opportunities ring-fenced for local residents and local businesses included in the supply chain. The Employment and Skills Strategy does not contain any local targets with regards local workforce employment. Instead, targets are set for employing local workforce across the multiple host boroughs. This gives Havering no surety that any Havering residents will be employed by the project. The fact that no firm commitment has been provided by the scheme promoter with regards to local employment means that the scheme is currently non-compliant with Policy 22.</p>
Applicant's Response	A commentary on local plan Policy 22: Skills and Training is presented on pages 156/157 of Table C.17 of Appendix C Local Authority Policy Review of the Planning Statement [APP-498].
Paragraph 5.1.29 to 5.1.33 Page 23	<p>Local Plan Policy 23 Connections</p> <p>The scheme is principally a road scheme and therefore does not directly support sustainable travel movements. It is recognised that National Highways are proposing new Non-Motorised User (NMU) connectivity enhancements as part of the project, including a footbridge connecting Folkes Lane and Moor Lane across the A127, a footbridge to link footpath 252 over the new LTC road, and a new NMU bridge over the M25 to connect Thames Chase Forest either side of the M25. These new NMU routes are welcome, and the Council has been engaging with National Highways on each of these proposals through the pre-application and pre-examination stages of this project. Whilst these routes are indeed welcome, the Council remains unsatisfied with the approach links to the A127 footbridge. Whilst the Council continues to work with National Highways on agreeing suitable NMU routes, the approaches to the A127 Footbridge fall outside of the red line boundary and are being progressed through</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	designated funds. Until these approach routes have been satisfactorily secured, it is not considered that the scheme is compliant with Policy 23 of the Local Plan.
Applicant's Response	<p>As recognised in the LIR comment, the Project is a new road scheme and does not facilitate increased rail connections. ES Chapter 3: Assessment of Reasonable Alternatives [APP-141] and Chapter 5 of the Planning Statement [APP-495] both explain that rail was considered as an alternative to the Project but ruled out as it would not meet the Project objectives. Accordingly this policy is not included in Table C.17 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498]. However, the Project would provide the opportunity for increased bus service connections through the Project tunnel.</p> <p>The Applicant is one of the biggest builders of walkers, cyclists and horse riders (WCH) routes in the UK. The Project's total provision of additional and improved routes equates to 64km of routes, which encourage active travel. These are summarised in Table 13.54 of ES Chapter 13: Population and Human Health [APP-151]. The Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [APP-512] and Chapter 5 of the Planning Statement [APP-495] set out the proposals and explain the WCH strategy that helped formulate them.</p> <p>The Project makes considerable additional provision for new accessible transport measures in terms of walkers, cyclists and horse riders as identified at paragraph 7.5.40 of the Health and Equalities Impact Assessment [APP-539].</p> <p>The plans include seven new green bridges to provide safe and easy crossings for people and wildlife, including an 84m-wide green bridge in Kent, one of the widest in Europe. New footbridges, two over the A127 and one over the M25, would create safe and comfortable crossings and restore WCH links that have been severed by historic road building.</p> <p>The Council's support for new NMU route provision is welcomed. In terms of the A127 footbridge approach links, this is addressed in the Applicant's response to the Council's more detailed comment on this matter set out in paragraphs 10.1.2 to 10.1.6 on pages 122 to 124 of its LIR below.</p>
Paragraph 5.1.42 Page 23	<p>Local Plan Policy 27 Landscaping</p> <p>LB Havering is generally satisfied with the landscape and visual impact assessment findings and the concluding significance of effect(s).</p>
Applicant's Response	<p>The Council's satisfaction is noted. A commentary on local plan Policy 27: Landscaping is presented on pages 159/160 of Table C.17 of Appendix C Local Authority Policy Review of the Planning Statement [APP-498] and also within Table 1.1 of ES Appendix 7.1: Local Planning Policy of Relevance to Landscape and Visual [APP-376].</p>
Paragraph 5.1.45, 5.1.46	<p>Local Plan Policy 28 Heritage Assets</p> <p>The proposed M25 Ockendon Compound is located directly to the south west of the North Ockendon Conservation Area. Whilst the compound location does not encroach into the North Ockendon Conservation Area itself, it is located next to it. Whilst it is</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>acknowledged that the layout of the compound has been designed to minimise the impact on the conservation area, the earthworks stockpile area will have a detrimental impact on the setting of the conservation area. Additionally, construction traffic will for a limited time be accessing both the main M25 Compound and the satellite compound off Pea Lane along borough roads within the conservation area. The lack of clarity as to how long these roads will be used for construction traffic purposes is a concern as it gives the Council uncertainty as to the duration of the impact on this conservation area.</p> <p>Until National Highways are able to provide the Council with clarity on this point, it is not possible to ascertain whether the scheme is compliant with Local Plan Policy 28.</p>
Applicant's Response	<p>The construction magnitude of impact on North Ockendon Conservation Area is assessed as moderate and the effect is assessed as temporary moderate adverse, which is significant (Cultural Heritage ref. CA4, —ES Chapter 6: Cultural Heritage [AS-044] and —ES Appendix 6.10: Assessment Tables [AS-052]). This assessment included the M25 compound and construction access routes and it is acknowledged that they would form part of this temporary significant adverse effect. While the earthworks stockpile would be detrimental to the setting of the asset (as would the presence of the compound as a whole), it would not be sufficient to increase the magnitude of impact from moderate to major.</p> <p>Table 4.1 of the outline Traffic Management Plan for Construction (oTMPfC) [REP1-175] details the illustrative Heavy Goods Vehicle (HGV) access routes to the Ockendon Road and M25 compounds. Access to these two compounds is via the local road network for the first 12–24 months and then via spur roads from the M25. Detail of the roads being used is provided in Table 4.1. Pea Lane would not be used as an access route to the M25 compound and Ockendon Road compound.</p> <p>Access along Pea Lane is only required for access to the utilities working to complete part of Work No MU72 where it passes beneath the Upminster and Grays branch railway line, north of Ockendon Road. These works are envisaged to take approximately 24 weeks (as communicated on pg. 8 of ES Appendix 2.1: Construction Supporting Information [AS-049]) within the first period of the Project's construction, with no further return to this site to complete works, or further use of Pea Lane envisaged.</p> <p>The Applicant considers that this matter is adequately addressed in its commentary on Policy 28: Heritage Assets presented on pages 160/161 of Table C.17 of Appendix C Local Authority Policy Review of the Planning Statement [APP-498].</p>
Paragraph 5.1.47	<p>LB Havering policy commits the Council to taking archaeological significance into account when making planning decisions and to taking appropriate measures to safeguard that interest. Where nationally important remains exist, they will be physically preserved</p>
Applicant's Response	<p>Nationally important designated remains or non-designated remains of equivalent significance to a scheduled monument can be removed with clear and convincing justification in wholly exceptional circumstances, according to the National Policy Statement for National Networks (NPSNN) paragraph 5.131.</p>

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<p>Paragraph, 5.1.49 and 5.1.50. Page 24</p>	<p>As well as establishing a better understanding of the buried potential through site evaluation, it is recommended that National Highways show how cultural heritage and its sympathetic treatment have fed into project planning and the final range of public benefits that would be derived from any consented scheme.</p> <p>Until the Council receives further information from National Highways on the above matters, it is not possible to ascertain whether the scheme is compliant with Local Plan Policy 28.</p>
<p>Applicant's Response</p>	<p>The Applicant considers that this matter is adequately addressed in its commentary on Policy 28: Heritage Assets presented on pages 160/161 of Table C.17 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498].</p>
<p>Paragraph 5.1.55 to 5.1.58 Page 24</p>	<p>Local Plan Policy 29 Green Infrastructure</p> <p>The scheme will result in a significant loss of existing Green Infrastructure (GI) at Thames Chase Forest. Whilst it is recognised that this GI will be replaced to the north and the south of the existing site, and the Council is aware that Thames Chase partners are satisfied with the replacement land, further information is required as to the quality of the mitigation being proposed for the replacement GI in this area. Green Infrastructure also includes public rights of way (PROW) in the form of bridleways and footpaths. Several of Havering's PROW are impacted both during construction and operation of the LRC. Further details can be found in paras 10.1.2 to 10.1.15 of the Non-Motorised User section of this LIR. Whilst the scheme will result in some additional connections for pedestrians and cyclists in the form of NMU bridges being delivered, how some of these structures are maintained post scheme implementation remains an outstanding matter. This is discussed further in the Non-Motorised User section of the LIR. The Council continues to be in discussion with National Highways to seek improved links to Folkes Lane woodland from the new proposed NMU bridge over the A127. Should these improvements be secured, the Council would consider such measures to support Policy 29.</p>
<p>Applicant's Response</p>	<p>See response to paragraph 5.1.9 of the Council's LIR above. A commentary on local plan Policy 29: Green Infrastructure is presented on pages 161/162 of Table C.17 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498] and also within Table 1.4 of ES Appendix 8.23: Terrestrial Biodiversity Legislation and Policy [APP-419]. The Applicant has responded in further detail within this document to the issues of PROWs and NMUs raised by the Council.</p>
<p>Paragraph 5.1.62 Page 25</p>	<p>Local Plan Policy 30 Biodiversity and Geodiversity</p> <p>It is noted in Requirement 4 of the draft DCO that no part of the authorised development can commence until the 2nd iteration of the Environmental Management Plan (EMP2) has been submitted to and approved in writing by the Secretary of State (SoS). Requirement 4 further states that submission to the SoS takes places following consultation by the undertaker with relevant planning authorities. It further states that the EMP2 must reflect the mitigation measures set out in the REAC. It is essential that such mitigation measures are agreed with the Council prior to the commencement of works.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	<p>See response to paragraph 5.1.9 of the Council's LIR above. A commentary on local plan Policy 30: Biodiversity and Geodiversity is presented on pages 162/163 of Table C.17 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498] and also within Table 1.4 of ES Appendix 8.23: Terrestrial Biodiversity Legislation and Policy [APP-419].</p> <p>As the Council has highlighted, there is a requirement to consult with relevant planning authorities prior to submission to the SoS. The Applicant considers that this provides a suitable and sufficient opportunity for the Council to influence the mitigation measures and raise any queries or concerns.</p>
Paragraph 5.1.67 Page 26	<p>Local Plan Policy 33 Air Quality</p> <p>The Council remains concerned that the methodology for screening of nitrogen deposition impacts is unable to ascertain the impact of air quality on the wider local area owing to the limitations of the transport modelling available.</p>
Applicant's Response	<p>See response to paragraph 5.1.9 of the Council's LIR above. A commentary on local plan Policy 33: Air Quality is presented on pages 165/166 of Table C.17 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498] and also within Table 1.4 of ES Appendix 5.5: Air Quality Legislation and Policy [APP-349].</p> <p>See response to paragraphs 7.3.2 to 7.3.7 of the Council's LIR below regarding the nature of the modelling and its suitability, and responses to paragraphs 6.5.13 and 6.5.15, below, for further responses regarding the assessment of nitrogen deposition.</p>
Paragraph 5.1.71 Page 26	<p>Local Plan Policy 34 Managing Pollution</p> <p>Further evidence is required to understand the level of noise impacts arising from the scheme at a local level and any appropriate mitigation. Further information is required to reassure the Council that this policy has been complied with.</p>
Applicant's Response	<p>See response to paragraphs 6.4.7 to 6.4.10 of the Council's LIR, below. A commentary on local plan Policy 34: Managing Pollution is presented on pages 166/167 of Table C.17 of Appendix C: Local Authority Policy Review of the Planning Statement [APP-498]. Details of the noise impacts arising from the Project and appropriate mitigation are provided in the ES Chapter 12: Noise and Vibration [APP-150] together with its supporting figures and appendices.</p>
Paragraph 6.2.5 to 6.2.7 Page 26	<p>6 Topic Specific Issues 6.2 Materials and Waste Assessment of Data Sheets</p> <p>Overall, the data used in the Environmental Statement (ES) and supporting documentation, particularly the Outline Materials Handling Plan (oMHP), the Outline Site Waste Management Plan (oSWMP), the Excavated Materials Assessment (EMA), and the Code of Construction Practice (CoCP) are appropriate and acceptable. LB Havering previously raised queries about some of the data as well as conclusions in earlier consultations. This related to the quantities of waste predicted to arise from the</p>

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	scheme, primarily excavation waste, that may require management outside of the Order Limits, and the amount (and source) of aggregates used in construction. The above queries were addressed satisfactorily by National Highways (NH) in response to the consultation comments, including through meetings with the Applicant and preparation of the Statement of Common Ground (SoCG).
Applicant's Response	The Council's satisfaction is noted and welcomed.
Paragraph 6.2.9 to 6.2.12 Page 27	<p>Assessment Process</p> <p>The assessment process has followed the Design Manual for Roads and Bridges (DMRB) guidance and requirements of National Highways Standard Design Manual for Roads and Bridges LA 110 Material assets and waste (NH 2019). As such, the process is considered appropriate. However, this differs from the EIA process and guidance for other types of development, for example, as set out in the IEMA guidance Materials and Waste in Environmental Impact Assessment (2020). The main difference is that the DMRB approach does not include criteria for consideration of the impact, and its significance, on permitted reserves and land banks of primary aggregates of demand for, and consumption of, aggregates in a development. This issue was raised by LB Havering with NH. In response, NH voluntarily produced a Local Aggregates Assessment (October 2022) which was provided to LB Havering, but this has not been submitted as part of the DCO Application, so therefore is not the subject of Examination scrutiny. The document helpfully quantifies the demand for aggregates; the permitted reserves in Greater Essex, Kent, Medway, and London (including LB Havering); and the potential worst-case effect (i.e., depletion of reserves) as a result of the demand. It concluded that the project would not be likely to have a 'sizable impact' on landbank, capacity or sales within the area assessed.</p>
Applicant's Response	The Applicant has proactively engaged with LBH to assist in their duties as Minerals Planning Authority. The Local Aggregates Assessment (October 2022) does not form part of the Project assessment, however, it has been produced to assist the local authorities in forward planning of aggregate landbanks.
Paragraph 6.2.14 Page 27	<p>Scheme Design</p> <p>The design of the scheme, as it relates to reducing the amount of waste produced and requiring off-site management, and to reducing demand for primary aggregates, is considered appropriate.</p>
Applicant's Response	The Council's satisfaction is noted.
Paragraph 6.2.12 to 6.6.20	Construction Impacts

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Page 28	The ES and associated documents identify the construction impacts on materials and waste appropriately. As identified above, while the assessment process does not consider the impact on aggregates reserves and land banks, the Applicant produced a supplementary Local Aggregates Assessment to identify the potential impacts, in response to representations by LBH and other waste and mineral planning authorities. The impact on waste management facilities which may be required to manage waste requiring off-site management was not considered as the management of waste will be the responsibility of contractors and subject to contractual arrangements. However, the EMA identifies potential facilities and sites assessed against suitability criteria which would also be applied by contractors.
Applicant's Response	The Applicant has proactively engaged with LBH to assist in their duties as Minerals Planning Authority. The Local Aggregates Assessment (October 2022) does not form part of the Project assessment however it has been produced to assist the local authorities in forward planning of aggregate landbanks. A review of the recycling, recovery and disposal capacity of the Project's study area (Kent and Essex County Councils and East London Waste Authority) has been carried out and is presented in ES Chapter 11: Material Assets and Waste [APP-149].
Paragraph 6.2.22 Page 28	Operational Impacts The operational impacts from a materials and waste perspective will be minimal and so LB Havering has no comments to make in this regard.
Applicant's Response	This comment is noted.
Paragraph 6.2.26 Page 28	Mitigation No specific mitigation measures from a Materials and Waste perspective are requested for Havering.
Applicant's Response	This comment is noted.
Paragraph 6.2.28 Page 28	DCO Requirements The DCO requirements, through implementation of the documents associated with the ES as outlined above, are considered appropriate in terms of materials and waste. LB Havering would encourage the ExA to seek the Local Aggregates Assessment (October 2022) for consideration during the Examination.
Applicant's Response	Please see response to Paragraph 6.2.12 to 6.6.20 regarding the Local Aggregates Assessment (October 2022).

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<p>Paragraph 6.3.10 Page 29</p>	<p>Archaeology Assessment of Data Sets</p> <p>The Applicant has consulted appropriate sources of information regarding known heritage significances. It is acknowledged by all parties that the nature of archaeology as a buried resource means that not all assets can be identified and that hitherto unknown archaeological sites are likely to be affected by a consented scheme.</p>
<p>Applicant's Response</p>	<p>The Applicant has carried out an extensive programme of archaeological evaluation including an Aerial Mapping Study, geophysical survey and archaeological trial trench evaluation in order to identify unknown archaeological assets. Over 4,000 trial trenches have been excavated across the Project, c. 426 of which were excavated within the London Borough of Havering, with a particular focus on the Route Alignment. The Route Alignment has been extensively trial trenched where it diverges from the existing M25. The Ockendon Road compound has been fully trial trenched. Approximately 66% of the M25 compound has been trial trenched: the significance of the archaeological resource of the remaining 33% of the compound is well understood due to the clear cropmark evidence of the enclosures and ring ditches there.</p> <p>It is acknowledged that the presence of currently unknown archaeological sites cannot be ruled out in areas which have not been trial trenched. However, following several years of extensive desk-based assessment and field evaluation the nature of the archaeological resource that would be affected by the Project in Havering is now very well understood. As stated by LBH in their LIR at paragraph 6.3.15, '<i>Archaeological field evaluation has covered a great extent of the scheme impact areas in the borough and provided very useful information on significance to inform a management strategy</i>'. While the Applicant recognises the need for additional evaluation to inform detailed mitigation plans, the Applicant is clear that sufficient evaluation has been carried out to inform determination of the Development Consent Order (DCO).</p> <p>The procedure for mitigating impacts to currently unknown archaeological remains is set out within the Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (AMS-OWSI) [APP-367]. The detail for any required investigation and recording of previously unidentified archaeological remains would be developed on a site-specific basis in collaboration with the relevant planning authority.</p> <p>Archaeological interests will primarily be controlled by means of site-specific written schemes of investigation. The Applicant proposes that the draft DCO would include a requirement to the effect that no part of the authorised development is to commence until, for that part, a site-specific written scheme for the investigation of areas of archaeological interest, reflecting the relevant mitigation measures set out in the draft AMS-OWSI, has been submitted to and approved in writing by the Secretary of State, following consultation by the undertaker with the relevant planning authority and Historic England on matters related to their respective functions. This allows for the Council to be directly involved in the archaeological mitigation process.</p> <p>The Register of Environmental Actions and Commitments (REAC) (which is now proposed to be directly incorporated into the Code of Construction Practice (CoCP)) provides further commitments [REP1-157]. The draft AMS-OWSI presented in ES</p>

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	<p>Appendix 6.9 [APP-367] includes details of specifically identified measures to mitigate the impact to known heritage assets and a range of generic mitigation measures from which appropriate mitigation would be applied for currently unknown heritage assets that could be physically damaged by construction.</p> <p>Nevertheless, the draft DCO [REP1-042] contains requirements to the effect that:</p> <ul style="list-style-type: none"> Any archaeological remains not previously identified which are revealed when carrying out the authorised development must be retained <i>in situ</i> and reported to the relevant planning authority as soon as reasonably practicable from the date they are identified. No construction operations are to take place within 10 metres of such for a period of 14 days from the date of any such notice served unless otherwise agreed in writing by the Secretary of State. If the relevant planning authority determines in writing that the archaeological remains require further investigation, no construction operations are to take place within 10 metres of the remains until provision has been made for the further investigation and recording of the remains in accordance with details to be submitted in writing to, and, unless otherwise agreed by the Secretary of State, approved in writing by, the relevant planning authority. <p>This allows for Havering and other stakeholders to be directly involved in the mitigation process for previously unidentified archaeology.</p> <p>Further details regarding these matters can be found in SoCG [REP1-105] items 2.1.45 and 2.1.48.</p>
<p>Paragraph 6.3.12 to 6.3.15 Page 29</p>	<p>Assessment Process</p> <p>LB Havering is content not to recommend further desk-based archaeological assessment work to accompany a decision. However, the EIA assessments of significance and harm in general are not always convincingly articulated.</p> <p>For example, significance is ascribed to individual artefacts made as spot finds and recorded in museums without considering what wider, as yet unexposed along the route, activity those spot finds are likely to represent in many cases.</p> <p>Significance assessment should be grounded in national, regional and local research framework questions lead on from there to a clear link with the chosen mitigation approach.</p> <p>Archaeological field evaluation has covered a great extent of the scheme impact areas in the borough and provided very useful information on significance to inform a management strategy.</p>
<p>Applicant's Response</p>	<p>The Environmental Impact Assessment (EIA) has been informed by the Cultural Heritage Desk-Based Assessment [APP-351 to APP-354] which utilised regional research frameworks when assigning value (significance) to archaeological assets and also considered the archaeological potential of findspots. Furthermore, findspots are being taken into account when designing detailed archaeological mitigation measures. The Applicant notes that since January 2020, a significant amount of archaeological work has taken place and the assessment has been developed using best practice for assessing heritage assets</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>with unknown archaeological potential (i.e. through a combination of desk-based assessment, non-intrusive field assessment such as geophysical survey and archaeological trial trenching). Across the Project, over 4,000 archaeological trial trenches were excavated between November 2019 and November 2021. The data from the trial trench evaluation supersedes the findspot data across much of the Order Limits within Havering. Across the Project as a whole, following trial trench evaluation it can be argued that findspots have proven to be a relatively poor indicator of archaeological potential in comparison to other methods, primarily cropmark analysis.</p> <p>The Applicant considers that the assessment of value (significance) of heritage assets is therefore robust.</p> <p>Further details regarding these matters can be found in SoCG [REP1-105] items 2.1.49 and 2.1.50.</p>
<p>Paragraph 6.3.16 and 6.3.17 Page 29</p>	<p>There are, however, outstanding questions around significance at a handful of areas that have not yet been subject to archaeological evaluation (e.g., Thames Chase Forest, Ockendon Compound) and there is a major outstanding question around the Ockendon Channel, a large, buried middle palaeolithic feature located at or near the proposed M25 junction site.</p> <p>This feature has the potential to harbour nationally significant undesignated heritage assets from early prehistory and LB Havering recommends a more detailed field assessment of it to help understand its extent and significance. This needs to be obtained to allow an understanding of the harm created to it by the planned wide and deep motorway cutting proposed at that location and to inform thinking on a mitigation programme.</p>
<p>Applicant's Response</p>	<p>The presence of important Middle Palaeolithic remains has been identified and assessed within ES Chapter 6: Cultural Heritage [AS-044]. The importance of these buried archaeological remains, and the complexity of the mitigation is reflected in the approach to the proposed mitigation and is set out in more detail in the AMS-OWSI [APP-367] and will be developed further with LBH's archaeological advisors. For Ockendon Channel the Applicant has stated <i>'the Applicant's palaeolithic specialists have updated their assessment based on further work within the area of the Ockendon Channel. The draft AMS-OWSI will be updated in consultation with London Borough of Havering's archaeological advisors to set out appropriate mitigation prior to consent'</i> (SoCG Item 2.1.46 [REP1-105]).</p> <p>For Thames Chase Forest the Applicant has stated <i>'the boundary of the Project to the north of Thames Chase Forest has reduced and the impact is derived from a gas diversion running close to the existing M25, so no further trenching is required'</i> (SoCG Item 2.1.46 [REP1-105]). Within Thames Chase Forest the vast majority of the landed is wooded, so the Applicant took the decision not to remove trees to facilitate trial trenching prior to the Project being consented. The small area of open land was not trenched as it is located immediately adjacent to the Thames Chase Forest Visitor Centre. Furthermore, the Thames Chase Forest is located adjacent to the existing M25. Previous M25 widening schemes have been subject to archaeological investigations and as a result, the nature of the archaeological resource in this area is well understood.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>Regarding the M25 compound at North Ockendon, approximately 66% of the compound has been trial trenched. This investigation (along with desk-based assessment) has recorded (ES Chapter 6: Cultural Heritage [AS-044]):</p> <ul style="list-style-type: none"> • Asset (3682) Late Bronze Age or Early Iron Age occupation or industrial activity, medium value • Asset (3680) Bronze Age perpendicular ditches and pottery, low value • Asset (611) dispersed Iron Age to Roman pits and ditches, of low value • Asset (3848) Early Medieval to Post-Medieval activity including a Tudor kiln and pond, medium value, which partially extends within the M25 compound • Asset (3688) ditches with 11th to 12th-century pottery and unstratified Roman pottery, low value • Asset (594) Medieval agricultural and settlement-periphery activity, of low value • Asset (1810) a former lane recorded on the 1841 Tithe Map, of low value • Asset (3683) Post-Medieval ditch and undated pit, low value <p>The value (significance) of the archaeological resource of the remaining 33% of the M25 compound is well understood due to the clear cropmark evidence of the enclosures and ring ditches recorded there:</p> <ul style="list-style-type: none"> • Asset (595) cropmarks of a rectilinear enclosure, pits and ringditches, medium value • Asset (598) cropmarks of a trackway of possible Medieval to Post-Medieval date, low value • Asset (4761) cropmarks of a small, partial rectilinear feature, low value • Asset (605) possible Prehistoric cropmarks, low value <p>Further details regarding these matters can be found in SoCG [REP1-105] item 2.1.46.</p>
<p>Paragraph 6.3.19 to 6.3.21 Page 30</p>	<p>Scheme Design</p> <p>The design will create unavoidable harm to archaeological remains. LB Havering, however, is content that certain aspects of the harm (such as the line of the road) can be implemented without unacceptable harm, on the understanding that appropriate management measures can be successfully secured. Such management measures have not yet been fully detailed or agreed. Other aspects of harm, such as compound design and landscaping, have the potential to preserve important remains in situ through detailed design measures.</p> <p>The scheme design offers some potential to present and interpret heritage through its landscaping and in rest areas. However, the extent that this will be possible in Havering may be limited and the Environment Statement does not identify any public heritage mitigation through design in the borough. There are some useful benefits with a heritage aspect to them through, for example, reinstating a historic route way currently cut by the A127 Southend Arterial Road.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	<p>This matter is addressed by the Applicant in the SoCG between the Applicant and the LBH [REP1-105] as follows:</p> <p>Item 2.1.15: <i>Requirement 9 of the draft DCO [REP1-042] addresses the management and delivery of archaeological mitigation in line with the draft Archaeological Mitigation Strategy – Outline Written Scheme of Investigation (AMS-OWSI) [APP-367], which prominently states that the first principle of mitigation is to preserve or protect archaeological remains wherever possible.</i></p> <p>Item 2.1.45: <i>The Applicant held a meeting with London Borough of Havering on 20/2/23 during which it was emphasised that the draft AMS-OWSI [APP-367] would be written in consultation with the Council. Requirement 9, paragraph 1 of the draft DCO [REP1-042] secures accordance with this document.</i></p> <p>Item 2.1.84, regarding requests for presentation and interpretation opportunities: <i>The Applicant is considering a variety of options to address the Council's requests and provided a detailed update at a meeting on 21/2/23. This matter is under discussion pending further negotiations between the Applicant and the LBH.</i></p>
Paragraph 6.3.23 to 6.3.24 Page 30	<p>Construction Impacts</p> <p>Construction impacts are broadly understood but further detail is needed to inform the mitigation proposals in the Archaeological Written Scheme of Investigation (AWSI).</p> <p>More detail would be especially useful on the impact of the planned M25 junction cutting. This is an element of the scheme with potential to affect the significant Ockendon Channel and the formation level and extent needs to be understood to inform an archaeological management strategy.</p>
Applicant's Response	<p>The Applicant notes that since January 2020, a significant amount of archaeological work has taken place and the assessment has been developed using best practice for assessing heritage assets with unknown archaeological potential (i.e. through a combination of desk-based assessment, non-intrusive field assessment such as geophysical survey and archaeological trial trenching). Across the Project, over 4,000 archaeological trial trenches were excavated between November 2019 and November 2021.</p> <p>This matter is addressed further by the Applicant in the SoCG between the Applicant and the LBH [REP1-105] as follows:</p> <p>Item 2.1.48: <i>The presence of important Middle Palaeolithic remains has been identified and assessed within ES Chapter 6 [AS-044]. The importance of these buried archaeological remains, and the complexity of the mitigation is reflected in the programme and is set out in more detail in the draft AMS-OWSI [APP-367].</i></p> <p>Item 2.1.46:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>For Ockendon Channel, the Applicant's palaeolithic specialists have updated their assessment based on further work within the area of the Ockendon Channel. The draft AMS-OWSI [APP-367] will be updated in consultation with London Borough of Havering's archaeological advisors to set out appropriate mitigation prior to consent.</i></p> <p>The DCO establishes the required process and the detail for any required investigation, as explained in item 2.1.45:</p> <p><i>Archaeological interests will primarily be controlled by means of site-specific written schemes of investigation. The Applicant proposes that the DCO would include a requirement to the effect that no part of the authorised development is to commence until, for that part, a site-specific written scheme for the investigation of areas of archaeological interest, reflecting the relevant mitigation measures set out in the draft AMS-OWSI [APP-367], has been submitted to and approved in writing by the Secretary of State, following consultation by the undertaker with the relevant planning authority on matters related to its function. This allows for the Council to be directly involved in the archaeological mitigation process.</i></p>
<p>Paragraph 6.3.26 Page 30</p>	<p>Operational Impacts</p> <p>LB Havering is satisfied that the operational impacts from an archaeological perspective have been accurately assessed.</p>
<p>Applicant's Response</p>	<p>The Council's satisfaction is noted.</p>
<p>Paragraph 6.3.28 to 6.3.33 Page 30 and 31</p>	<p>Mitigation</p> <p>Mitigation is proposed to be subject to forthcoming documents, including an AWSI, currently in draft. The fact that this document is yet to be drafted and will not be subject to the scrutiny during the Examination is unsatisfactory to LB Havering.</p> <p>LB Havering is of the view that the Applicant needs to think further about predetermination archaeological assessment in unexamined areas and also to think more around mitigation arising.</p> <p>A further concern is the limited detail on the geographic extents and types of proposed archaeological fieldwork to help mitigate or offset consented impact.</p> <p>Provision of maps of the scheme showing where, and what kind of, archaeological mitigation is planned are highly desirable. LB Havering would encourage the ExA to seek this information during the Examination.</p> <p>LB Havering welcomes that the Applicant is considering how best to store, display and interpret the archaeological results from fieldwork related to the scheme. Whilst Havering has been involved in welcome discussions around how this can be achieved, no firm proposals have been put forward by the Applicant. LB Havering would recommend that this is put forward as part of the mitigation plan. This could involve a combined public archive and heritage centre, for example.</p>

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	<p>LB Havering has commented on several occasions around the desirability of enshrining key underlying principles of archaeological mitigation in the CoCP, REAC and other high level scheme documents. Some progress with the Applicant has been made on these points which is very welcome. However, LB Havering continues to press for archaeological management to be acknowledged and considered as part of the wider environmental response.</p>
<p>Applicant's Response</p>	<p>Regarding pre-determination assessment, the Applicant refers the reader to the answer provided to paragraph 6.3.10, above. The Applicant strongly disagrees with the comments regarding the status and scrutiny of the dAMS-OWSI. ES Appendix 6.9: Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [APP-367] was submitted with the application. Its status and purpose and scope are clearly defined in Sections 2.3, 2.4 and 2.5 (pages 3 to 5) of the document. This matter is addressed further by the Applicant in the SoCG [REP1-105], item 2.1.45:</p> <p><i>The Applicant held a meeting with London Borough of Havering on 20/2/23 during which it was emphasised that the draft AMS-OWSI [APP-367] would be written in consultation with the Council. Requirement 9, paragraph 1 of the draft DCO [REP1-042] secures accordance with this document.</i></p> <p>Mapping of the proposed archaeological mitigation areas will be provided at a later deadline.</p> <p>Paragraph 8.7.1 of the draft AMS-OWSI [APP-367] states: <i>'The Project is likely to provide scope for additional and more complex reporting, through for example a period or regional journal, stand-alone 'monograph' publication and/or popular publication. In addition, popular publications that include, for example, reconstruction drawings and non-technical summaries could be provided to make the results of the onsite mitigation recording more publicly accessible. A programme and strategy for the publication, and public dissemination of the results of the archaeological programme of works will be provided in the updated project design.'</i> Annex A of the draft AMS-OWSI also sets out a strategy for Public Archaeology and Community Engagement.</p> <p>This matter of underlying principles of archaeological mitigation is addressed by the Applicant in the SoCG [REP1-105], item 2.1.15:</p> <p><i>Requirement 9 of the draft DCO [REP1-042] addresses the management and delivery of archaeological mitigation in line with the draft Archaeological Mitigation Strategy – Outline Written Scheme of Investigation (AMS-OWSI) [APP-367], which prominently states that the first principle of mitigation is to preserve or protect archaeological remains wherever possible.</i></p>
<p>Paragraph 6.3.35 Page 31</p>	<p>DCO Requirements</p> <p>LB Havering considers the DCO requirements acceptable from the archaeological perspective, subject to agreement of the AWSI, CoCP and other matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing appropriate management measures in relation to the Ockendon Channel archaeological feature.

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Ensuring the required pre-determination archaeological assessment in unexamined areas, specifically Thames Chase Forest and the Ockendon Compound, and suitable mitigation arising. • Delivering public heritage mitigation, including a combined public archive and heritage centre.
Applicant's Response	Comments on these issues have been provided in the Applicant's responses to paragraphs 6.3.10, 6.3.16 to 6.3.17 and 6.3.28 to 6.3.33, above.
Paragraph 6.4.7 to 6.4.10 Page 32	<p>Noise and Vibration Assessment and Mitigation Proposed Construction Noise Mitigation Measures</p> <p>Ockendon Road Diversion Route – RNTM58 Ockendon Road 19 months.</p> <p>The ES states (Table 12.39 Night-time Impacts and Effects from Road Closures and consequent diversions during <i>Project construction phase</i>) that the 19-month closure of Ockendon Road will have a significant adverse impact.</p> <p>In the ES, CoCP and REAC table there is no stated mitigation measures put forward to reduce the impact along this diversion route. LB Havering would suggest that there should be a set of mitigation measures offered by the Applicant to deal with noise and vibration impacts such as HGV restrictions, speed reduction measures, road resurfacing prior to construction with low noise surfacing, community engagement, and noise insulation.</p>
Applicant's Response	<p>Construction traffic impacts on the wider road network are temporary in nature, only occurring for the duration of the works in that area. As detailed within ES Chapter 12: Noise and Vibration [APP-150] significant effects associated with construction traffic have been identified within the ES but these predominantly occur on local minor roads around the Project, where the existing flows are low; as detailed on ES Figure 12.2: Construction Traffic Noise – Affected Links [APP 310].</p> <p>As such, minimising the duration of the closure of Ockendon Road is a valuable way to reduce the impacts described by the Council. This matter is addressed by SoCG [REP1-105] item 2.1.25, as follows:</p> <p><i>At a meeting on 20/4/22, it was explained that the Applicant appreciates the impacts the closure would cause and is actively seeking to reduce the closure duration by using methods such as rephasing a water diversion and opening the underpass earlier. The proximity of the railway means a significant closure is considered unavoidable at this stage.</i></p> <p>Item 2.1.25 also reports the current outcome of this work to reduce the closure duration:</p> <p><i>It was confirmed that the closure duration will be capped at 10 months through a commitment in the Stakeholder Actions and Commitments Register (SACR).</i></p> <p>The SACR [REP1-176] was updated at Examination Deadline 1 to include this as commitment SACR-007:</p>

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	<p><i>The temporary full closure of Ockendon Road (as defined below) shall not exceed 10 months. The temporary full closure is the closure which is in place between point 38/D and point 38/C in the Streets Subject to Temporary Restrictions of Use Plans [REP1-030], with the reference RNTM58 in the outline Traffic Management Plan for Construction [REP1-175].</i></p> <p>The roads presenting the potential for significant impacts tend to be lower speed roads, with impacts occurring at properties directly adjacent, which when coupled with the temporary short-term nature of the impacts, means that provision of physical noise mitigation such as low noise surfacing and acoustic screening are not considered to be sustainable or proportionate measures.</p> <p>Specific control of construction traffic noise is therefore implemented through the ability to actively monitor and manage the flows around the network, allowing route changes and other control measures to be implemented to alter flow patterns of construction traffic where problems are identified. This would be managed through measures in the oTMPfC [REP1-175].</p> <p>The oTMPfC [REP1-175] provides a framework that would apply to the design, management and communication of construction traffic management, around which the Contractors must develop their future proposals. It sets out how the Traffic Management Plans (TMPs) will be determined and developed by the Contractors through consultation with all relevant stakeholders via the Traffic Management Forum. Additionally, the oTMPfC set out the minimum requirements the TMP would address for each stakeholder category i.e. residents, businesses, schools etc, set out in Table 2.3. This approach offers a robust framework for developing the TMP in consultation with relevant stakeholders, as the details associated with the construction methodology develop.</p> <p>The use of diversion routes is often necessary as part of a road closure to facilitate the safe construction of the works. Table 4.5 in the oTMPfC [REP1-175] sets out proposed diversion routes as a start point for further discussion via the Traffic Management Forum as stated in paragraph 4.7.3 of the same document:</p> <p><i>'4.7.3 The diversion route would be determined through discussions with the local highway authority closer to the time as other factors may need to be taken into account to make the decision (e.g., other works in the nearby area which may be external from the Project works).'</i></p> <p>Through the TMP and the Traffic Management Forum, when evaluating the suitability of a diversion route, the Contractors will discuss and carefully consider the potential impacts on sensitive receptors, including residential dwellings and other identified sensitive receptors, in close proximity to the local road network and implement appropriate mitigation measures where reasonably practicable. These mechanisms are reflected in the dialogue reported in the SoCG [REP1-105] item 2.1.25.</p> <p>Such measures would be set out in ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157]. This plan will encompass sensitive receptors, including residential areas impacted by the construction works, and outline a robust monitoring strategy. As committed in the REAC NV009 [REP1-157] the Contractors will identify monitoring in consultation with relevant local planning authorities to ensure that the mitigation measures suggested are</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>working effectively. The Contractors will implement a monitoring system capturing real-time traffic data to confirm effective traffic control measures and temporary traffic management performance. Monthly compliance reports, based on traffic monitoring measures, will be provided to the Traffic Management Forum to assess activity and ensure adherence to specifications, guiding actions to resolve non-compliance and address complaints. This requirement is secured in the oTMPfC [REP1-175] and described in paragraphs 2.4.8 – 2.4.24 of the document.</p> <p>Specifying mitigation at this early stage, when the exact diversion routes and potential impacts are yet to be defined, would not be considered appropriate. Instead, a framework has been set to enable the relevant consultation with stakeholders to determine the suitability of diversion routes and appropriate mitigation measures, which is supplemented by a monitoring strategy to closely observe and identify areas that require improvement as a result of impacts, including diversion routes from temporary traffic management. This approach will enable the Contractors to take evidence-based decisions to implement tailored mitigation measures where appropriate.</p> <p>In addition to measures set out in ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157], the Contractors will secure Section 61 consent under the Control of Pollution Act 1974 (REAC NV004) at relevant stages of the Project as necessary, which is outlined in Table 4.2 of the CoCP. In consultation with the relevant local authority, additional control measures will be agreed upon as part of the Section 61 process, to effectively manage potential disruptions and impacts resulting from the Project construction activities, including temporary traffic management and associated diversion routes. Such measures may include traffic calming measures and physical interventions such as acoustic barriers where these are proved to be necessary, effective and reasonably practicable.</p>
<p>Paragraph 6.4.12 to 6.4.16 Page 32</p>	<p>Construction noise impacts north of the A13 to the M25</p> <p>The BPM measures are usual for all construction projects and LB Havering is satisfied with these. LB Havering would request detail of the enclosure of static plant that has been specified as additional mitigation for CN122, CN124, CN125, CN126 and CN133. These sites can be found in Figure 11. Although the construction work affecting these receptor locations is time controlled in accordance with BS 5228 (noise) guidance, LB Havering would emphasise that all night-time work is accompanied with S61 agreements including public engagement.</p>
<p>Applicant's Response</p>	<p>As set out in ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157], the Contractors will secure Section 61 (s61) consent under the Control of Pollution Act 1974 (REAC NV004) at relevant stages of the Project as necessary, which is outlined in Table 4.2 of the CoCP. In consultation with the relevant local authority, additional control measures will be agreed upon, to effectively manage potential disruptions and impacts resulting from the Project construction activities, including temporary traffic management and associated diversion routes.</p>

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	<p>Details of any acoustic enclosures would be specified within this process and advised to LBH through the s61 process to ensure construction noise is controlled once the exact specifics of construction are fully understood relating to the exact level of noise required to be mitigated by the enclosures to meet appropriate thresholds.</p>
<p>Paragraph 6.4.19 to 6.4.25 Page 32 to 34</p>	<p>Construction Vibration Assessment LB Havering notes that potentially CV42 and CV44 will be subject to moderate or greater construction vibration impact level (PPV level). Significant impact is mitigated by time-controlled operations in accordance with DMRB LA111. There are, however, no physical mitigation measures offered, although it is recognised that such measures can be practically challenging. LB Havering would request manned monitoring at CV42 and CV44 on the first day of work on structures RWN000082 and RWN000085 to determine whether any impact is greater than predicted. Whilst it is recognised that further information has been provided in earlier public consultations with regards to proposed compound layouts, a block plan would be helpful to show designated areas of activity/non-activity. There is currently a lack of clarity around how the compound layout will change as construction works progress. For example, Havering assumes that once the new scheme road to the west of the compound has been built the compound will be reduced, but there is currently a lack of information on this point. With reference to the numbers 1 to 5 Havering has identified in figure 11 above [figure not reproduced – available on page 33 of the LIR]:</p> <ol style="list-style-type: none"> 1. Compound cabins and offices should be placed along the northern boundary and are anticipated to be at least double height (6m). This would provide a significant barrier/screen to compound activity. 2. Site/contractors and visitors parking should be close to the offices, screened by cabins/offices, which would move compound activity noise further from receptors. 3. Stores, unloading area. Forklift activity further from receptors. 4. Construction vehicle parking, testing, maintenance. 5. Concrete batching in the south-west of the compound would be ideal.
<p>Applicant's Response</p>	<p>Commitments made within ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157] under REAC item NV009 (Noise and Vibration Monitoring) requires noise and vibration monitoring to be undertaken at locations identified in consultation with the relevant local planning authorities, with NV001, NV002 and NV004 securing the need for further noise and vibration assessment once exact specifics of the working practices and programme are fully understood in consultation with the relevant local authorities. With regard to the monitoring of vibration at CV42 and CV44 during piling of retaining wall RWN000082 and RWN000085, REAC commitment NV017 (Vibration from Piling) specifically covers the issue of vibration from piling and the mechanisms in place to control this. These requirements would be consulted on, and where appropriate included within the scope of any Control of Pollution Act 1974 s61 applications made under NV004 with LB Havering.</p>

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	<p>Information relating to construction compound layouts is presented within Section 1.3 of ES Appendix 2.1: Construction Supporting Information [AS-049].</p> <p>The suggest construction noise mitigation measures would form part of Best Practicable Means (BPM) measures which are secured within ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157] under REAC item NV007 (Best Practicable Means). The Contractors will secure Section 61 consent under the Control of Pollution Act 1974 (REAC NV004) at relevant stages of the Project as necessary, which is outlined in Table 4.2 of the CoCP. In consultation with the relevant local authority, control measures will be agreed upon, to effectively manage potential disruptions and impacts resulting from the Project construction activities, including compound layouts where appropriate.</p>
<p>Paragraph 6.4.27 Page 34</p>	<p>General Compound Considerations</p> <p>LB Havering would recommend that the Applicant considers the following points in relation to the M25 Compound:</p> <ul style="list-style-type: none"> • Solid (Asphalt) or rolled, flat type 1 compound roads and parking areas. Well maintained and all holes filled on a minimum weekly basis. Site speed limits. Haul roads to and from work sites should be type 1 material, if possible, level and well maintained. • Ensure a new electrical connection is made to the compound, to power, cabins, drying room, canteens, lights, electric vehicle charging points, etc. This will remove the need for mobile, temporary diesel generators, mobile tower lights and small tool generators. This would also result in fewer diesel fuel deliveries. • Electrical transformer (if required) should be placed in the south-east corner. • Air conditioning or ventilation units should all be located to the south of the cabins and offices. • Smoking areas should not be adjacent to site hoarding, ensure they are screened by cabins/offices. • Compound noise control for the compounds should be covered in the site induction. • All general construction noise and vibration mitigation measures for compounds as outlined in Lower Thames Crossing – 6.3 Environmental Statement Appendices Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan should be adhered to. • Resident engagement, e.g., compound life and noise control considerations.
<p>Applicant's Response</p>	<p>With regard to the comments on paving to compound roads and parking areas, the Applicant would state that the materials that will be chosen will be appropriate to the loadings required and the number of vehicles using the roads and parking areas. Speed limits will be applied to all roads and parking areas. All compound roads and parking areas will be maintained on a periodic basis to ensure that they are fit for purpose.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Haul roads will be level and well maintained. Where possible the Applicant will look at using the permanent works as haul roads. • The Applicant confirms that general construction noise and vibration mitigation measures for compounds as outlined in ES Appendix 2.2: Code of Construction Practice [REP1-157], will be adhered to. • The Code of Construction Practice confirms under paragraph 6.5.2.d. on page 53 that '<i>smoking areas will be provided at site offices and worksites, equipped with containers for smoking wastes, and located away from site entrances and residential areas.</i>' • Resident engagement around compounds and the works associated with the compounds is covered in detail in Section 5 of the Code of Construction Practice [REP1-157], pages 37-40 inclusive. • Noise control for the compounds will be covered in the site-specific staff induction. These site-specific inductions which will include site-specific environmental commitments and Project environmental commitments. These are detailed in paragraph 6.10.10 of the Code of Construction Practice [REP1-157]. • Where possible, air conditioning or ventilation units will all be located to the south of the cabins and offices, subject to these locations complying with health and safety and environmental requirements. <p>The Applicant proposes to install a connection to the existing utility networks for the use of the M25 compound. These Works are promoted as Work No MUT29 within the DCO application, and can be seen at Sheet 39 of the Works Plans [AS-026]. The foul water networks are proposed to be connected via the construction of Work No MUT28 and are shown on Sheets 39, 42 and 43 of the same document. This proposal is intended to reduce the number of generators required within the compound and reduce the number of vehicles associated with life support deliveries.</p> <p>Work No MUT28 and MUT29 are narrated in Schedule 1 of the draft DCO [REP1-042] as follows:</p> <p><i>'Work No. MUT28 – as shown on sheets 39, 42 and 43 of the works plans and being the temporary installation of multi-utilities, to include the installation or diversion of underground utilities connections for the construction areas Work No. CA13 and Work No. CA14 within a multi-corridor along North Road and Clay Tye Road, for approximately 2,035 metres in length.</i></p> <p><i>Work No. MUT29 – as shown on sheet 39 of the works plans and being the temporary installation of multi-utilities, to include the installation or diversion of underground utilities connections for the construction area Work No. CA14 within a multi-corridor west of North Road, for approximately 922 metres in length.'</i></p> <p>The general construction noise and vibration best practice mitigation measures as set out in the REAC contained within ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157] are commitments that the contractor must adhere to and are secured under Schedule 2 Requirement 4 of the draft DCO [REP1-042]. REAC</p>

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	<p>commitment NV008 also requires the Contractors to undertake community engagement to notify residents of particularly noisy and vibration generating activities prior to commencement of construction.</p>
<p>Paragraph 6.4.29 Page 34</p>	<p>DCO Requirements LB Havering considers the DCO requirements acceptable from a noise and vibration perspective, subject to agreement of the matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing a set of mitigation measures to deal with noise and vibration impacts on the Ockendon Road Diversion Route. • Securing manned monitoring at CV42 and CV44 on the first day of work on structures RWN000082 and RWN000085 to inform effective mitigation. • Securing appropriate noise and vibration mitigation in relation to the M25 Compound to minimise its impacts on the residents of North Ockendon.
<p>Applicant's Response</p>	<p>The Applicant refers back to the answers provided to paragraphs 6.4.9 and 6.4.10, 6.4.19 to 6.4.25 and 6.4.27, above. Commitments made within ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157] under REAC item NV009 (Noise and Vibration Monitoring) require monitoring be undertaken, with NV001, NV002 and NV004 securing the need for further noise assessment once exact specifics of the working practices and programme are fully understood in consultation with the relevant local authorities.</p> <p>REAC commitment NV017 (Vibration from Piling) specifically covers the issue of vibration from piling and the mechanisms in place to control this. These requirements would be consulted on, and where appropriate included within the scope of any CoPA s61 applications made under NV004 with London Borough of Havering. The need for monitoring will be considered during the drafting of the Section 61 applications.</p>
<p>Paragraph 6.5.5 and 6.5.6 Page 35</p>	<p>6.5 Air Quality Assessments of Data Sets LB Havering is satisfied with the air quality data sets that have been used in the air quality assessment presented within ES Chapter 5. It should be noted that the assessment of road vehicle exhaust emission impacts utilised data to describe traffic flows, fleet composition and speed produced from the traffic modelling exercise. However, the dispersion model outputs rely upon these inputs and therefore any discrepancies may also affect the air quality conclusions.</p>
<p>Applicant's Response</p>	<p>As set out in Chapter 4 of Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [APP-522], the traffic forecasts have been produced in line with the Department for Transport's (DfT's) Transport Analysis Guidance (TAG) and are in line with DfT traffic forecasts, published as TEMPro 7.2 and spatially adjusted by developments in the Uncertainty</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>Log. Sensitivity tests for low and high growth, in line with TAG have been undertaken and are reported within the Transport Forecasting Package [APP-522] and the Transport Assessment [APP-529].</p> <p>The air quality dispersion modelling has been undertaken in accordance with best practice modelling principles (LAQM (TG.22)) and in accordance with relevant guidance (DMRB LA 105). Further information on the air quality modelling is available in ES Chapter 5: Air Quality [APP-143].</p>
<p>Paragraph 6.5.8 and 6.5.9 Page 35</p>	<p>Assessment Process</p> <p>LB Havering considers the air quality assessment process that has been carried out is appropriate in the context of national guidance for the assessment of air quality impacts from highways schemes. The air quality standards for particulate matter with an aerodynamic diameter of less than 2.5µm (PM2.5) have been updated since the assessment was undertaken. It is unclear whether an Addendum will be provided to consider results in the context of the new legislation. However, it is considered unlikely that the conclusions for receptors within the Borough would be materially affected.</p>
<p>Applicant's Response</p>	<p>For clarity the PM2.5 thresholds prescribed in the Air Quality Standards Regulations 2010 (as amended) and Air Quality (England) Regulations 2000/2002 have not been amended. The Applicant understands that the Council is referring to the Targets set as a result of the Environment Act and has provided information below on this subject.</p> <p>The targets for particulate matter where particles are less than 2.5 micrometres in diameter (PM2.5) as set out in the Environment Act 2021 and the Environment Improvement plan, were enacted following the submission of the DCO application, as part of The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (ETR) on the 30 January 2023.</p> <p>The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 are clear that the legal target will only be measured and assessed at monitoring stations (such as Defra Automatic Urban Rural Network (AURN) monitoring network). It is the Applicant's understanding that the 12µg/m³ interim PM2.5 target set in the UK Government's Environmental Improvement plan is not legally binding and compliance is likely to be determined in the same way as the legal PM2.5 target (i.e. at AURN monitoring stations).</p> <p>The Applicant has analysed the latest air quality monitoring data from the AURN Network and it should be noted that for 2022, the interim PM2.5 target was achieved across the entire AURN monitoring network in England (which includes more than 80 monitoring stations). Only six monitoring stations monitored PM2.5 concentrations which exceeded the legal target of 10µg/m³, but only by a small margin (maximum annual mean 12µg/m³). PM2.5 concentrations are expected to decline in the future in response to ongoing actions undertaken by UK government and local authorities to reduce emissions, and so it is likely monitored concentrations would be lower by the legal target compliance date of 2040. It is therefore considered unlikely that the Project would impact on achievement of the PM2.5 targets.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	The air quality assessment reported in ES Chapter 5: Air Quality [APP-143] showed that the Project would comply with the current legal thresholds for PM2.5. Specifically, the air quality modelling confirmed that there would be no exceedances of the annual mean PM2.5 AQS objective of 25µg/m ³ and the annual mean PM2.5 Limit Value of 20µg/m ³ across the study area in both the Do-Minimum and Do-Something scenarios of the construction and operational phases.
Paragraph 6.5.11 Page 35	Scheme Design LB Havering considers the design of the scheme to be appropriate in relation to potential air quality impacts on receptors within the Borough.
Applicant's Response	This comment is noted.
Paragraph 6.5.13 Page 35	Construction Impacts LB Havering is satisfied that construction related air quality impacts have been identified correctly in general. However, changes in ammonia (NH ₃) concentrations at ecological designations as a result of road vehicle exhaust emissions have not been assessed. These can directly affect vegetation. As such, comprehensive consideration of air quality effects has not been provided.
Applicant's Response	The assessment of Nitrogen Deposition effects during the construction phase has considered ammonia emitted by road vehicles. The impact of NH ₃ has been considered as part of the air quality assessment for both construction and operation as described in ES Chapter 5: Air Quality [APP-143] , paragraphs 5.3.100 to 5.3.106.
Paragraph 6.5.15 Page 35	Operational Impacts Similarly, to construction related air quality impacts, it is considered operational impacts have generally been identified correctly with the exception of consideration of potential NH ₃ emission was impacts at ecological designations.
Applicant's Response	The operational assessment of Nitrogen Deposition effects has considered ammonia within the assessment. The impact of NH ₃ has been considered as part of the air quality assessment for both construction and operation as described in ES Chapter 5: Air Quality [APP-143] , paragraphs 5.3.100 to 5.3.106. Details on the feasibility of operational phase mitigation and compensation measures for residual nitrogen deposition effects are discussed in ES Appendix 5.6: Project Air Quality Action Plan [APP-350] .
Paragraph 6.5.17 to 6.5.22 Page 35 and 36	Mitigation Proposed mitigation relates to potential construction impacts. This is contained within the (REAC) contained within the Code of Construction Practice (CoCP) as actions AQ001 to AQ008. LB Havering offers the following comments on the mitigation proposals set out:

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • AQ001 to AQ005 are reasonable and generally align with best practice guidance; • AQ006 does not provide sufficient detail on how any future requirement for monitoring will be determined. This should provide a methodology for the 'risk-based approach' stated in the measure or reference suitable guidance as a minimum. • The baseline monitoring period outlined in AQ007 is considered appropriate; • AQ008 is not sufficiently detailed to fully determine how monitoring will be undertaken, for example 'appropriate survey instruments' is extremely vague, and it does not define how the trigger levels will be defined; and, • The outlined actions in the event of a trigger level exceedance are vague and no mechanism for providing site specific measures is provided within the measure. Reliance is provided on monitoring for particulate matter with an aerodynamic diameter of less than 10µm (PM10) and PM2.5, which may not relate to amenity impacts associated with depositional dust. These are more likely to occur and should be considered both as monitoring requirements and during the remedial action stage.
Applicant's Response	Response noted. Details in relation to the monitoring approach during construction will be set out by the Contractors and the air quality monitoring programme which will require approval by the Secretary of State in consultation with local authorities as per the REAC commitments within ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157].
Paragraph 6.5.24 Page 36	<p>DCO Requirements</p> <p>LB Havering considers the DCO requirements acceptable from the air quality perspective, subject to agreement of the REAC, CoCP and other matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing appropriate air quality monitoring and mitigation proposals that fully align with best practice guidance.
Applicant's Response	The Applicant refers back to the answers provided to paragraphs 6.5.17 to 6.5.22, above.
Paragraph 6.6.7 Page 37	<p>6.6 Flooding and Drainage Assessment of Data Sets</p> <p>LB Havering considers the data sets used for the assessment of flood risk and drainage are appropriate. They are understood to be the latest currently available information in relation to flood risk and drainage for the locality.</p>
Applicant's Response	This comment is noted.

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Paragraph 6.6.10 to 6.6.13 Page 37</p>	<p>Assessment Process</p> <p>The risk of surface water flooding to the proposed scheme is considered within the FRA and is assessed as low. However, it is not considered that sufficient assessment has been undertaken of the potential impacts of the scheme on surface water flood risk. It is therefore not clear whether the mitigation measures are sufficient. Specifically, watercourse DI-1N14ZZZ2: New diversion and culvert (on Sheet 42 of the drainage plans) has been scoped out of the hydro morphology assessment. This is likely to be acceptable considering the characteristics of the ditch. However, the watercourse diversion should be given further consideration to minimise culverting and ensure changes to the gradient do not cause increase flooding or maintenance burdens. Ongoing groundwater monitoring is proposed in key locations, such as proposed earthworks cuttings. LB Havering is of the view that reasonable consideration has been given to ground water flood risk. The risk of increased pollution from both routine runoff and accidental spillage has been considered and mitigation proposals are generally considered appropriate.</p>
<p>Applicant's Response</p>	<p>The Applicant confirms that further consideration is being given to the diversion of watercourse DI-1N14ZZZ2. Topographical surveys of the watercourse are being undertaken to verify the watercourse diversion design. Results will be shared with LBH and this matter is under discussion pending further negotiations between the Applicant and the London Borough of Havering following the survey. Further details of the negotiations are addressed in SoCG [REP1-105] item 2.1.92.</p>
<p>Paragraph 6.6.17 to 6.6.19, 6.6.22 and 6.6.23 Page 37 and 38</p>	<p>Scheme Design</p> <p>A minimum discharge rate of 1l/s is proposed from surface water outfalls. The proposed minimum discharge rate of 1l/s is considered to be too low and could increase the risk of blockages, which would potentially increase flood risk. LB Havering would like to see further consideration given to whether the discharge rate is appropriate or whether mitigation measures are required to manage the blockage risk.</p> <p>In the FRA, it is proposed that the basins are designed for the 100 year + 20% climate change event with a sensitivity check for the 40% climate change event. However, based on the lifetime of the scheme, the basins should be designed for the 100 year + 45% climate change rather than using this as a sensitivity test. The Applicant has confirmed that the basins have been re-designed to manage the 100 year + 45% climate change, in accordance with the latest guidance.</p> <p>Attenuation Basin 11 is located within Flood Zone 3. This basin is an upgrade of an existing basin so its location is unavoidable. However, efforts would need to be made to mitigate this and an enhanced maintenance schedule would be required for this basin based on the risk of flooding. NH has indicated that the Basin 11 would incorporate an embankment to manage the fluvial flood risk. Full details for drainage proposals have not been provided for J29 but proposals to manage this with upgrades to the existing network are considered reasonable.</p>
<p>Applicant's Response</p>	<p>With regard to the proposed minimum discharge rate to surface watercourses from the highway drainage system recent technical innovations mean this can be achieved without risk of blockages. The discharge rates proposed are in accordance with</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>local planning policy requirements to limit discharges of runoff from new areas of impermeable land cover to the 1 in 1 year greenfield rate or 1l/s (whichever is higher).</p> <p>The drainage design was undertaken to accommodate the climate change recommendation applicable at that time (a 20% uplift in rainfall intensity on the 1 in 100 year storm). There was an update to the climate change guidelines in May 2022, which recommended an allowance of 40% to 45% uplift in rainfall intensity to the 1 in 100 year storm. These rainstorms have been simulated and the drainage design tested to check the capacity of the retention ponds and basins. The modelling results demonstrate that all of the drainage ponds have sufficient capacity to accommodate the runoff generated without overtopping.</p> <p>Further details of the discussions between the Applicant and the Council on this point are set out in the relevant SoCG [REP1-105] item 2.1.94. The Applicant confirms that as an existing basin that is to be retained and upgraded, Basin 11 would incorporate an embankment to manage the fluvial flood risk.</p>
<p>Paragraph 6.6.25 to 6.6.27 Page 38</p>	<p>Construction Impacts</p> <p>NH has committed to preparing a Flood Risk Assessment and Drainage Strategy for the construction phase, to be prepared by the contractor. In terms of the construction, this approach is considered to be reasonable as the contractor would be best placed to determine the mitigation requirements. LB Havering, in the role as the LLFA, considers they should have an opportunity to review and comment on the Flood Risk Assessment and Drainage Strategy for the construction phase. Havering's comments on the strategy should be submitted to the SoS as part of the approval process for the management document. Both the M25 compound and the Ockendon Road compound are relatively low risk flooding (notwithstanding previous comments that surface water flooding needs to be considered in more detail for the proposals). Havering does not have concerns in relation to these sites and flood risk.</p>
<p>Applicant's Response</p>	<p>The Applicant confirms that the LBH, in the role as the Local Lead Flood Authority (LLFA), would have the opportunity to review and comment on the Flood Risk Assessment and Drainage Strategy for the construction phase. This is secured by commitments RDWE001 and RDWE006 within the Code of Construction Practice [REP1-157]. As stated, both of these commitments have achievement criteria of SoS approval of the Flood Risk Assessment (FRA) and drainage plan following consultation with the relevant planning authorities.</p>
<p>Paragraph 6.6.32 to 6.6.34 Page 39</p>	<p>Mitigation</p> <p>The Construction Environmental Management Plan (CEMP) should give consideration to the requirements for the management of flood risk and surface water. The CEMP should also provide evidence of how existing watercourses will be managed during the construction process to ensure that flood risk is not increased. NH would be obliged to carry out maintenance in accordance with DMRB and the maintenance plan. NH should provide annual submissions of maintenance activities completed and correlated against the maintenance plan. Similarly, to the above, groundwater monitoring is proposed at several critical locations.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	LB Havering would expect NH to submit ongoing groundwater monitoring records, including an assessment of whether mitigation is effective.
Applicant's Response	Consideration of the management of flood risk and surface waters during the construction phase are secured through Project commitments RDWE001 and RDWE006 within the Code of Construction Practice [REP1-157]. In line with Project commitment RDWE001, the Contractors would be required to prepare a construction phase flood risk assessment to consider onsite and offsite risks including climate change allowances up to 2030. Additionally, Project commitment RDWE006 requires the Contractors to develop a construction phase drainage plan setting out how the Contractors will manage surface water runoff across the worksite. Both plans would be approved by the SoS following consultation with the relevant planning authorities, which includes London Borough of Havering in their role as LLFA.
Paragraph 6.6.36 Page 39	<p>DCO requirements</p> <p>LB Havering considers the DCO requirements acceptable from the flooding and drainage perspective, subject to agreement of the CEMP, the FRA and other matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing the opportunity for LB Havering, as LLFA, to review and comment on the Flood Risk Assessment and Drainage Strategy for the construction phase of the project.
Applicant's Response	The Applicant refers back to the answers provided to paragraphs 6.6.7 to 6.6.36, above.
Paragraph 6.7.8 and 6.7.9 Page 40	<p>6.7 Skills and Employment Policy Context</p> <p>In terms of apprenticeships, using CITB benchmarks for development scheme, a scheme with a value of £6.1 - £10M would provide for two apprenticeships. The CITB / NSAfC does not provide formulaic guidance for a project of this scale, however the target of new jobs and new apprenticeships suggested is fewer than the simple extrapolation of the formula would suggest was appropriate. In terms of the overall targets, if there is no further breakdown of these to identify specific targets for Havering, there is a risk that the opportunities will not reach those most in need of support in the Borough. This is a matter that LB Havering has consistently and repeatedly raised with NH, however thus far no further progress has been made.</p>
Applicant's Response	<p>The Project's Skills, Education and Employment (SEE) Strategy outlines minimum targets that Contractors must meet during the delivery of the Project. These targets have been benchmarked extensively.</p> <p>This matter is addressed in item 2.1.79 of the SoCG between the Applicant and the LBH [REP1-105] including the following text:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>The Applicant has held regular SEE meetings with the Council to develop the strategy and notes the request for ring fencing of social value (in this case sourcing of labour) in the London Borough of Havering. The Applicant' SEE Lead provided an update on SEE workforce figures at the SEE working group meeting on 31/1/23.</i></p> <p><i>The Applicant has committed to a target of 45% of its workforce based within 20 miles of the Project. Delivery partners will be required to engage with local job brokerage services and education providers to advertise jobs, and share details of roles for publication through local communication channels.</i></p> <p><i>The Applicant also commits to providing at least 1,000 local business leaders across the region with the opportunity to develop the skills needed to bid for work on the Project. This will improve their capability and capacity to gain new work not only on the Project but across the wider region. This will also support the Project's local workforce target.</i></p> <p><i>A skills and employment working group will operate throughout construction. This will provide a forum for the local authority to work with the Applicant to share emerging needs and local priorities and identify other opportunities to maximise local economic benefits.</i></p> <p><i>The use of a regional target rather than borough-specific targets is a proportionate way of maximising the use of the local workforce without unduly constraining the delivery of a Nationally Significant Infrastructure Project, ensuring there is a flexible approach to labour market issues.</i></p> <p><i>This matter is under discussion pending feedback from the London Borough of Havering regarding their proposals for revised SEE strategy targets.</i></p> <p>The workforce and business leader target, advertising requirement and skills and employment working group commitments referred to above are contained in the SEE Strategy, a document that will be appended to and secured through the Section 106 Heads of Terms [APP-505].</p>
<p>Paragraph 6.7.10 Page 40</p>	<p>Assessment of Data Sets</p> <p>There is no assessment of the local labour market within Havering.</p>
<p>Applicant's Response</p>	<p>Contractors will be required to conduct a skills gap analysis which will inform their Employment & Skills Plans and supplier initiatives. This is secured through the Section 106 Heads of Terms [APP-505].</p> <p>The Applicant would welcome any information the Council has sight of concerning the local labour market in Havering that it feels would be useful in this process, via the Lower Thames Crossing Employment & Skills Working Group. The Applicant would also welcome awareness of any existing local initiatives so that it can support these in the most meaningful and impactful way.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Paragraph 6.7.13 Page 40</p>	<p>Assessment Process LB Havering recognises there is no statutory process laid out to assess the SEE Strategy. LB Havering has been consulted by NH on the content of the SEE Strategy, however, Havering remains unsatisfied with how these comments have been taken into account in the draft that was submitted as part of the DCO Application.</p>
<p>Applicant's Response</p>	<p>This comment is noted. The matter of engagement is also addressed within the SoCG [REP1-105] item 2.1.79, which discusses the role of regular SEE meetings and consideration of the request for local SEE targets. The Applicant also refers back to the answers provided to paragraphs 6.7.8 to 6.7.10, above and the ongoing engagement that will occur via the Lower Thames Crossing Employment & Skills Working Group.</p>
<p>Paragraph 6.7.15 Page 40</p>	<p>Scheme Design LB Havering has no comments to make on scheme design in the context of Skills and Employment.</p>
<p>Applicant's Response</p>	<p>This comment is noted.</p>
<p>Paragraph 6.7.17 Page 40</p>	<p>Construction Impacts The workforce required to build the scheme has been stated over the duration of the build with no percentage commitment to employment or training roles for LB Havering. Without a commitment to Borough-specific targets, the monitoring of impacts within Havering cannot be measured.</p>
<p>Applicant's Response</p>	<p>The Applicant refers to the answers provided to paragraphs 6.7.8 to 6.7.9, above. Although there is not a specific Havering target, the Applicant will have supply chain performance data during delivery that will enable it to measure impact in Havering.</p>
<p>Paragraph 6.7.19 to 6.7.21 Page 40</p>	<p>Operational Impacts While the strategy refers to other major projects in the vicinity, it does not assess the potential impact of these and other projects on the availability of both skilled and unskilled labour. As such, this also increases the risk of the required workforce being imported from elsewhere. LB Havering has called for training for skilled roles to be front loaded to achieve the upskilling stated in the SEE Strategy. Without this up front training, the roles that will be available will be low skill and are unlikely to leave a skills legacy, which is a stated ambition for the Strategy. It is unlikely that Havering residents will access jobs in the section of the project that is south of the River Thames in Kent. The cost of travel and accessibility of the main employment sites may also preclude Havering residents from applying.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	<p>The Applicant is working closely with the Major Projects Working Group, with representatives from other major projects in the vicinity, to ensure that it can identify areas for collaboration, particularly around shared local labour requirements and skills development.</p> <p>The Applicant agrees that there will be a need for training for skilled roles to successfully deliver the project and leave a sustainable legacy locally. This will form part of the Contractors' Employment & Skills Plans. Upfront training strategies will also benefit Contractors who will be able to call upon (and employ) the necessary skilled workforce and meet the 45% local workforce target.</p>
Paragraph 6.7.23 to 6.7.25 Page 41	<p>Mitigation</p> <p>The SEE Strategy does not offer local employment or training targets for Havering residents. The S106 Agreements – Heads of Terms document includes the SEE Strategy but offers no positive resource to the Council that would support bringing forward the SEE Strategy to positively impact LB Havering. The Heads of Terms document sets out proposed Planning Obligations including an "Officer Support Contributions" but lacks sufficient details to give LB Havering the assurance it needs that such a resource would be able to drive forward the strategy. NH proposes to drive the SEE Strategy through the Supply Chain. Havering's experience is that this is not an effective approach, with supply chains not meeting commitments and using "best endeavours" to cover their shortcomings. Havering would seek to work with NH to drive and monitor performance against local targets to realise any benefit for Havering residents.</p>
Applicant's Response	<p>The Applicant refers back to the answers provided to paragraphs 6.7.8 to 6.7.9, above.</p> <p>The Applicant will be driving the SEE Strategy through Contractors and their supply chains. Each Contractor will have dedicated social impact/social value teams to ensure that meaningful engagement and initiatives are sustained during the delivery of the Programme (evident already within the Borough with Balfour Beatty). The Applicant will be gathering quarterly performance data to assure and evidence supply chain delivery. Continual engagement will take place between the Council, Contractors (supply chain) and Applicant through the Lower Thames Crossing Employment & Skills Working Group, where the Council will have the opportunity to work collaboratively with the Contractors to help inform their annual Employment & Skills plans (e.g. identifying existing local initiatives/areas for support).</p>
Paragraph 6.7.27 Page 41	<p>DCO Requirements</p> <p>LB Havering considers the DCO requirements acceptable from the skills and employment perspective, subject to agreement of the matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Requiring the SEE Strategy to offer Borough-specific local employment / training targets for Havering residents.

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	The Applicant refers back to the answers provided to paragraphs 6.7.8 to 6.7.25, above.
Paragraph 6.8.7 and 6.8.8 Page 41	<p>6.8 Carbon Assessment of Data Sets</p> <p>LB Havering considers the data sets that have been used in the carbon emissions assessment presented within ES Chapter 15: Climate, to be reasonable. It should be noted, however, that the assessment of road vehicle exhaust emissions utilised data produced from the traffic modelling that NH have undertaken. Havering has concerns about aspects of the traffic modelling as set out in chapter 7 of this LIR. The emission calculation outputs rely upon these inputs and therefore any discrepancies may also affect the carbon conclusions.</p>
Applicant's Response	As set out in Chapter 4 of Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [APP-522] , the traffic forecasts have been produced in line with DfT's TAG and are in line with DfT traffic forecasts, published as TEMPro 7.2 and spatially adjusted by developments in the Uncertainty Log. Sensitivity tests for low and high growth, in line with TAG have been undertaken and are reported within the Transport Forecasting Package [APP-522] and Transport Assessment [APP-529] .
Paragraph 6.8.10 Page 42	<p>Assessment Process</p> <p>Havering considers that the assessment process has been appropriate in the context of national guidance for the assessment of carbon emission impacts from highways schemes.</p>
Applicant's Response	This comment is noted.
Paragraph 6.8.12 Page 42	<p>Scheme Design</p> <p>It is considered the design of the scheme is appropriate in relation to potential carbon emission impacts on receptors within the Borough.</p>
Applicant's Response	This comment is noted.
Paragraph 6.8.14 and 6.8.15 Page 42	<p>Construction Impacts</p> <p>It is considered construction-related carbon emission impacts have been identified and assessed correctly. However, it is unclear how the Construction Travel Plan will substantially support carbon reduction given the high percentage of car borne trips to the</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	construction compounds by workers. (M25 Compound trips 75% by car). Mechanisms to ensure accuracy of results are included in the Carbon and Energy Management Plan.
Applicant's Response	<p>The car mode shares as detailed in paragraph 5.4.9 of the Framework Construction Travel Plan [APP-546] are the baseline mode shares which have been applied within the Applicant's transport model, and as noted in paragraph 5.4.10 are '<i>considered to be a conservative assumption of the likely use of sustainable modes to access the compounds</i>'. Chapter 7 of the Framework Construction Travel Plan sets out areas where targets will be developed within each of the Site Specific Travel Plans, and this includes reducing the number of single occupancy car trips and increasing trips by sustainable modes. Targets in both these areas would support the reduction in carbon from the Project's construction workforce.</p> <p>In addition, Contractors are incentivised to minimise travel emissions as these count towards their agreed carbon targets (commitment CBN11 in Appendix E, Carbon and Energy Management Plan [APP-552]). A further commitment is that the delivery partners are to promote the use of active transport for personnel to and from the compounds and to provide managed electric charging facilities for e-bikes at each compound, in covered cycle parking areas, to satisfy demand (CBN10).</p>
Paragraph 6.8.17 Page 42	<p>Operational Impacts</p> <p>It is considered operational-related carbon emission impacts have been identified and assessed correctly.</p>
Applicant's Response	This comment is noted.
Paragraph 6.8.19 and 6.8.20 Page 42	<p>Mitigation</p> <p>Proposed mitigation relates to potential construction impacts. This is contained within the Carbon and Energy Management Plan Appendix E. The commitments appear reasonable and provide assurance that the project will not exceed the calculated carbon budget, as well as incentives for contractors to improve upon their designated emissions. Specific to the Borough, there are a number of requirements to minimise carbon emissions from compounds. It is noted that the use of zero emission generators has been included within the calculation of carbon emissions. However, Havering would like to see this included as a commitment and added to Table E1 of the Carbon and Energy Management Plan. Additionally, the main text provides a requirement for at least 20% of the energy demand for site compounds and offices to be from onsite renewables. Havering would again like to see this included as a specific commitment and added to Table E1.</p>
Applicant's Response	The comments is noted. In relation to ' <i>20% of energy demand for site compounds and offices to be from onsite renewables</i> ' the Applicant wishes to clarify that this is in fact a commitment for the Project. The 20% onsite generation relates to office and welfare facilities within each main works compound (as defined in schedule 1 of the draft DCO [REP1-042]). The onsite generation does not include demand related to other compound-based construction activities including the Tunnel Boring

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>Machine segment factory, concrete batching plant and slurry treatment plant, which will be run with renewable energy purchased from the grid. The Applicant will clarify this position, including an update to CBN07 [APP-552] at Deadline 3.</p> <p>Regarding the use of zero tailpipe emission generators, this was included within the carbon quantification. Through the Carbon and Energy Management Plan [APP-552] the delivery partners are incentivised to use low-carbon construction methods including zero-tailpipe emissions generators. The Project Manager will reserve the right to permit fossil fuel usage for generators if required, e.g. if sufficient hydrogen or similar generators are not available and delays would result. The Applicant would maintain an element of flexibility for its Contractors by not securing this within the DCO, whilst encouraging their use as much as possible, as there may be a number of reasons why this would not be practical.</p>
<p>Paragraph 6.8.22 Page 42</p>	<p>DCO Requirements</p> <p>LB Havering considers the DCO requirements acceptable in relation to carbon emission matters within the Borough, subject to agreement of the Carbon and Energy Management Plan and other matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing the commitment to use zero emission generators during the construction phase. • Securing the commitment for a requirement for a least 20% of the energy demand for site compounds and offices to be from onsite renewables.
<p>Applicant's Response</p>	<p>The Applicant refers back to the answers provided to paragraphs 6.8.14, 6.8.15, 6.8.19 and 6.8.20, above.</p>
<p>Paragraph 6.9.6 to 6.9.10 Page 43 to 45</p>	<p>6.9 Ecology Assessment of Data Sets</p> <p>LB Havering is satisfied that the ecological assessment follows the methodology set out in the DMRB LA 108 Biodiversity (Highways England 2020a) and relevant guidance, including Chartered Institute of Ecology and Environmental Management (CIEEM) publications. LB Havering also acknowledges that the ES Chapter 9 Terrestrial biodiversity has due regard for the methods of assessing the impact of changes in air quality on designated and non-designated sites as set out in DMRB LA 105 Air Quality (Highways England 2020b). In relation to paragraph 5.23 of the NPSNN, which states, 'The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests', LB Havering welcomes the Biodiversity Metric calculations which have assessed the Biodiversity Net Gain (BNG) baseline conditions and the post development BNG forecast to be generated by the project. Havering accepts that the current assessment is based on the preliminary project design (as of August 2022) and uses the Biodiversity Metric 3.1 Calculation Tool to determine whether the project could result in a net gain in biodiversity units. Havering notes the Metric results for the project overall are predicted to be 7% for habitat units but -11% for hedgerows and -7% for rivers and streams. It is, however, important to consider how the deficiencies to ensure no net 44 loss of biodiversity will be overcome for the scheme which is necessary</p>

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	<p>before any claim for BNG can be made for this NSIP. Overall, LB Havering is satisfied that the assessments undertaken have informed likely impacts from both construction and operational phases of the project and that these assessments confirm how target compensatory habitat and condition will be achieved. Havering supports the monitoring, which includes the employment of a suitably qualified Ecological Clerk of Works (EcoW) throughout construction, works to ensure delivery of all the mitigation measures, in line with all protected species licence requirements. Havering is satisfied that no part of the Borough is likely to be impacted by this NSIP, which will result in effects on the marine environment, as set out in Chapter 9 Marine Biology of the ES.</p>
<p>Applicant's Response</p>	<p>With reference to the Project's biodiversity metric figures, reported in ES Appendix 8.21: Biodiversity Metric Calculations [APP-417], the Project is applying the Natural England Biodiversity Metric ahead of this being a mandatory requirement. For Nationally Significant Infrastructure Projects, mandatory BNG is likely to commence in November 2025, and (subject to further announcements from government) is expected to apply to applications accepted for examination after that date, which would not include the A122 Lower Thames Crossing. The Applicant is not claiming that the Project is achieving biodiversity net gain.</p> <p>In its design, the Project has focused on maximising biodiversity value through being ambitious in terms of the habitats proposed for essential mitigation requirements, shown in ES Figure 2.4: Environmental Masterplan [APP-159 to APP-168], and their long-term management described in the outline Landscape and Ecology Management Plan [REP1-173], with a focus on the Lawton principles of more, bigger, better and joined up. It is recognised that the ambition demonstrated in the design does not necessarily maximise the value calculated by the Biodiversity Metric, but it is the view of the Applicant that the Project delivers a design of high biodiversity value. It is expected that the forecast Metric performance would improve during detailed design. Design refinements would seek to further reduce habitat loss during construction, minimise lags between habitat loss and creation and to maximise the condition and distinctiveness of habitats created, and the Project would seek to maximise biodiversity performance over the full Project lifecycle.</p>
<p>Paragraph 6.9.12 to 6.9.17 Page 44</p>	<p>Mitigation</p> <p>As the Solar Park grassland will be used as a reptile receptor site, LB Havering would like further details of the existing site grass sward and how this fits with proposal for grassland seeding. Havering seeks these in relation to wildflower meadow and/or flowering grass mixes, particularly flowering lawn mixes for pollinators to allow for more frequent cutting than hay meadows. LB Havering welcomes the inclusion of detail relating to long-term ecological monitoring of habitats created after the five-year establishment period, undertaken to assess the success of the grassland in terms of developing into the relevant target Priority habitat. LB Havering also welcomes Table 8.35 in the Terrestrial biodiversity chapter of the ES, which confirms that the compensatory planting for habitat losses of ancient woodland are not considered within the BNG calculations due to the irreplaceable nature of the habitat lost. LB Havering requests that as ancient and veteran trees are also irreplaceable habitat, that the net gain reported in this table is amended to reflect this and remove the 0.13ha from net permanent gain. Havering also requests that where existing habitat is s41 Priority habitat, that this is clearly shown in Table 8.35. LB Havering has reviewed the</p>

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	<p>confidential appendices and associated figures relating to badger, Barn owl and Marsh harrier and are satisfied that the mitigation hierarchy has been applied. Potential impacts on other protected species e.g., bats, great crested newts and water voles, are detailed with mitigation measures, in Chapter 8 of the ES. These include unlit sections of road to provide dark corridors for photosensitive species and warm white luminaires to reduce the impacts on insects and bats. Where licensing will be required, the draft application is also provided to support the DCO and biodiversity losses and compensation features have been embedded into the design of the project and recorded in ES Appendix 2.2 which includes both the CoCP and REAC. This is welcomed by Havering.</p>
<p>Applicant's Response</p>	<p>The Solar Park would be used to create open mosaic habitat, as detailed in the ES Figure 2.4: Environmental Masterplan Sections [APP-168] and the outline Landscape and Ecology Management Plan [REP1-173], Section 7.10. Part of the requirement for this habitat type is the provision of some areas of grassland so if the species present would contribute favourably to the floristic diversity of the site then they could be incorporated into its detailed design. This would align with Design Principles [APP-516], clause LSP.22.</p> <p>Regarding the comment on Table 8.35 [APP-146] and the inclusion of 0.13ha permanent habitat gain with respect to ancient and veteran trees, the Applicant acknowledges that this should be treated in the same manner as ancient semi-natural woodland and include the statement '<i>Not considered a net gain due to the irreplaceable nature of the habitat lost</i>'. This does not alter the overall outcome of the assessment.</p> <p>Detail on the presence of Section 41 Priority habitats is given in Table 8.21 of ES Chapter 8: Terrestrial Biodiversity [APP-146].</p>
<p>Paragraph 6.9.21 to 6.9.24 Page 45</p>	<p>North Ockendon Pit Mitigation</p> <p>ES Appendix 8.21 (APP-417) Biodiversity Metric Calculations Table C.1 Target habitat type and condition (area-based habitats) fails to make it clear which habitats within North Ockendon Pit SINC will be affected by the scheme. There is also no labelling within the calculations to refer to this designated site regarding strategic significance to inform the bespoke compensation requirements. ES Chapter 8 Terrestrial Biodiversity (APP-146) states in Table 8.33 Construction effects on non-statutory designated sites north of the River Thames that for North Ockendon Pit SINC, construction effects are predicted to be an area of temporary reversible habitat loss (1.39ha representing 7.3% of the SINC) within the southern half of the SINC. LB Havering requires further information on the compensatory habitat creation described in Section 8.5, Figure 2.4: Environmental Masterplan (Application Document 6.2) and the Design Principles (Application Document 7.5) Clause no. LSP.22, PRO.04, PLA.05, LSP.02, LSP.04 and LSP.09, to assess if this would deliver adequate compensation for the habitat loss of this designated site. Havering does not agree that the impact of the habitat loss would result in "a negligible temporary adverse level of impact and result in effects that are slight adverse and not significant." Despite embedded mitigation, LB Havering requires bespoke compensation for the permanent loss of SINC and seeks to ensure that sufficient compensation is provided. Havering recommends that the</p>

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	<p>construction compound would be an appropriate single location for the creation of compensatory brownfield habitats with low nutrients which could also act as a buffer for the retained SINC habitats.</p>
<p>Applicant's Response</p>	<p>The impact of the Project on North Ockendon Pit Site of Importance for Nature Conservation (SINC) relates to a proposed upgrade to an existing footpath which runs along the southern and western edge of this site. Footpath FP151 runs along the southern boundary and joins FP254 at the western corner which then runs north along the western boundary. During surveys to inform the Project design and impact assessment, these were found to be heavily overgrown with vegetation and difficult to navigate. The Project proposal is to upgrade these footpaths to bridleways, which may be surfaced using a hoggin-type aggregate. The alignment of the public rights of way would not change. The 7.3% of the SINC area reported in ES Chapter 8: Terrestrial Biodiversity [APP-146], would be subject to vegetation clearance and surfacing with inert hoggin substrate. Following the surfacing of the bridleway, vegetation would be allowed to regenerate naturally to the edge of the path with the path itself offering an area free from vegetation to support invertebrates and enable reptiles to bask in the transition between vegetated cover and exposed sunnier areas. The assessment of likely significant effects from the Project to North Ockendon Pit SINC therefore concluded that the site would be subject to a temporary reversible impact which would not adversely affect its integrity. This effect would therefore constitute a slight adverse effect which is not significant. Approximately 2.0ha of open mosaic habitat would be created immediately adjacent to Ockendon Railsides SINC on its western edge. This would avoid a net loss in open mosaic habitat in close proximity to North Ockendon Pit SINC. This area of habitat creation is detailed in ES Figure 2.4: Environmental Masterplan [APP-167], with its long-term management secured in the outline Landscape and Ecology Management Plan [REP1-173], Section 7.7.</p>
<p>Paragraph 6.9.26 Page 45</p>	<p>DCO Requirements</p> <p>LB Havering considers the DCO requirements appropriate in relation to ecology matters within the Borough, subject to agreement of the matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing the requirement for appropriate mitigation measures for the North Ockendon Pit SINC. • Securing the requirement for bespoke compensation relating to the permanent loss of SINC in the Borough.
<p>Applicant's Response</p>	<p>The Applicant refers back to the answers provided to paragraphs 6.9.21 to 6.9.24, above.</p>
<p>Paragraph 6.10.14 Page 47</p>	<p>6.10 Built Heritage Data Sets</p> <p>The data sets used in the assessment of heritage assets and the production of the Cultural Heritage ES Chapter (and supporting technical documents) are acceptable.</p>

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Applicant's Response	This comment is noted.
Paragraph 6.10.16 Page 47	Assessment The assessment process for built heritage is based on the relevant legislation, policy and guidance and is acceptable.
Applicant's Response	This comment is noted.
Paragraph 6.10.22 Page 48	The Temporary Works Plans Sheet 42 (within Volume C, application document reference 2.17) shows the illustrative layout of the compound with storage, workshops, material storage and car park to the south, further away from the Conservation Area, and an "earthworks stockpile area" covering most of the compound area in closer proximity to the Conservation Area. The earth stockpiling appears much more intensive on the illustrative plan than indicated in the text of the REAC where they are described as "earth bunds on the north-western boundary of the compound". Stockpiling to this extent will have a detrimental impact on the setting of the Conservation Area and the intention of the REAC to provide visual screening of the compound facilities with bunds will be undermined by the quantity of stockpiling. The potential concrete batching plant is not shown specifically on the plan, but it is assumed that this will be located within the larger proposed storage area to the south west as per the REAC commitment. The details of this are unknown, but it is assumed that parts of this facility will be tall so locating it as far from the Conservation Area as possible is vital to better preserving its setting
Applicant's Response	<p>The provision of a 2–3m high bund in front of the M25 compound area containing plant storage, offices, welfare facilities and the concrete batching plant (as shown on Plate 1.15 of ES Appendix 2.1: Construction Supporting Information [AS-049]) would provide visual screening of low-level construction activity in views from North Ockendon (refer to Representative Viewpoint N-38 within ES Appendix 7.10: Schedule of Visual Effects [APP-385]) until soil storage stockpiles are created. Once the soil storage stockpiles are in place in the north part of the M25 compound (in line with REAC Item LV024 within ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157]), these would provide additional screening of construction activity within the M25 compound. The bunds and stockpiles providing screening would be seeded to reduce dust (in line with REAC Item AQ003), which would also soften their appearance in views.</p> <p>The positioning of construction compound facilities greater than 6m in height as westerly as reasonably practicable and positioning of the concrete batching plant as south-westerly as reasonably practicable within the M25 compound (in line with REAC Items LV022 and LV023) would further reduce the impact on views from North Ockendon by maximising the distance between these taller elements and the residential properties.</p>

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	<p>The locations of construction compound elements up to 6m in height (including soil storage stockpiles), up to 15m in height (plant storage) and up to 25m in height (concrete batching plant) are illustrated on Pages 41 to 44 of ES Figure 7.8: ZTV– 5km DTM Analysis of Main Construction Compounds [APP-205], which has formed the basis of the visual impact assessment at Representative Viewpoint N-38 at the southern edge of North Ockendon.</p> <p>From a Cultural Heritage perspective, the construction magnitude of impact on North Ockendon Conservation Area is assessed as moderate and the effect is assessed as temporary moderate adverse, which is significant (Cultural Heritage ref. CA4, ES Chapter 6 [AS-044] and ES Appendix 6.10: Assessment Tables [AS-052]). This assessment included the M25 compound and construction access routes and it is acknowledged that they would form part of this temporary significant adverse effect. While the earthworks stockpile would be detrimental to the setting of the asset (as would the presence of the compound as a whole), it would not be sufficient to increase the magnitude of impact from moderate to major.</p>
<p>Paragraph 6.10.24 to 6.10.25 Page 48 and 49</p>	<p>Construction impacts</p> <p>The construction impacts have been correctly identified. However, there remain some queries on the impact of the access routes to the M25 compound at North Ockendon. Main works access routes are shown on the Temporary Works Plans to the north and south of the compound and these will not run through the Conservation Area.</p> <p>ES Chapter 6 notes (para. 6.6.153) that “a short-term online main construction route would be established through the Conservation Area, along Ockendon Road and the B186. This is not clearly shown on the Temporary Works Plans Sheet 42, however, it is understood that the construction route passes the edge of the Conservation Area (and partially within) and will not be routed through the core of the Conservation Area.</p>
<p>Applicant's Response</p>	<p>The temporary impacts on North Ockendon Conservation Area have been assessed in ES Chapter 6: Cultural Heritage [AS-044]. The assumptions made by Havering in regard to the routes of the access routes are correct, construction traffic will not be routed through the core of the Conservation Area along Church Lane. The Applicant also refers the reader to the answer provided to paragraph 5.1.45, above.</p> <p>The Applicant confirms that the Temporary Works Plans Volume C (sheets 21 to 49, Sheet 42) [AS-036] do not show construction routes. These are shown in the Outline Traffic Management Plan for Construction [REP1-175]. Table 4.1 provides a description of the access routes along the B186, which is used in the initial period until the M25 slips are constructed.</p>
<p>Paragraph 6.10.26 to 6.10.29</p>	<p>Potential vibration impacts on historic and listed buildings within the Conservation Area during construction have been raised as a concern separately but, on review of the relevant ES Chapters, these impacts have been appropriately identified and assessed.</p> <p>Chapter 6 (para. 6.3.9) confirms that Chapter 12: Noise and Vibration has concluded that there would be no significant levels of ground-borne vibration during operation and so no further assessment of operational ground-borne vibration impacts was carried</p>

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	<p>out for cultural heritage assets. However, the potential impacts from vibration to buildings within the Conservation Area will result from construction phase (i.e. whilst the M25 compound is present). Two buildings to the north-west of the Conservation Area were assessed for the potential impact of vibration from piling activities (4 Cranham Place, Chapter 12 ref. CV 42, and Old Coach House, Chapter 12 ref. CV 43) and it was found that 49 the impacts would be 'minor' (in one case 'moderate') and 'not significant' (see Appendix 12.4 of the ES).</p> <p>The noise assessment in Chapter 12 has considered two buildings within the Conservation Area: Cedar, 1 Hall Farm, Church Lane, North Ockendon (Chapter 12 ref. CN 121); and Glebe Barn, Church Lane, North Ockendon (Chapter 12 ref. CN 124). CN 121 has been assessed to have no likely significant effect through construction noise impacts (Table 12.34, Chapter 12). The effect on CN 124 has been assessed to be at night time only during the construction of utilities work but Chapter 12 (Table 12.35) states that this would not constitute a significant effect.</p> <p>It appears that the assessment of noise and vibration has not concluded any significant effects to buildings within the North Ockendon Conservation Area during the construction or operational period.</p>
Applicant's Response	This comment is noted.
Paragraph 6.10.6.1 Page 49	<p>Operational impacts</p> <p>The operational impacts have been correctly identified.</p>
Applicant's Response	This comment is noted.
Paragraph 6.10.30	<p>Mitigation</p> <p>The "retention of screening vegetation, careful siting of compound facilities, and establishment of visual screening earthworks" (ES Chapter 6, para. 6.5.22) are listed as 'essential mitigation' commitments included as part of the design of the scheme to address the impact from construction compounds including the compound at North Ockendon. However, despite the 'good practice' and 'essential mitigation' commitments in the design of the scheme, the temporary, construction phase impact would be "significant" in EIA terms (as per ES Chapter, para. 6.6.156), which would be considered as "less than substantial" harm to the significance of the Conservation Area when applying the terminology of para. 5.134 of the NPSNN.</p>
Applicant's Response	The construction magnitude of impact on North Ockendon Conservation Area is assessed as moderate and the effect is assessed as temporary moderate adverse, which is significant (Cultural Heritage ref. CA4, ES Chapter 6: Cultural Heritage [AS-

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	<p>044) and ES Appendix 6.10: Assessment Tables [AS-052]). It is acknowledged that this would also constitute less than substantial harm.</p>
<p>Paragraph 6.10.31 and 6.10.33 Page 49</p>	<p>Relevant to build heritage assets within the LBH boundary, the 'essential mitigation' measures also include commitments within the REAC and Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (AMS-OWSI) to record historic buildings to be lost due to the project. The REAC contains a specific commitment to record the Grade II listed buildings proposed for demolition within Thurrock (REAC ref. CH004), and whilst there is no equivalent commitment for the recording of the locally listed buildings of 1 and 2 Bridge Cottages (DBA ID 4154 and 4155), 3 and 4 Bridge Cottages (DBA ID 4156 and 4157) and Estate House (DBA ID 4153) it is understood that this is due to the policy differentiation between designated and non-designated heritage assets. The loss of the designated heritage assets (listed buildings) will result in 'substantial' harm in policy terms, whereas no equivalent exists for non-designated heritage assets (although there will be a total loss of significance).</p> <p>Rather than a specific requirement, the recording of the locally listed buildings will be secured under REAC commitment CH001 which requires the implementation of the AMS-OWSI. Item no. 2.3 of the AMS-OWSI notes the aim to create records of any historic building before they are lost and table 9.3 provides a list of the buildings and the proposed level of recording. This is deemed to be an appropriate approach to securing the recording of the locally listed buildings. The Draft AMS-OWSI suggests a Level 3 recording for the locally listed buildings, however, a hybrid Level 3 – 4 record should be considered in order to adequately record the documentary history of the buildings and their group value given their close proximity.</p>
<p>Applicant's Response</p>	<p>The Applicant will undertake further discussions with Havering to agree the appropriate level of recording for the non-designated buildings proposed for demolition. The AMS-OWSI [APP-367] will be updated to reflect the agreed level of recording.</p>
<p>Paragraph 6.10.35 Page 50</p>	<p>DCO Requirements</p> <p>Section 20(1) allows for protective works to be carried out to any building on any land which may be affected by the development. Part 9 of Section 20 states that the undertaker of any protective works to a listed building must service notice on the local planning authority and have due regard to any response received. This will allow for any works to listed buildings to be monitored (although they are not currently envisaged).</p>
<p>Applicant's Response</p>	<p>The above comment correctly paraphrases elements of Section 20 of the draft DCO [REP1-042].</p>
<p>Paragraph 6.11.20 to 6.11.22 and 6.11.25 to 6.11.29</p>	<p>6.11 Landscape Assessment of Data Sets</p> <p>On review, LB Havering accepts the landscape value, susceptibility and sensitivity judgements that have been proposed. Of most sensitivity, the Thurrock Reclaimed Fen LCA sub area Mardyke has been judged as having high sensitivity with high levels</p>

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	<p>of tranquillity due to its sparsely settled nature and largely dark nighttime character. The Thames Chase sub area and Belhus Lowland Quarry Farmland are deemed to be of moderate sensitivity. The assessment concludes that the proposed scheme is predicted to have significant adverse residual effects on landscape character as a result of the construction and operation of the project. LB Havering generally agrees with the significance of landscape effect judgements. This includes the impacts on the Thames Chase LCA sub area, which are judged to be ‘moderate adverse’ at Year 1 and ‘slight adverse’ at Year 15 (Design Year). This is primarily due to the widening of the existing M25 motorway corridor to accommodate the new project slip roads, resulting in a further reduction in relative tranquillity due to the increased prominence of the modified M25 corridor, as well as permanent loss of recreational land within Thames Chase Forest Centre. As acknowledged in the ES, baseline field surveys commenced in 2017 and viewpoint photography for the Representative Viewpoint locations were last reviewed in Winter 2021 and Summer 2022. This ensures both the views and proposed developed are judged based on the worst-case scenario (deciduous trees have no leaf cover) and best-case scenario (leaf cover), which is welcomed. On review, LB Havering accepts the visual receptor value, susceptibility and sensitivity judgements that have been proposed. The assessment concludes that the proposed scheme is predicted to have significant adverse residual effects on visual amenity as a result of the construction and operation of the project. LB Havering agrees with this conclusion. Generally, LB Havering agrees with the effects that have been judged. Pertinent to Havering, Viewpoint N-42 takes into consideration the ‘view from the permissive path within Thames Chase Forest Centre’. The significance of effect on this visual receptor has been judged as ‘Large adverse; at Opening year (winter) and ‘Moderate adverse’ at Design Year (year 15 – summer and winter). This reduction in significance is primarily due to the establishment of mitigation planting that will reduce visibility within the Thames Chase Forest Centre open space near the Thames Chase WCH bridge, and along the new embankment of the Lower Thames 53 Crossing J29 link road. Though this is accepted, it does place a strong reliance on the appropriate establishment and maintenance of mitigation planting. LB Havering notes that Monitoring section (7.8) makes reference to the REAC, which sets out the requirements for overseeing establishment in the first 5 years. Whilst the Landscape and Ecological Management Plan (LEMP) sets out requirements during the aftercare period and beyond. These reports have been addressed in the section below. In addition, the significance of effect on visual receptors such as N-39 (View from footpath 231 near St Mary Magdalene Church, in North Ockendon Conservation Area) and N-41 (View from adjacent to residential properties, including Cranham Place on B1421, Ockendon Road) have been judged to be ‘Moderate adverse’ at Opening year (winter) and ‘slight adverse’ at Design Year (year 15 – summer and winter). As above, LB Havering accepts that the establishment of mitigation planting will soften views and reduce visibility of infrastructure by Year 15. However, the Council questions whether the proposed woodland planting shown in the photomontages (Figure 7.19 Application Document No. Baseline Photography – Viewpoint N-39 Summer Year 15 Sheet 3 of 4) is a realistic representation of the mitigation measures shown on the Environmental Masterplan (Section 13 Sheet 3). When reviewed, a large extent of the eastern edge of the highway, south of Ockendon Road, is only proposed as a native species hedgerow (untrimmed) (LE 4.3) with a reinforced earth bund (LE 7.4), which would look substantially different to the photomontage representation. In turn, this means the significance of effect judgements could differ from that specified in the LVIA.</p>

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<p>Applicant's Response</p>	<p>It is noted that the conclusions for landscape and visual sensitivity and significance of effect presented within the landscape and visual impact assessment in ES Chapter 7: Landscape and Visual [APP-145] are generally accepted by the London Borough of Havering.</p> <p>The proposed woodland planting shown in photomontage N-39 (ES Figure 7.19: Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) [APP-247]) is located on the landscape mound beyond the proposed untrimmed hedgerow and M25 corridor. The lighting columns along the M25 corridor are visible on the photomontage in front of the woodland planting on the landscape mound and behind the untrimmed hedgerow east of the M25 corridor. The significance of effect judgements within the landscape and visual impact assessment in ES Chapter 7: Landscape and Visual are therefore considered to be appropriate.</p>
<p>Paragraph 6.11.31 to 6.11.33 Page 53</p>	<p>Mitigation</p> <p>Havering is satisfied with the majority of the mitigation planting proposed to reduce the impact of the scheme and to offset the losses of vegetation and ancient and mature woodland blocks. However, the areas of mitigation planting are solely responsible for mitigating the impacts and therefore the design, implementation and overall management of the planting needs to be robust and future-proof. Havering notes that Document 7.5: Design Principles Table 5.9 Section – specific principles: Section 13 & 14 – M25 Junctions: Clause S14.051 makes reference to the Thames Chase Community Forest woodland mitigation (Work No. E45) and that new areas of woodland planting south of the Thames Chase Community Forest, including the location of memorial tree planting and replacement of trees planted by the community, shall be developed in collaboration with Thames Chase Trust and Forestry England. Though this is welcomed, Havering notes that the Environmental Masterplan (Section 13 Sheet 4 and 5) shows the majority of the new tree planting to be proposed as 'LE 2.11 Woodland with Non-native Species', whereas Havering would be expecting this to be predominately LE 2.1 Woodland to ensure the form and pattern of native woodlands is retained. The Planting Palettes within Appendix A of the Design Principles document show the differences between the mixes and overall, the Council supports the use of Quercus robur as the dominate species within the 'Ultimate Canopy' mix. However, LB Havering would advise that the LPAs have an opportunity to review and comment on species selection. The reference to 44eteranizing individual trees or management to create veteran features in trees over the lifetime of the LEMP is supported by Havering.</p>
<p>Applicant's Response</p>	<p>Section 5 of the outline Landscape and Ecology Management Plan [REP1-173] describes outline management requirements for the various habitat types proposed as part of the Project. The draft DCO [REP1-042] requires the submission of a Landscape and Ecology Management Plan for approval by the Secretary of State, in consultation with the bodies listed in Table 2.1 of the outline Landscape and Ecology Management Plan. The Landscape and Ecology Management Plan needs to be substantially in accordance with the outline Landscape and Ecology Management Plan and include details of commitments to aftercare, monitoring and maintenance activities relating to the landscaping and ecological features.</p> <p>Clause LSP.02 Planting Strategy within the Design Principles [APP-516] states that '<i>The planting species mix shall be as diverse as reasonably practicable to ensure resilience against potential future diseases. It will include native species of local provenance</i></p>

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	<p><i>and will also consider the inclusion of a small percentage of non-native species, where appropriate, in response to forecasted impacts of climate change. It shall comprise only 'plant healthy' accredited stock where reasonably practicable.'</i></p> <p>Local planning authorities such as London Borough of Havering are noted as being part of the advisory group for the development of the Landscape and Ecology Management Plan during detailed design, as outlined in paragraph 4.1.13 of the outline Landscape and Ecology Management Plan.</p>
<p>Paragraph 6.11.35 and 6.11.36 Page 54</p>	<p>DCO Requirements</p> <p>LB Havering considers the DCO requirements acceptable in relation to landscape matters within the Borough, subject to agreement of the LEMP and other matters above. These include, specifically:</p> <ul style="list-style-type: none"> • Securing a commitment to effective mitigation planting which is appropriately managed to be robust and future-proof, specifically in relation to Thames Chase Community Forest.
<p>Applicant's Response</p>	<p>The Applicant refers to the answers provided to paragraphs 6.11.31 to 6.11.33, above.</p>
<p>Paragraph 7.1.1 to 7.1.6 Page 55 and 56</p>	<p>7 Traffic and Transport Scheme Design</p> <p>In traffic terms the scheme has been designed on the basis of the DMRB. That said, there are locations where the design may not meet the demands placed upon it during operation. A detailed review of the scheme design for the elements in Havering has been conducted by the Council. These issues are set out below.</p> <p>The following documents have been reviewed:</p> <ul style="list-style-type: none"> • Engineering drawings 12, 13 and 14 in Volume A (A122 LTC plans and profiles); • Engineering drawings 14 and 15 in Volume B (A122 LTC Cross Sections); • General Arrangement plans sheets 40 -47 in Volume C; • Engineering sheets 3,4,5,6,7,8,9,10,11,12,13,14 and 15 in Volume G; • Junction Layout Sheet 1 and 2 submitted recently by NH in Procedural Deadline B; and • Rights of Way Plans sheets 39 to 47. <p>The identified issues are set out in Table 3. It should be noted that while cross section and long section detail is available, the GA drawings are not to a scale that is easily measurable on pdf drawings. As such, any measurements referred to are approximate at this stage. The review highlights potential concerns relating to:</p> <ul style="list-style-type: none"> • Design of permanent maintenance access points onto the LB Havering network;

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Specification for, coherency and consistency of Public Rights of Way (ProW) provision following LTC ProW diversions and stopping up of highways required for LTC delivery; • Safety of ProW users on new sections of footpath and bridleway where they interact with LB Havering network; and • Specifically, gradients of the proposed bridleway crossing of LTC to join to Dennises Lane. <p>As a general point, signing strategies for Non-Motorised Users (NMU) need to be produced and agreed at the detailed design stage.</p> <p>[Table 3 of the LIR has not been reproduced]</p>
<p>Applicant's Response</p>	<p>The Applicant would refer to the answers provided to paragraphs 10.1.2 to 10.1.6, below, regarding its approach to PRow and WCH issues, and the ongoing dialogue with the Council to resolve these matters.</p> <p>Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [APP-512] provides details on the proposed WCH strategy for the Project and the proposed bridge across the A127 to the west of the M25 junction 29.</p> <p>Reference should be made to the Design Principles [APP-516], Table 5.9 Section-specific principles: Section 13 & 14 – M25 junctions Clause No. S14.23 for A127 West WCH bridge (Work No. 9Y) for WCH provision.</p> <p>Due to the limited time allocated for the Applicant to respond to the LIRs submitted at Deadline 1 in the Examination timetable, the Applicant has focused on the Local Impact Report contents and would expect issues of detail raised in the associated appendices to the LIRs submitted in support of the LIRs, as well as technical tables within the LIRs, to be subject to examination. Therefore, the Applicant wishes to reserve the right to provide further comment on these items at a later date in the examination. In the case of the design issues raised in Table 3, the Applicant will continue to discuss this issue and will continue to work with the Council to seek to develop an agreed understanding of the issues and resolution of the concerns raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p>
<p>Paragraph 7.2.4 to 7.2.11 Page 76 and 77</p>	<p>7.2 Construction Impacts Traffic Modelling</p> <p>[Tables 4 and 5 of the LIR have not been reproduced]</p> <p>The impacts noted are significant for Havering. The length of the construction programme, at around six years, will place notable impacts on local roads in the borough. The length of time major elements of traffic management will be in place is a principal cause of concern for the Council.</p> <p>The key concerns include:</p> <ul style="list-style-type: none"> • The B186 will have localised traffic control for 12 months with no details specified. • St Marys Lane will have traffic control over a 2km length in 300m sections for 9 months.

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Ockendon Road will be closed where it crosses the M25 for 19 months with the potential for an additional 6 months either side of the full road closure for utility works. • The construction of a set of new M25 temporary slip roads to provide direct access into the main site compounds in Havering has a timeline of 'between 12 and 24 months' and is only completed midway through the construction programme. <p>Even allowing for the granularity of the traffic modelling, impacts are severe within Havering. The closure of Ockendon Road has a notable effect on the parallel east-west routes of St Marys Lane and Dennises Lane. The traffic controls and the closure of Ockendon Road place significant, and currently unmitigated, strain on the capacity of the parallel routes. St Marys Lane sees up to 590 PCUs of additional traffic (two-way) in a single peak hour whilst the closure is in place, as well as a 610 PCUs two-way increase earlier in the construction programme when temporary traffic control is placed on Ockendon Road. This equates roughly to 10 additional vehicles a minute in both directions. The uncertainty over the length of time required to deliver the M25 temporary slip roads (12-24 months being quoted) represents a major disruption for Havering's 77 communities, due to the positive effect on traffic flows when the slip roads are open, which draw heavy site bound traffic away from the local road network. On balance, the significant traffic volume changes have been identified correctly but, as stated previously, very localised impacts are beyond the scope of the modelling undertaken. It is noted that NH has committed in the control documents (Outline Traffic Management Plan for Construction or oTMPfC) to conduct further localised traffic modelling, albeit within a decision-making framework that is unclear. In addition to these key issues, the effects of construction traffic are felt across a wider area than that immediately in proximity to the works.</p> <p>Locations further afield seeing increases in traffic at various times through the construction programme include:</p> <ul style="list-style-type: none"> • A13 west of the M25. • Warley Road – for traffic diverting around the works at M25 junction 29. • Corbets Tey Road and Front Lane which are affected by the temporary traffic controls and the closure of Ockendon Road. • Hall Lane, again as a result of the temporary traffic controls and closure of Ockendon Road. <p>In contrast, the A127 sees mainly decreases in traffic levels due to the works at M25 junction 29.</p>
Applicant's Response	<p>The Applicant appreciates that there will be changes in traffic flows during construction and has sought to avoid or reduce construction impacts where feasible. The oTMPfC [REP1-175] sets out measures to minimise disruption to users of the highway network and details the monitoring system that will be implemented by the Contractors and utilities contractors. This monitoring system will capture real-time data to confirm the effectiveness of traffic and vehicle control measures and ensure the arrival and departure times of vehicles from compounds are controlled. Various monitoring measures such as automatic number plate recognition, traffic flow monitors, and possibly web-based camera systems or similar systems will be implemented to capture data on traffic composition, traffic flow, journey times (to a limited extent), and traffic safety (collision) data. The monitoring system will capture and report information related to construction traffic such as compliance with vehicle routeing, incidents and</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>accidents reporting. The monitoring data will be collected and held by the Contractors and utilities contractors as part of their supplier set up procedures, and the systems will be coordinated across all contracts and utility works to ensure consistency and ease of reporting and appraisal. The data will be used to inform reporting to the Traffic Management Forum (TMF) on a monthly basis, allowing for the analysis of the performance of temporary traffic measures, including identification of any non-compliance or complaints, and the impact of construction traffic. The TMF will then be able to assess perceived impacts and actual impacts to determine necessary actions to resolve any issues.</p> <p>Where construction activities for the Project are likely to proceed at the same time as the construction of other projects in proximity to it, Contractors will manage this in a coordinated way, maximising opportunities to reduce the overall impact on communities and the environment. A National Highways Traffic Manager would be appointed for the entire Project network (i.e. logistic routes and routes requiring temporary traffic management). Their role would include oversight of and coordination with third-party project construction activities to minimise the impacts on the public and stakeholders. Further measures relating to construction traffic management are set out in the ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157].</p> <p>In response to the queries relating to the specific locations raised by London Borough of Havering the Applicant states the following:</p> <p>Table 4.3 of the oTMPfC provides a description of why temporary traffic management is necessary for B186 and St Marys Lane, including the detailed requirements for traffic measures and the anticipated duration of these measures.</p> <p>In regards to Ockendon Road, following DCO application submission this matter has been under discussion with London Borough of Havering. This matter is addressed by SoCG [REP1-105] item 2.1.25, as follows:</p> <p><i>At a meeting on 20/4/22, it was explained that the Applicant appreciates the impacts the closure would cause and is actively seeking to reduce the closure duration by using methods such as rephasing a water diversion and opening the underpass earlier. The proximity of the railway means a significant closure is considered unavoidable at this stage.</i></p> <p>Item 2.1.25 also reports the current outcome of this work to reduce the closure duration:</p> <p><i>It was confirmed that the closure duration will be capped at 10 months through a commitment in the Stakeholder Commitments and Actions Register (SACR).</i></p> <p>The SACR [REP1-176] was updated at Examination Deadline 1 to include this as commitment SACR-007:</p> <p><i>The temporary full closure of Ockendon Road (as defined below) shall not exceed 10 months. The temporary full closure is the closure which is in place between point 38/D and point 38/C in the Streets Subject to Temporary Restrictions of Use Plans [APP-029], with the reference RNTM58 in the outline Traffic Management Plan for Construction [APP 547].</i></p> <p>For the purpose of clarification regarding the traffic management measures needed for the delivery of utility works on Ockendon Road, it is important to note that the requirements do not involve a full road closure. Instead, they entail a 2-week contraflow</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>arrangement and two separate periods of 6-month contraflows, which are specifically identified as RNTM59 and RNTM60, respectively, in Table A.4 of the oTMPfC [REP1-175].</p> <p>The Applicant has established a timeline of the initial 12-24 months for constructing and operating temporary slips on the M25, granting access from the strategic road network (SRN) to the main compounds on either side of the motorway. While the Applicant would aim to prioritise the early construction of these accesses to reduce reliance on the local road network and its associated impacts, it is imperative to allow sufficient time for the safe construction of these temporary slips, which will also necessitate temporary traffic management measures on the M25.</p>
<p>Paragraph 7.2.14 to 7.7.20 Page 77 and 78</p>	<p>Data Sets</p> <p>There appears to be little consideration of access to construction compounds and traffic management on the construction and diversion routes, other than the identification of the routes and the need for diversions, which are set out in the Outline Traffic Management Plan for Construction (oTMPfC) document. Further details of all temporary traffic management will need to be provided, including layouts of site compound accesses, so that the impact of construction traffic to be properly assessed by LB Havering. This will need to identify traffic management provision, in addition to a more accurate prediction of expected traffic flows and an adequate investigation of impact of these changes on the operation of the local highway network. The proposals for construction of the project, and associated diversion routes in the borough, do not appear to have been assessed at this level. This is a significant omission. LB Havering considers that the data from the strategic model are neither appropriate nor acceptable for use for this purpose. A strategic model, whilst WebTag compliant, may not reflect the base local highway network and traffic flows accurately enough to understand the impact of these construction diversion and routes adequately. LB Havering has a number of concerns with regards to the modelling carried out for construction:</p> <ul style="list-style-type: none"> • The predicted construction traffic flows on Stubbers Lane, Pea Lane and Pike Lane do not appear to reflect the diversion routes that have been proposed. Traffic flows on Stubbers Lane are lower than expected; traffic flows on Pea Lane are conversely higher. • Traffic appears to be diverted onto Sunnings Lane; however, this route is closed to motor vehicles. • The proportion of construction and non-construction vehicles on each link is unclear from the modelling output. <p>Given the above concerns, LB Havering is of the view that the strategic model and the traffic flow forecasts should not be used to predict traffic flow changes in the local network during construction phases.</p>
<p>Applicant's Response</p>	<p>This matter is partly addressed by SoCG [REP1-105] item 2.1.4 as follows:</p> <p><i>Whilst every effort has been made to identify all accesses and all works required to those accesses, it is possible that unknown or informal accesses exist or the need to improve an access or lay out a further access will only come to light at the detailed design stage, once the full construction methodology has been determined. For example, the precise layout of accesses to</i></p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>construction compounds will need to take into account factors such as the swept path of the construction vehicles together with appropriate landscape mitigation which cannot be fixed at this stage. In addition, accesses may change because of developments which are themselves not yet consented or anticipated. In addition, the exercise of the power would be subject to the requirements, in particular Requirement 4 which secures compliance with the measures in the Code of Construction Practice, and (the updated) Requirement 10 which requires compliance with the oTMPfC.</i></p> <p>There is no diversion route within the DCO application documents that uses Sunnings Lane and the traffic modelling does not show any construction traffic using this road. However the Applicant does propose to use Stubbers Lane, just to the east of Sunnings Lane, as part of the Ockendon Road closure diversion. With regards to flow on Pea Lane being higher than would be expected in construction traffic modelling phases 4–7 when Ockendon Road is closed, this is a result of vehicles choosing to route via Pea Lane instead of the proposed diversion route. The Applicant's transport model is not able to force vehicles to use the signed route, with vehicles taking the shorter route, as may happen in reality.</p> <p>The Applicant considers that the strategic transport model is the appropriate tool to model the impacts of construction traffic as it allows for the modelling of the route followed by vehicles being used to construct the Project and the by staff going to and from the compounds. An area wide model is needed to capture their routes and the impacts on other road users. The GIS shapefiles supplied to LBH show the forecast number of construction and non-construction vehicles on the links in the Fully Modelled Area of the transport model (Lower Thames Area Model (LTAM)) which includes LBH and neighbouring areas.</p>
<p>Paragraph 7.2.22 and 7.2.23 Page 78</p>	<p>Assessment</p> <p>The assessment process for determining the impact of construction routes has, thus far, been confined to the use of the strategic model to identify the changes in traffic flows on network links due to diversion requirements e.g., the closure of Ockendon Road. LB Havering considers that more detailed, local prediction of traffic flows, modelling of junction performance and impact assessment of any traffic management proposed is required.</p>
<p>Applicant's Response</p>	<p>The Applicant refers back to the answer provided to paragraph 7.2.14, above. The construction modelling was a complex and detailed exercise which is recorded in Chapter 8 of the Transport Assessment [APP-529] and Transport Assessment Appendix E: Construction Traffic Assessment Supporting Information [APP-534]. More detailed modelling can be undertaken as appropriate nearer to the start of the construction phase as set out in paragraph 2.4.20 of the oTMPfC [REP1-175] as part of discussion.</p>
<p>Paragraph 7.2.24 to 7.2.26 Page 78 and 79</p>	<p>Local Impacts</p> <p>There have been a number of concerns identified with the use of the proposed construction and diversion routes which need to be addressed through further detailed work. This includes:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Compound access onto Warley Street, B186 North Road and Ockendon Road turning analysis shows that the full main road width of North Road or Ockendon Road will be required for access by larger vehicles, unless large radii and wide access roads are provided. The compound accesses are on private land, and so the access points can be provided within the red line boundary. The oTMPfC does not provide information on the design of the compound accesses and, consequently, feasibility of the exact access provision cannot be assessed. • Haul road crossings and Ockendon Road compound access may be impeded by the vertical alignment of Ockendon Road and the M25 overbridges. • B186 Warley Street – compound access visibility concerns and safe provision of public transport access. • B186 North Road – compound access visibility concerns. • Diversion route for Ockendon Road and the suitability of the diversion route for general and construction traffic (see Figure 12 below [not reproduced]). • The issues identified above will require further information and provision of more detailed proposals for construction traffic management. This will need to include: <ul style="list-style-type: none"> • More detailed information on vehicle types and frequency of access required. • More detailed layouts for the access points onto the network to ensure that vehicles can use them without impeding the progress of other vehicles. • Whether compound accesses and turning areas can be formed within the red line boundary. The oTMPfC does not provide information on the design of the compound accesses and, consequently, feasibility of the exact access provision cannot be assessed. • Feasibility of junctions on rural roads to facilitate the movement of large, slowturning vehicles and facilitating these safely. • Feasibility of using narrow rural roads for diverted vehicles or construction vehicles which depends on the number and type of vehicles. • Consideration needs to be given to the temporary provision for bus stops and pedestrian access to these. • The traffic management plan and diversion routes focus more on construction vehicles and non-construction diverted vehicles due to traffic management plans. Planning for, and assessment of, the impact of construction worker traffic has not been considered fully. <p>[Tables 6, 7, 8 and 9 of the LIR have not been reproduced]</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Applicant's Response</p>	<p>In relation to the site entrances and haul roads, this matter is addressed by SoCG [REP1-105] item 2.1.4 as follows:</p> <p><i>Whilst every effort has been made to identify all accesses and all works required to those accesses, it is possible that unknown or informal accesses exist or the need to improve an access or lay out a further access will only come to light at the detailed design stage, once the full construction methodology has been determined. For example, the precise layout of accesses to construction compounds will need to take into account factors such as the swept path of the construction vehicles together with appropriate landscape mitigation which cannot be fixed at this stage. In addition, accesses may change because of developments which are themselves not yet consented or anticipated. In addition, the exercise of the power would be subject to the requirements, in particular Requirement 4 which secures compliance with the measures in the Code of Construction Practice, and (the updated) Requirement 10 which requires compliance with the oTMPfC.</i></p> <p>In relation to the diversion routes proposed in the oTMPfC [REP1-175] and specifically for Ockendon Road, the Applicant would refer back to the answers provided for paragraph 7.2.4 to 7.2.1.</p> <p>Table 2.3 of the oTMPfC [REP1-175] sets the minimum requirements the Traffic Management Plan (TMP) will address when managing impacts on public transport, including buses. This includes the provision to arrange temporary bus stops and actively engage with operators during the development of the Traffic Management Plans.</p> <p>Due to the limited time allocated for the Applicant to respond to the LIRs submitted at Deadline 1 in the Examination timetable, the Applicant has focused on the Local Impact Report contents and would expect issues of detail raised in the associated appendices to the LIRs submitted in support of the LIRs, as well as technical tables within the LIRs, to be subject to examination. Therefore, the Applicant wishes to reserve the right to provide further comment on these items at a later date in the examination. In the case of the construction access/diversion route issues raised in Tables 6, 7 and 8 (many of which are new details), the Applicant will continue to work with the Council to seek to develop an agreed understanding of the issues and resolution of the concerns raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p>
<p>Paragraph 7.2.41 to 7.2.44 Page 93 and 94</p>	<p>Mitigation</p> <p>LB Havering has concerns around the suitability of some of the roads proposed to accommodate diverted traffic. It should also be pointed out that the proposed diversion route is also identified as a secondary route for construction traffic. No suitable mitigation has been put forward, thus far, by the Applicant to ensure these roads are maintained in an appropriate condition in order to accommodate additional traffic during the closure of Ockendon Road and also a potentially significant number of HGVs. In addition, whilst traffic management measures are set out in generic form in the oTMPfC, further details of all temporary traffic management will need to be provided, including layouts of site compound accesses and for all the highway network. The mitigation proposals related directly to construction traffic are considered to be very limited in nature.</p> <p>Areas of concern are:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Construction traffic impacts (traffic volume, unsuitable roads and junctions etc.) not fully defined and in part reliant on contractors. • No mitigation for 19 month Ockendon Road closure. • Programming of M25 temporary slip road opening not agreeable to LB Havering as a major piece of mitigation is delivered too late in the overall construction programme. • The control documents used to manage construction impacts as drafted are unfit for purpose: they lack ambition and target setting, which will be essential to manage the adverse effect of the volume and type of construction expected and the sheer volume of employees engaged in construction activities for the scheme. • No commitment to responding or funding / delivering wider mitigation that may be necessary based on operational experience. • There a number of traffic /ProW that would benefits from Protected Provisions (PPs). There is no PPs to cover highway approvals, transfer of footbridge 252 etc. <p>The mitigation proposals, and control over them in the construction phase in particular, are insufficient to give certainty to the LB Havering that the impacts are mitigated (NPSNN paragraph 3.3). The use of designated funds to secure scheme mitigation is inappropriate.</p>
<p>Applicant's Response</p>	<p>In relation to the diversion routes proposed in the oTMPfC [REP1-175] and specifically for Ockendon Road and its closure duration, the Applicant would refer to its answer to paragraphs 7.2.4 to 7.2.11</p> <p>In response to the scheduling of the M25 slip road, the Applicant would refer to its answer to paragraphs 7.2.4 to 7.2.11, above.</p> <p>In relation to construction impact mitigation, the Applicant would refer to its answer to paragraphs 6.4.7 to 6.4.10 and 6.4.27, above.</p> <p>These matters are also addressed by SoCG [REP1-105] items 2.1.25 to 2.1.27.</p> <p>In relation to potential protective provisions for highways, the Applicant would refer to its response to paragraphs 7.4.5 and 7.5.6, below. In short, article 10 of the draft DCO [REP1-042] sets out that assets which are handed back to local highway authorities must be provided to their reasonable satisfaction. This provides an appropriate (and highly precedented) mechanism for the transfer of assets, including Footbridge 252.</p>
<p>Paragraph 7.2.46 and 7.2.47 Page 94</p>	<p>DCO Requirements</p> <p>The level of detail presented on the proposed mitigation of construction traffic impact within the borough area is not sufficient to assess and mitigate impacts on the local highway network. The draft DCO includes a Requirement for the Final Traffic Management Plan to be approved by the SoS following consultation with the relevant authorities.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	This comment is noted. The Applicant refers to its answer to paragraphs 7.2.41 to 7.2.44, above.
Paragraph 7.3.2 to 7.3.7 Page 94 to 95	<p>7.3 Operational Traffic Impacts Traffic Modelling</p> <p>The transport assessment (TA) of the scheme is strategic in nature, with the modelling covering the entire South East of England east of the Blackwell Tunnel and the M25. However, paragraph 2.20 of the NPSNN indicates that, "...local forecasts will be used for the assessment of any specific road scheme being assessed under the NN NPS". The assessment has used 'traditional' TEMPro / NTEM (Trip End Model Presentation Program / National Trip End Model) based approaches to traffic growth (as also set out in NPSNN Annex B in 2014), rather than more recent analytical techniques based on scenario planning. Alternative growth scenarios are assessed, but only as a mathematical construct from the 'central case' (see NPSNN paragraph 4.6 which indicates the need for sensitivity tests). Sustainable travel option development is required to meet the policy of NPSNN set out in paragraph 3.17. As the majority of sustainable travel mitigation has been backed off to 'designated funds' the meeting of this test is not made out. 95 Paragraph 3.25 of the NPSNN sets out the policy test for a road user charging scheme. Paragraph 1.4.3 of the road user charging statement suggests that the project aligns with Policy 3.2.5 of the NPS NN as income from tolls would go to the Government in general, not specifically to fund the scheme. LB Havering would consider such a link to be tenuous at best. NPSNN paragraph 4.4 requires assessment of the scheme in the following terms: "...In this context, environmental, safety, social and economic benefits and adverse impacts, should be considered at national, regional and local level...". The traffic information presented is entirely strategic in nature. The recent creation of local traffic models by NH (which LB Havering do not consider to be fit for purpose due to their total reliance on the strategic analysis without using local information) is proof that NH are aware of this deficiency in the operational traffic modelling. LB Havering also notes paragraph 4.6 of the NPSNN, which requires a "local transport model to provide sufficiently accurate detail of the impacts of a project". With regards to the traffic analysis, this has knock-on effects on compliance with NPSNN paragraph 5.6 relating to (air quality) and paragraph 5.191 relating to noise. It can be argued that the lack of reliable local traffic modelling makes analysis of local noise and air quality issues untenable. It is clear that the scheme, as currently proposed, has a degree of compliance with the NPSNN based on its strategic nature. Locally, however, the analysis of traffic is limited and constrained by the assessment tools employed. This leads to questions of compliance at the local level being an area of concern.</p>
Applicant's Response	<p>The Applicant's transport model has been produced following DfT's TAG as was current at the date the assessment was undertaken. An update to TAG which published NTEM 8.0 and the traffic growth factors needed to model the DfT's Common Analytical Scenarios were published as definitive guidance in November 2022.</p> <p>The local junction modelling exercise undertaken by the Applicant for the Council was designed to check, given the flows shown in the LTAM, which junctions may merit further consideration under future Project scoping and initiation. The use of traffic data</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>directly from the LTAM forecasts for 2030 was set out clearly in the technical note supplied to the Council. As observed data was not available at the time this work was undertaken in 2022 it was not possible to build and validate 2022 base year local junction modelling at these sites.</p> <p>The Applicant submitted Localised Traffic Modelling [REP1-187] at Deadline 1. This sets out the Applicant's approach to localised traffic modelling, where this work has been completed and the criteria that the Applicant has used to determine whether localised traffic models should be produced.</p> <p>Regarding the NPSNN and charging, as set out in the Road User Charging Statement [APP-517]:</p> <p><i>1.4.1 The Lower Thames Crossing would be close to the Dartford Crossing, which already has a road user charging scheme in place for demand management purposes. The Lower Thames Crossing would join the Dartford Crossing in a very heavily utilised part of the SRN. Section 4.2 of National Highway's licence (DfT, 2015a) requires it to ensure the effective operation of the network.</i></p> <p><i>1.4.2 A charge at the Lower Thames Crossing, in conjunction with the existing charging regime at the Dartford Crossing, would enable the effective operation of both crossings and the wider SRN and local road network. If there was no charge for using Lower Thames Crossing, this would lead to higher overall demand and traffic taking longer routes than would otherwise be necessary.</i></p> <p><i>1.4.3 Although charging revenue would not directly fund the Project, it would go to the Government and hence distribute the cost of the Project between the taxpayer and users. This is aligned with paragraph 3.25 of the National Policy Statement for National Networks (DfT, 2014).</i></p> <p><i>1.4.6 Without prejudice to any decision by the Secretary of State on the grant of development consent, the DfT has reviewed details of the proposed road user charging regime for the Project and has confirmed that they are in line with government policy.</i></p> <p>With respect to NPS compliance in general, including sustainable travel, Appendix A to the Planning Statement [APP-496] NPSNN Accordance Table sets out how the Project accords with relevant NPS policy.</p> <p>Regarding the suitability of the modelling for air quality and noise etc, the Applicant refers to the answers provided to paragraphs 6.5.5 and 6.5.6, above.</p> <p>Regarding scenario analysis, the Applicant refers to the answers provided to paragraphs 7.3.11 to 7.3.14, below.</p>
<p>Paragraph 7.3.9 Page 95</p>	<p>Data Sets</p> <p>The data used to traffic model the LTC are based on a 2016 traffic model, with its validation improved by the use of mobile phone data in 2019 and 2022. A number of points concerning the data used include:</p> <ul style="list-style-type: none"> • The most recent uncertainty log has been issued and reviewed by LB Havering. The review suggests that all sites known to Havering have been included, with the exception of sites on the A1306 corridor that are listed as 'reasonably foreseen'. A total

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>of 4,218 dwellings from the current Havering Local Plan have been given the status by NH of “reasonably certain”. Notably, this figure includes 661 units on the A1306 corridor. This represents the latest known planning information available and therefore provides an accurate picture of growth in terms of Havering's area.</p> <ul style="list-style-type: none"> As noted above, TEMPro 7.2 has been used to growth traffic to future years. Previous models had capped growth to TEMPro except where the uncertainty log has shown known developments. This approach has been followed again to ensure double counting of growth does not occur. The data used is relevant to the analytical task at hand but in some areas is dated and predates the changes in traffic levels and changes in journey purpose seen during and since the Covid-19 pandemic. <p>On balance, when considered against the strategic analysis the model is designed to achieve, the data used are generally fit for purpose. However, the lack of detail at the local levels makes a statement of confidence in the data inputs at a local level difficult to validate. That said, the model is now reflective of the current Havering Local Plan's proposed growth.</p>
Applicant's Response	<p>The Applicant acknowledges that the London Borough of Havering considers that the developments included in the transport modelling are reflective of its current Local Plan proposed growth. Traffic levels have returned after the COVID-19 pandemic and the Applicant will continue to monitor traffic levels against those forecast for 2030.</p>
Paragraph 7.3.11 to 7.3.14 Page 96	<p>Assessment</p> <p>The assessment of traffic flows for construction and operation involves the use of a SATURN software based traffic model. Model coverage for the project is considered by LB Havering to be adequate for a strategic scheme. As would be expected from a strategic model, there is no assessment of individual junction performance. Following a request from Havering, NH produced a Local Junction modelling report which on review Havering considered unsatisfactory. Further information on the Local Junction modelling can be found in paras 7.5.1 to 7.5.24 of this LIR. Validation is improved in comparison to the previous models, although this is not fully reported in the Transport Assessment (TA) / Combined Modelling and Appraisal Report. Modelled journey times appear to reflect observed conditions closely. The creation of high and low growth scenarios accords with the NPSNN (paragraph 4.6), but not with the with the latest DfT guidance on modelling uncertainty through scenario-based assessments.</p>
Applicant's Response	<p>The Applicant produced traffic forecasts for the core, high and low growth scenarios in accordance with DfT Transport Analysis Guidance, as it was when the DCO application was made in October 2022. The Applicant notes that NTEM 7.2 was used for the assessment for the DCO application which was submitted in October 2022. The revised DfT traffic growth forecasts, known as NTEM 8.0, were not definitely released until November 2022, which was after the submission of the DCO application. High and low growth scenarios were modelled and the performance of the Project and the surrounding highway network is reported in Chapter 7 of the Transport Assessment [APP-529], Chapter 8 of the Combined Modelling and Appraisal Report Appendix C:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>Transport Forecasting Package [APP-522] and Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package Annexes [APP-523].</p> <p>The local junction modelling exercise undertaken by the Applicant was designed to check, given the flows shown in the LTAM, which junctions may merit further consideration under future Project scoping and initiation. The use of traffic data directly from the LTAM forecasts for 2030 was set out clearly in the technical note supplied to the Council. As observed data was not available at the time this work was undertaken in 2022 it was not possible to build and validate 2022 base year local junction modelling at these sites.</p>
<p>Paragraph 7.3.16 to 7.3.23 Page 96 and 97</p>	<p>Combined Modelling and Appraisal Report Comments</p> <p>The Combined Modelling and Appraisal Report (ComMA) summarises the transport modelling, forecasting and appraisal work undertaken for the Project. It reports on the key findings of the appraisal work on the social, environmental and economic impacts of the provision of the scheme. The ComMA fails to explore the very real concern about the application of the Lower Thames Area Model (LTAM) to the necessary local assessments of traffic and environmental factors. In the document clarity is provided as to what status the new A122 LTC has in the modelling and appraisal. Sections 2.4.6 and 7 provide details of what the road is (i.e., not a Smart Motorway). Sections 3.7-3.9 provide the view that the scheme and its analysis has been developed on the basis of predicting future traffic levels and providing suitable road capacity to cater for the predicted demand. The approach is a standard assessment based on a central case but with limited analysis of high and low growth scenarios. These wider scenarios are not based on a detailed review of planning and traffic growth evidence, but rather a mathematical construct form the central case. The latest DfT guidance sets out how a scheme appraisal should deal with future uncertainty, including use of an 'uncertainty toolkit' to assess factors affecting growth. The basis of the guidance is to consider a range of plausible scenarios that would represent alternative trends in growth and therefore in traffic volumes. This concept of scenario planning allows the assessment to move into the realms of 'decide and provide' i.e. the traffic levels are responsive to a particular vision of the future. This decide and provide approach is now regularised as good practice in transport analysis, given the need to move forward within a different policy landscape including climate change and carbon neutrality. Therefore, the NH transport analytical approach is not consistent with latest guidance. No clarity is provided on how sustainable mode changes instigated by the scheme have been valued. This appears to potentially use the DfT's sustainable modes toolkit, but is at odds with the claims made in the scheme benefits statement which allocates benefits to Non-Motorised User studies rather than actual benefits that users will see. 97 The section 7.3.48 sets out the distributional benefits of the scheme on an area basis, but no attempt is made to identify where disbenefits of the scheme fall. This lack of a complete distributional analysis is critical for Havering on matters such as environment where the traffic benefits to the areas are suggested to be limited in comparison to the adverse impacts. TEMPro 7.2 has been used to growth traffic to future years. Previous model iterations had capped growth to TEMPro, except where the uncertainty log has shown known developments. This approach has been followed again to ensure double counting of growth does not occur.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
Applicant's Response	<p>The traffic modelling has been carried out in accordance with the DfT Transport Analysis Guidance as it was in October 2022. High and low growth scenarios were modelled and the performance of the Project and the surrounding highway network is reported in Chapter 7 of the Transport Assessment [APP-529], Chapter 8 of the Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package [APP-522] and Combined Modelling and Appraisal Report Appendix C: Transport Forecasting Package Annexes [APP-523].</p> <p>The value of the active travel assets provided by the Project is shown in Section 8.4, Physical Activity in the Combined Modelling and Appraisal Report Appendix D: Economic Appraisal Package – Economic Appraisal Report [APP-526]. The appraisal used the DfT's Active Mode Appraisal Toolkit (AMAT) (Department for Transport, 2022). This toolkit implements the guidance set out in TAG Unit A5.1 (Department for Transport, 2020b).</p> <p>The distributional impacts analysis, reported in Combined Modelling and Appraisal Report Appendix D: Economic Appraisal Package – Distributional Impact Appraisal Report [APP-525], was carried out in accordance with DfT TAG.</p>
Paragraph 7.3.25 and 7.3.26 Page 97	<p>Construction Model</p> <p>The construction model assesses the eleven identified phases of the construction programme. It models both the road closure and formal traffic management arrangements, together with considering the impact of 'diverted' traffic or traffic which re-routes through increased congestion. The construction model is based on 2030, rather than the now predicated 2032 opening year. The TEMPro 7.2 growth factor from 2030 to 2032 is 1.0176, which does not seem overly significant at a macro level, but of course may have some specific local implications. For the nature of the scheme, the traffic analysis conducted is generally fit for purpose. What the traffic model does not do is provide the granularity to confidently assess localised impacts of the scheme, such as at a number of junctions with LB Havering operated roads and the Transport for London Road Network (TLRN), operated by TfL.</p>
Applicant's Response	<p>In the LTAM, the construction modelling for the traffic for each of the construction traffic modelling phases, that run from 2025 – 2030 was modelled together with the background level of traffic from 2030. 2030 is the background level of traffic in the final construction year. With the opening date for the Project moved to 2032 (following the written ministerial statement of 9 March 2023) and the construction period running from 2027 – 2032, the background traffic being for 2030 represents the level of background traffic around mid-way through the construction programme. The Applicant believes that the construction modelling remains fit for purpose.</p> <p>The Applicant considers that the strategic transport model is the appropriate tool to model the impacts of construction traffic as it allows for the modelling of the route followed by vehicles being used to construct the Project and by staff going to and from the compounds. An area-wide model is needed to capture their routes and the impacts on other road users. The GIS shapefiles</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	supplied to LBH show the forecast number of construction and non-construction vehicles on the links in the Fully Modelled Area of the transport model (LTAM) which includes LBH and neighbouring areas.
<p>Paragraph 7.4.1 and 7.4.2 Page 97</p>	<p>Operational Impacts</p> <p>The operational traffic impacts have also been documented in mapping produced by LB Havering. This shows substantial impacts on the A127 corridor (1,333 PCUs two way in the AM peak on the A127 in the opening year) and adjacent local roads. Figure 15 and Figure 16, below, show the change in traffic with the scheme in operation during the AM Peak and PM Peak respectively. Increases in traffic are shown in red; decreases in blue and no change in green. The numbers shown indicate the change in PCUs from the base traffic conditions to the situation with the scheme in operation. As previously noted, a PCU is equal to 1 car. In this case, an HGV is equivalent to 2.5 PCUs. Table 10 summarises the key operational traffic impacts.</p> <p>[Figures 15, 16 and table 10 of the LIR have not been reproduced]</p>
<p>Applicant's Response</p>	<p>A cordon model from the LTAM and the GIS shapefiles showing model outputs were provided to the Council to enable them to review the anticipated impacts of the Project on the surrounding road network.</p>
<p>Paragraph 7.4.5 and 7.5.6 Page 101</p>	<p>DCO Requirements</p> <p>The Schedule 2 Requirements are deficient in a number of areas in respect of traffic and transport:</p> <ul style="list-style-type: none"> • The proposed Wider Network Monitoring and Management Plan provides no mechanism for funding any necessary mitigation for Havering. There are insufficient monitoring points in Havering. The decision making mechanism for the provision of mitigation is insufficient • Furthermore, Havering would wish to object to Part 3 Article 10 of the draft DCO which places a maintenance burden on the Council for new and improved new streets, structures and any other street which is not intended to be a highway. The Council is not in a financial position to maintain new facilities which occur as a result of the construction of the proposed scheme and would therefore be seeking commuted sums through Protective Provisions. Of particular note is footpath 252 over the Essex Thameside line. • Concern that the CoCP becomes the Phase 2 EMP – in effect this leaves the EMP unexamined and reliant on other documents for control (e.g. CoCP, CEMPs for each construction site and the REAC). • Traffic management (R10). The phrase 'substantially in accordance with' gives uncertainty. • Travel Plan (R11). The phrase 'substantially in accordance with' gives uncertainty. <p>In summary, the Requirements do not give adequate control over traffic impacts. As an aside, the lack of Protective Provisions gives further uncertainty for LB Havering.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Applicant's Response</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]. The monitoring locations set out in the WNIMMP were selected on the following basis:</p> <ul style="list-style-type: none"> • Locations situated on the SRN that are geographically close to the A122 junctions as informed by the 'scale of impacts' analysis in the Transport Assessment [APP-529] (the nearest and second nearest junctions on the SRN and major road network (MRN) located adjacent to the junctions with the A122, the A2, the A13 and the M25) • Locations requested for monitoring from local highway authorities following a review of the consultation feedback <p>The current locations are set out on page 18 of the WNIMMP. A mechanism allowing for review of the proposed monitoring locations is provided through Requirement 14 in Schedule 2 of the draft DCO, whereby an operational traffic impact monitoring scheme must be approved by the Secretary of State following consultation with the relevant highways authorities (which includes London Borough of Havering). Relevant highways authorities will be able to propose locations for inclusion, which will be considered by the Applicant during the development of the operational traffic monitoring plan. The final decision on inclusion will be made by the Secretary of State through the approval process, as set out in Part 2 of Schedule 2 of the draft DCO [REP1-042].</p> <p>Once the Project opens for traffic, there will be changes in how traffic flows across the region. Many parts of the network would experience significant benefits on both journey times and journey reliability, whilst other locations would experience adverse impacts. Overall, the benefits on the road network would outweigh the adverse impacts, and this is reflected in the positive economic benefit of the Project.</p> <p>Chapter 7 of the Transport Assessment [APP-529] presents locations which are forecast to see either beneficial or adverse impacts as a result of the Project. If the monitoring identifies issues or opportunities related to the road network because of traffic growth or new third-party developments, then highway authorities would be able to use this as evidence to support scheme development and case making through existing funding mechanisms and processes.</p> <p>In relation to LBH's comments on Article 10, the Applicant considers it appropriate that the maintenance of roads which will form part of the local road network is a function which is discharged by the local highway authority. The maintenance of both local highways and the strategic road network is funded by the DfT. Local highway funding is mainly based on a formula linked to the total mileage of A roads, B and C roads, and unclassified roads in each area, together with the numbers of bridges, lighting columns, cycleways and footways. This funding is refreshed every few years to take account of changes in road length and number of highway structures. Accordingly, as local highway works are carried out under the DCO, the amount of funding that each local highway authority receives will be amended to recognise these additional responsibilities. Given that this process already exists, it is not appropriate to require the Applicant to provide funding for the maintenance of parts of the local network out of the money given to it to maintain the strategic road network. The Applicant recognises that the Council may have different funding arrangements than those highways authorities outside London. However, the Applicant's position is that it does not provide commuted sums to local highway authorities for any assets it provides as part of its major projects programme. The</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>Applicant notes that it is making a significant and substantial capital contribution to the delivery of these assets, and in light of the existing funding arrangements, it is not appropriate for the Applicant to have an ongoing and indeterminate responsibility. The Applicant notes that this position has been endorsed, with limited and rare exceptions, on a number of transport DCOs (see, for example, article 14 of the M42 Junction 6 Development Consent Order 2020, article 12 of the A428 Black Cat to Caxton Gibbet Development Consent Order 2022 and article 9 of the A303 (Amesbury to Berwick Down) Development Consent Order 2023).</p> <p>Requirement 4 in the draft DCO [REP1-042] clearly indicates that the principles contained within the first iteration of the Environmental Management Plan (CoCP) [REP1-157] will set the framework for future iterations of the Environmental Management Plan, and this first iteration is subject to examination.</p> <p>The Applicant is considering the comments made by the Council concerning the use of the term 'substantially in accordance with' in the draft DCO [REP1-042] in its LIR and the Council's Deadline 1 Submission – Applicant's amended dDCO [REP1-251].</p>
<p>Paragraph 7.5.5 to 7.5.11 Page 103</p>	<p>Local Junction Modelling Methodology</p> <p>The strategic model runs used to assess impacts are the AM 07:00 to 08:00 and PM 17:00 to 18:00 time periods. The local junction modelling analysis report has not considered whether the 08:00 to 09:00 AM period is more relevant to localised models. The flows extracted are from the 2030 Do Minimum (DM) and Do Something (DS) LTAM runs. No additional validation or review of the extracted flows has been undertaken by NH. Indeed, there is limited discussion on the approach taken to the transfer of flow information from model to model. This is despite LB Havering making a repeated request for information on this matter in the engagement with NH (prior to the modelling taking place). No additional validation of current junction operation has taken place in the analysis; in essence the strategic model flows and turning information have been used to simulate a localised Origin and Destination (O&D) matrix for each junction. Thus, the turning movements are exclusively based on the simulated O&D matrix without further validation. LB Havering does not consider this an appropriate approach. The modelled "on the ground" geometry has been taken from Google maps. Given the sensitivity of localised models to road geometry, this is a high-risk approach that could significantly affect the modelling outcomes. On basis of the approach discussed above, LB Havering remain unsatisfied with the validity of the modelled outcomes. The assessments do not take into account the cumulative impacts along the corridor, nor do they take into account impacts on non-motorised users or public transport. Safety issues have also not been reported. Given the concerns set out above, LB Havering and TfL commissioned their own local junction modelling work, to test the validity of the modelled outcomes provided by NH. This work was also undertaken to provide answers to some of the information that was missing in the NH Highways technical work cited above. The findings of this modelling work are discussed in further detail below.</p>
<p>Applicant's Response</p>	<p>The Applicant refers back to the answers provided to paragraph 7.3.11, above.</p>

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<p>Paragraphs 7.5.13, 7.5.14, 7.5.16 and 7.5.17 Page 104</p>	<p>Local Modelling Impacts commissioned by LB Havering and Transport for London</p> <p>LB Havering and TfL have undertaken an assessment of the local traffic impacts of the scheme using either Linsig V3 or Junctions 10 as appropriate, that assesses the effect of the scheme on 11 local road junctions in the borough.</p> <p>In common with the modelling conducted by National Highways in support of their planning application to build the Lower Thames Crossing, the junctions have been modelled for the time periods of 0700-0800 and 1700-1800. A copy of the local modelling report produced by appointed consultants Cole Easdon can be found in Appendix 2 of this LIR. This report also assesses each junction in relation to relevant Healthy Streets criteria to identify opportunities for interventions with regard to public transport, walking and cycling. Accident data for all eleven junctions have also been analysed.</p> <p>The <i>Healthy Streets</i> assessment identifies that most of the junctions would benefit from improved pedestrian/cycle crossing points, whilst others would also benefit from the banning of U-turn manoeuvres, provision of bus priority measures, and Advanced Stop Lines (ASLs) for cyclists.</p> <p>The accident data analysis found that the A12/North Street and A12/Pettits Lane had relatively high numbers of accidents in the 5-year period analysed (some 38 and 25 accidents respectively), whilst the A12/Gubbins Lane, A127/Squirrels Heath Road and A127/Hall Lane junctions had all experienced 19 accidents. All five junctions are recommended for further investigation with regards to road safety.</p>
<p>Applicant's Response</p>	<p>This comment and the findings regarding pre-existing safety concerns are noted.</p>
<p>Paragraphs 7.5.19 to 7.5.24 Page 104 to 105</p>	<p>The summarised findings of the modelling were as follows: The following junctions operate within capacity and will continue to do so in the year 2030 with or without the LTC scheme:</p> <ul style="list-style-type: none"> • A12 Colchester Road/Harold Court Road; • A127 Southend Arterial Road/Wingletye Lane • A13/Marsh Way; • A127/Front Lane; • A13/A1306 Wennington Road (Wennington Interchange); and • A124 St Mary's Lane/Station Road/B1421 Corbets Tey Road (Bell Corner). <p>The following junction will operate over capacity in 2030, with or without the LTC, however, there may be scope to improve this junction:</p> <ul style="list-style-type: none"> • A12 Colchester Road/Gubbins Lane/Gooshays Drive.

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	<p>The LTC causes the following junctions to operate over capacity (i.e. without the LTC, these junctions would operate with reserve capacity in 2030):</p> <ul style="list-style-type: none"> • A127 Southend Arterial Road/Hall Lane; and • A12 Eastern Avenue/Pettits Lane/Pettits Lane North. <p>The following junctions are severely over-capacity, both now and in the 2030 DS scenario. As such, these junctions will likely require amendments to the strategic network to alleviate the strain on these junctions:</p> <ul style="list-style-type: none"> • A12/North Street/B175 Havering Road; and • A127 Southend Arterial Road/Ardleigh Green Road/Squirrels Heath Road. <p>A brief summary of the overall findings, together with the report recommendations relevant for each junction, is set out in Table 11.</p> <p>[Table 11 of the LIR has not been reproduced]</p>
Applicant's Response	This comment is noted. The Applicant refers to the answers provided to paragraphs 7.4.5 and 7.5.6, above.
Paragraph 7.5.26 to 7.5.27 Page 106	<p>Next Steps</p> <p>The Council is concerned that this work has identified the above issues and the clear need for mitigation. The current proposed wider monitoring and mitigation strategy does not identify a mechanism for the delivery of such mitigation for LB Havering. This matter is discussed further in the Council's Written Representation. The Council is seeking a commitment from NH that it will work with LB Havering and TfL to deliver suitable mitigation measures that will address capacity constraints forecast at key junctions within Havering. LB Havering would like to see such a commitment secured through the DCO.</p>
Applicant's Response	The Applicant refers to the answer provided to paragraphs 7.4.5 above.
Paragraph 8.1.1 to 8.1.11 Page 105 to 109	<p>8 Implications for Schools Construction Impacts</p> <p>To further assess construction traffic impacts, an analysis by GIS mapping has identified schools within 500m of notable changes in traffic flows caused by scheme 107 construction. Construction phases 4 and 7 have been analysed given these are periods of maximum effort in the construction programme currently envisaged.</p> <p>Phase 4 (June 2026 – November 2026 as reported) construction traffic AM Peak – schools near to increased traffic greater than 50 PCU; school less than 500m from the road:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • Branfil Primary School +73. • Havering Sixth Form + 79 and +58. • Sacred Heart of Mary Girls' School +74. • St Joseph's Catholic Primary School +71. • Upminster Infant & Junior School +72. • Coopers' Company & Coborn School +72. • James Oglethorpe Primary School +153. • Ardleigh Green Infant & Junior School +60. • Harold Wood Primary School +56. • Redden Court School +56. <p>Phase 7 construction traffic AM Peak – schools near to increased traffic greater than 50 PCU; school less than 500m from the road:</p> <ul style="list-style-type: none"> • James Oglethorpe Primary School, +159. • Upminster Infant & Junior School +73. • Coopers' Company & Coburn School +73. • Sacred Heart of Mary Girls' School + 73. • Havering Sixth Form +98. • Ardleigh Green Infant & Junior School +72. • Harold Wood Primary School +53. • Redden Court School +53. • St Joseph's Catholic Primary School +73. • Branfil Primary School +59. <p>Of particular concern is the challenge pupils travelling into these schools from outside of the borough east of the M25 (and therefore more likely to be travelling by vehicles rather than on foot) will have getting to and from school during the construction period. Table 12 below shows the most affected schools during construction and the number of pupils travelling outside the M25 boundary.</p> <p>[Table 12 of the LIR has not been reproduced]</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>The information in the table above is also set out in map form in Appendix 3. Branfil Primary School, The Coopers' Company & Coborn School and The James Oglethorpe Primary School are particularly affected, given the total number of pupils travelling from outside of the borough east of the M25. For a more detailed consideration of impacts in Havering, under operational conditions, the locations of schools in the borough and the changes in traffic levels caused by the scheme have been reviewed. A total of 18 Havering schools are within 500m of a road which has a traffic increase of greater than 50 PCUs in the AM peak. LB Havering requests fixed crossing points to support pedestrians travelling to schools, which will be particularly impacted by increased traffic flows during construction periods. Given the severity of the impacts schools on key parts of the network such as St Mary's Lane will experience, particularly with increased traffic flows, such a measure is considered vital in reassuring parents and minimising risk for pupils travelling to and from school. In addition, the Council requests a financial contribution to the bikeability programme for each year of construction. Ensuring pupils can cycle safely to school will help to manage traffic flows and it a vital life skill for residents. Contributions are also sought for the TfL Sustainable Travel Active Responsible Safe (STARS) accreditation programme, which supports schools in, encourage pupils parent and staff to travel sustainable to and from school. Table 12 shows the number of pupils travelling into schools in Havering from outside of the M25. Should the road closures during construction triggers the statutory distances for free school transport being exceeded, the LB Havering would require NH to provide the necessary funding to allow LB Havering to discharge its statutory duties. The Council is also concerned about the impact Corbets Tey Special school will experience during construction due to its proximity to the works proposed for Ockendon Road. All pupils travelling to the school do so by private vehicle. The vast majority of these pupils live within Havering. There is concern that these journeys will be affected by the wider construction traffic impacts. The potential impacts for Corbets Tey Special school emphasise the importance of the appointed contractor doing all it can to minimise the length of time Ockendon Road is fully closed for. There is concerned that Front Lane will be adversely impacted by construction traffic which is forecast to increase during certain periods of construction. Pupils walking to Engayne Primary school from the east currently have to navigate Front Lane. This is a particularly busy road and will become more challenging for pupils to navigate during construction of Lower Thames. The Council requests a Zebra crossing facility to be installed at the junction with Isis Drive to enable safe passage across this road.</p>
<p>Applicant's Response</p>	<p>The regular exchange of information from the Council regarding schools affected is welcomed by the Applicant. This matter is addressed by SoCG [REP1-105] items as follows:</p> <p>2.1.23:</p> <p><i>The oTMPfC sets out general access requirements of school staff, parents and children and describes what should be addressed as a minimum in the Traffic Management Plan (e.g. maintaining safe access and egress, advance warning for sensitive events, Heavy Goods Vehicle (HGV) movements not permitted past school entrances during drop off and pick up times). Work is ongoing to identify whether additional measures may be required.</i></p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>Engagement with the Council has taken place specifically around mitigation measures for potentially affected schools. As acknowledged, a School Engagement Plan is in place for the Project, accompanied by a register of engagement activities undertaken with individual schools which records feedback about issues / concerns that individual schools express. The engagement programme with schools aims to raise awareness of the Project and to manage issues, for example environmental issues or those relating to access / travel to school.</i></p> <p><i>Additionally, the CoCP states that the Contractor's Communication and Engagement Plan (CEP) will specify a detailed programme of community engagement for specific stakeholder groups, including schools, identifying proposed methods and likely timing of consultation activities during the construction period. Community Liaison Groups are proposed to be open to attendance from the local community, which would include school representatives. Local community leaders from the CLGs will be identified and invited to attend the Traffic Management Forum (this could include school representatives).</i></p> <p><i>At the meeting on 25/7/22, it was confirmed that a Schools Working Group would be created for those most affected. The schools engagement coordinator continues to liaise directly with Council officers to set this up. The meeting also clarified the Council's expectation that the engagement would be phased according to construction/traffic impacts timeline and designed proportionate to scale of impact, to ensure it was manageable and relevant. This is also subject of liaison with officers in order to develop a plan per school.</i></p> <p><i>Invitations were issued to the Schools Working Group in early March 2023 using contacts recommended by the Council. As of 24/4/23, an introductory session date will be proposed once replies have been received following the end of the school holidays. This matter is under discussion pending London Borough of Havering's consideration and sufficient maturity of the engagement plans in advance of contractors mobilising.</i></p> <p>2.1.24:</p> <p><i>The requests are noted. The Population and Human Health assessment includes impacts on educational facilities. Schools have been identified within a prescribed study area (500m from the Order Limits) which include schools along St Marys Lane. The results of the assessment will feed into the oTMPfC which will identify further related mitigation measures.</i></p> <p><i>It is noted that the Council has stated the level of additional mitigation ultimately requested will depend on the outcome of the school engagement planning detailed in item 2.1.23.</i></p> <p><i>The Applicant is considering a variety of options to address the Council's requests and provided a detailed update at a meeting on 21/2/23. This matter is under discussion pending further negotiations between the Applicant and the London Borough of Havering.</i></p> <p><i>The Applicant can confirm that Corbets Tey Special School was approached to participate in the Schools Working Group. The school did not send a representative to the initial meeting but the Applicant is happy to continue reaching out to engage with</i></p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>them and would appreciate any extra assistance that the Council is able to provide in doing this. The identified schools are noted and the Contractors will be integrated into the engagement process to ensure knowledge transfer.</p> <p>The Applicant notes the mitigation requests including named pedestrian crossings, sustainable travel training and contributions to cover potential school transport implications. These will be considered, and the Applicant will continue to work with the Council to seek to develop an agreed understanding of the issue and resolution of the concern raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p>
<p>Paragraph 8.2.1 to 8.2.5 Page 109 and 110</p>	<p>Operational traffic</p> <p>AM traffic change greater than +50 PCU with school under 500m from road in 2030 opening year:</p> <ul style="list-style-type: none"> • Engayne Primary School 121 PCUs. • Upminster Infant & Junior School 63 PCUs. • St Joseph's Catholic Primary School 63 PCUs. • Sacred Heart of Mary Girls' School 63 PCUs. • Havering Sixth Form 122 PCUs. • Emerson Park Academy 180 PCUs. • Nelmes Primary School 220 PCUs. • Champion School 222 PCUs. • Ardleigh Green Infant & Junior Schools 336 PCUs. • Havering College of FE 67 PCUs. • Redden Court School 435 PCUs. • Harold Wood Primary School 435 PCUs. • Marshalls Park Academy 64 PCUs. • Rise Park Academy 60 PCUs. • Clockhouse Primary School 109 PCUs. • St Patricks Primary School PS 68 PCUs. • Harold Court Primary School 78 PCUs. • Royal Liberty School 67 PCUs.

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>As with the impacts during construction, of particular concern is the challenge pupils travelling into these schools from outside of the borough east of the M25 (and therefore more likely to be travelling by vehicles rather than on foot) will have getting to and from school once the scheme is fully operational. Table 13 on the following page shows the most affected schools during scheme operation and the number of pupils travelling to those schools from outside the M25 boundary.</p> <p>The Royal Liberty School is particularly affected, given the total number of pupils travelling from outside of the borough east of the M25. The information in the table above is also set out in map form in Appendix 3.</p> <p>[Appendix 3 and table 13 of the LIR have not been reproduced]</p>
<p>Applicant's Response</p>	<p>Assessments of accessibility and traffic-related severance have been undertaken for both construction and operational phases of the Project. The accessibility assessment is set out in Section 7.2 of the Health and Equalities Impact Assessment [APP-539]; for operation, this considers the change in access to opportunity for education facilities as one destination type and Havering shows slight to moderate improvements in accessibility. Section 7.3 of the Health and Equalities Impact Assessment [APP-539] contains an assessment of traffic-related severance. This considers the potential separation of residents from community facilities and the services they use within their community as a result of substantial changes in transport infrastructure or by changes in traffic flows arising from the Project. Locations anticipated to show a moderate increase in severance as a result of the Project are listed in Table 7.9, although none of these are located within Havering. The impact on schools as a result of the operational phase of the Project is therefore considered to be acceptable.</p> <p>A wide range of walking and cycling improvements are proposed as part of the Project design, improving connectivity, filling missing links in the PRoW network and enhancing the safety of routes through the provision of shared pedestrian– cycle tracks along key routes. The Applicant's proposals do not create new severance between communities to the west and east of the Project alignment and opportunities for walking and cycling are enhanced through the provision of green bridges and footbridges at appropriate locations.</p>
<p>Paragraph 9.2.2 to 9.2.5 Page 116</p>	<p>Upminster Cemetery and South Essex Crematorium Scheme Impacts</p> <p>Regardless of whether the length of closure is 19 months (or indeed a reduced 10- month period), this length of closure is unacceptable and will inevitably cause a great deal of disruption to the Cemetery. A key issue for LB Havering is the most likely loss of income the closure of Ockendon Road will have because funeral directors, and ultimately bereaved families, may choose to use alternative facilities in other parts of the region such as in Essex and Thurrock. Funeral directors have told Havering that having to travel alternative routes to the Cemetery (such as the diversion route proposed for the closure in Figure 23) will mean longer journeys and ultimately increased costs. One funeral director wrote to the Council to say: <i>“Local businesses will have added mileage costs added to their outgoings as they will have to use diversions routes for years and probably experience traffic jams on all local routes again for years. The impact on local company's trying to continue to serve local people while contending</i></p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>with years of building works and heavy machinery moving about on our local roads will I am sure bringing many businesses to their knees” Whilst NH has indicated in the oTMfC that the diversion route proposed would take vehicles approximately 11 minutes to navigate, the Council is concerned that during certain times of the day the diversion route could take significantly longer than this.</i></p>
<p>Applicant's Response</p>	<p>The Applicant refers back to the answers provided to paragraphs 7.2.4 to 7.2.11, above, particularly concerning management of traffic impacts and the commitment to reduce the duration of the Ockendon Road closure.</p> <p>This matter is addressed by SoCG [REP1-105] item 2.1.25 as follows:</p> <p><i>At a meeting on 20/4/22, it was explained that the Applicant appreciates the impacts the closure would cause and is actively seeking to reduce the closure duration by using methods such as rephasing a water diversion and opening the underpass earlier. The proximity of the railway means a significant closure is considered unavoidable at this stage.</i></p> <p><i>It was also explained that the oTMPfC commits the Project to a Traffic Manager and Traffic Management Forum, with attendees, consultees and contributors listed. The Traffic Management Forum, specifically, is intended to resolve issues through consultation and exploring the local knowledge that the relevant authority possesses and incorporating that knowledge into the Traffic Management Plans (TMPs). These TMPs will be developed post consent and in line with the controls and commitments in the oTMPfC. London Borough of Havering will be a consultee when developing TMPs.</i></p> <p><i>As part of the preparation of TMPs, temporary traffic management measure proposals will be consulted on with the relevant authority as set out in the oTMPfC. As such, the exact length, nature and duration of temporary traffic management measures will be discussed and relevant authority comments, issues considered and incorporated where reasonably practicable. The level of detail sought by London Borough of Havering will be developed by the contractor as part of the TMPs, which will include principles and mechanisms that allow interface and dialogue between relevant stakeholders.</i></p> <p><i>Table 2.3 of the oTMPfC outlines the requirements of various stakeholders including community facilities and how the subsequent TMPs will address these when developed.</i></p> <p><i>Through regular meetings and emails up to May 2023, a meeting with the Council Leader on 7/2/23 and a site visit on 19/5/23, the Applicant has advised that work continues to seek a reduction in the closure duration. This has been aided by the contractor beginning to mobilise.</i></p> <p><i>At the site visit it was confirmed that the closure duration will be capped at 10 months through a commitment in the Stakeholder Commitments and Actions Register (SACR). The draft text is as follows, with a full version to be shared at an examination deadline:</i></p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>'The temporary full closure of Ockendon Road shall not exceed 10 months. The full closure covers point 38/D to point 38/C in the Streets Subject to Temporary Restrictions of Use Plans [APP-029], with the reference RNTM58 in the outline Traffic Management Plan for Construction [REP1-175].'</i></p> <p><i>This matter is under discussion pending further negotiations between the Applicant and the London Borough of Havering as opportunities to reduce the impact are explored.</i></p> <p>The Applicant would refer to the answers provided to paragraphs 9.3.2 to 9.3.8, 9.4.3, 9.6.1 to 9.6.3 and 9.8.1 to 9.8.12, below, regarding the business and operational impacts on the Cemetery.</p>
<p>Paragraph 9.3.2 to 9.3.8 Page 116 and 117</p>	<p>Business Implications</p> <p>In terms of business impacts, during the 2021 calendar year, 16% of all burials and 17% of all cremations at SEC came from the east or north-east of Havering. These routes will be severely impacted during construction of the scheme and, as such, will deter clients from using the UC and SEC services. There are a number of facilities in Essex and Thurrock that funeral directors could advise bereaved families to use instead. There is concern that the construction impacts, over such an extended period of time, will mean that the SEC is unable to serve a wide catchment area. A loss of business for the UC and SEC would not only impact on the facility itself, but also other businesses that rely on people visiting. For example, construction work has the potential to impact upon the café business sited at SEC (i.e., if people are running late for funerals they are less likely to have the time to use the café facilities). Staff that run the café have raised the following issues with the Council:</p> <ul style="list-style-type: none"> • Regarding people attending funerals – the extra time it takes to navigate the journey to the crematorium would result in us losing a considerable amount of business. Usually people arrive earlier and they come in prior to the service they are attending. If it takes them longer to travel through a diversion, it's likely that they will not have the time to stop off for a sandwich/tea/cake. • Funeral staff – if they have to take a diversion it will mean the time they have between funerals is much tighter, therefore we may see a decrease in overall business from our funeral director customers. • Visitors to the cemetery/crematorium – Our regular customers would likely be put off if they have to navigate a complicated or long diversion. This would directly impact our weekend trading. LB Havering is concerned that these impacts will lead to 117 reputational damage, with stakeholders choosing to use cemeteries and crematoria in the wider region instead. This will impact on the local economy within Havering. Furthermore, Havering is concerned that it will not be able to meet its obligations under the Local Authorities Cemeteries Order 1977, in particular Schedule 1 Access to Cemeteries.
<p>Applicant's Response</p>	<p>The Applicant refers back to the answers provided to paragraphs 9.2.2 to 9.2.5, above.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Paragraph 9.4.3 Page 119</p>	<p>Potential Loss of Income</p> <p>Given that, as it currently stands, Ockendon Road alone will be closed for the best part of two years, this could lead to a potential loss of up to £1.4 million. This, of course, does not take into account the wider traffic management measures that will be in place within the Upminster area during other parts of the six year construction period (such as along St Mary's Lane), so the potential for lost income and disruption is clearly much greater than that. There will inevitably be a longer-term income issue for the Council with whole families (and local funeral directors) using other facilities and not returning to UC and SEC, resulting in a loss of business for the Council for years to come.</p>
<p>Applicant's Response</p>	<p>Section 10 of the Compulsory Purchase Act 1965 provides persons with an interest in land, but where no land is acquired, to a right to compensation for injurious affection to the claimant's interest caused by the execution of the works. The Council would be able to put forward a claim in due course should it feel that it has the necessary evidence to support it. The Applicant would consider any claims on their individual merits, once received, in line with the compensation code.</p>
<p>Paragraph 9.5.1 to 9.5.6 Page 119</p>	<p>Staff Implications</p> <p>[Table 16 of the LIR has not been reproduced]</p> <p>It is also important to recognise that a number of staff work at the SEC who will also be impacted by the road closure. As the table below shows, 16 out of the 31 staff that work at the Crematorium live east or north-east of the borough and are likely to be impacted by construction works for the scheme. All staff are present in the workplace, with start times from 8am in the morning. It is imperative staff start on time, and the office team need to be ready for reception to open from 9am when calls from funeral directors start coming in, and to also then be ready for the first funerals of the day to take place. Delays to funerals caused by the closure of Ockendon Road would be totally unacceptable to LB Havering. The proposals, therefore, will have an impact on staff commuting and affect their ability to get to work on time, which will undoubtedly lead to negative service impact if it results in any potential delays to services opening on time each day. In addition, it is a legal requirement that a Medical Referee (MR) attends SEC each day in person to scrutinise cremation paperwork. This must happen before a cremation takes place. The MRs are practising GPs in the community and work on a rota basis with one attending each week in turn, in between their surgery appointments. As practising GPs their time is extremely sensitive to disruption, so any traffic delays will have an effect on them also. The worst case scenario would be that an MR gets caught in traffic and cannot get to the SEC in time, meaning a cremation cannot go ahead. Such an incidence occurring would lead to a serious complaint, financial loss/compensation claim and reputational damage. The proposals will also undoubtedly affect deliveries, contractors, stonemasons and the journeys of the bereaved who come to visit the resting place of loved ones across the grounds of UC and SEC.</p>
<p>Applicant's Response</p>	<p>The Applicant would refer to the answers provided to paragraphs 9.2.2 to 9.2.5, 9.3.2 to 9.3.8, 9.4.3, 9.6.1 to 9.6.3 and 9.8.1 to 9.8.12.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Paragraph 9.6.1 to 9.6.3 Page 120</p>	<p>Impact on Wider Stakeholders</p> <p>The Council has been engaging with stakeholders to better understand what the potential impact would be not just for the UC and SEC itself, but also for the businesses that serve the Cemetery. There is a strong view that continual road closures, diversions, extended times needed to get staff and vehicles from “a to b” and the additional mileage costs will put a major strain and costs on local business such as funeral services. If funeral services have longer journeys to/from the UC/SEC, this could result in much shorter time between funerals and this, in turn, would mean fewer funerals being able to take place at the Cemetery. Ultimately, this would lead to a reduced level of income for this Council operated facility. Other nearby facilities, such as Public Houses used for wakes, will also be affected. The Huntsman and Hounds is the nearest pub to the Cemetery and can sometimes hold up to three wakes in a day. The loss of this trade would adversely affect its long term future.</p>
<p>Applicant's Response</p>	<p>The Applicant understands the concerns raised.</p> <p>In its negotiations to date, the Applicant has emphasised that it will continue to work with the Council to seek to develop an agreed understanding of the issue and resolution of the concern raised. This accords with the principles of the oTMPfC [REP1-175]. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p>
<p>Paragraph 9.7.1 and 9.7.2 Page 120</p>	<p>Compensation/Financial Mitigation</p> <p>The Council is extremely concerned that works for the scheme could see a significant loss of revenue as a result of a project being delivered within the Borough by another organisation and through no fault of the Council. The Council therefore considers that it is within its right to seek financial recompense from NH for the injurious effects of any loss of revenue for UC and SEC during the extended construction period.</p>
<p>Applicant's Response</p>	<p>The Applicant would refer to the answers provided to paragraphs 9.4.3 and 9.8.1 to 9.8.12.</p>
<p>Paragraph 9.8.1 to 9.8.12 Page 120 and 121</p>	<p>Discussions with National Highways</p> <p>The Council formally wrote to NH in August 2022 raising concerns as set out above. The Council has formally received a response from NH who have stated that compensation would not be applicable in this instance. The relevant extract from the letter is set out below: “Regarding your concerns about the potential loss of income at the site, whilst we do sympathise with the owners of businesses faced with problems during our construction work, we must ensure the safety of all road users as well as the teams who are working on our project. For certain activities there is no practicable alternative to a road closure. With any road improvements there will be some disruption and inconvenience to those living and working nearby but we will try to minimise this in accordance with the objectives laid out in the oTMPfC [REP1-175]. National Highways has a statutory duty to improve and maintain the strategic road network, and legally businesses have no rights to any maintained level of access to a road network. We have concluded that there would be no compensation payable with respect to the closure of Ockendon Road</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>and its impact on the South Essex Crematorium/Upminster Cemetery. Temporary or permanent changes to traffic flows are a commercial risk that all businesses are likely to face at some point. Compensation is only payable where there has been an interference with a private right of access to an individual site. Even then, compensation for business losses is not payable. However, if a claimant can prove a reduction in the value of the land in such a case, compensation could be claimed for this loss of value.”</p> <p>LB Havering believes that the closure of the Ockendon Road will have an injurious effect on the operation of the Crematorium and the ability of the Council to discharge its statutory functions in respect of providing burial and crematorium services. This injurious effect is not linked to land acquisition through the LTC scheme, rather it arises from the restrictions on access the LTC scheme will generate. The provision of burial and crematorium services by the Council is not a business as suggested by National Highways in para 9.8.3, rather an essential public service that the Council is obligated to make arrangements for. The operation of this service in an effective way requires good stewardship of public funds to allow the Council to demonstrate it has complied with its statutory best value obligations. To that end the decline in use caused by the Ockendon Road is a matter that the Council must seek recompense from National Highways for the injurious effect on the Council and its local taxpayers. The Council requires a planning obligation to deliver recompense for the financial losses incurred due to the LTC scheme construction preventing access to the facility from a significant number of bereaved families and mourners. Whilst LB Havering welcomes the indication from NH that through their appointed contractor they have made progress in reducing the proposed closure length down to ten months, such a closure length would still have a significant impact on the SEC and wider businesses in the area. All staff are present in the workplace, with start times from 8am in the morning. It is imperative staff start on time, and the office team need to be ready for reception to open from 9am when calls from funeral director's start coming in, and to also then be ready for the first funerals of the day to take place. Delays to funerals caused by the closure of Ockendon Road would be totally unacceptable to LB Havering. The proposals, therefore, will have an impact on staff commuting and affect their ability to get to work on time, which will undoubtedly lead to negative service impact if it results in any potential delays to services opening on time each day. In addition, it is a legal requirement that a Medical Referee (MR) attends SEC each day in person to scrutinise cremation paperwork. This must happen before a cremation takes place. The MRs are practising GPs in the community and work on a rota basis with one attending each week in turn, in between their surgery appointments. As practising GPs their time is extremely sensitive to disruption, so any traffic delays will have an effect on them also. The worst case scenario would be that an MR gets caught in traffic and cannot get to the SEC in time, meaning a cremation cannot go ahead. Such an incidence occurring would lead to a serious complaint, financial loss/compensation claim and reputational damage. The proposals will also undoubtedly affect deliveries, contractors, stonemasons and the journeys of the bereaved who come to visit the resting place of loved ones across the grounds of UC and SEC.</p>
<p>Applicant's Response</p>	<p>The Applicant would refer back to its answer to paragraph 9.4.3, above. Section 10 of the Compulsory Purchase Act 1965 provides persons with an interest in land, but where no land is acquired, to a right to compensation for injurious affection to the</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	claimant's interest caused by the execution of the works. Any potential claim would be considered by the Applicant on its own merits in due course.
<p>Paragraph 9.8.14 to 9.8.16 Page 121 and 122</p>	<p>Impact on Wider Stakeholders</p> <p>The Council has been engaging with stakeholders to better understand what the potential impact would be not just for the UC and SEC itself, but also for the businesses that serve the Cemetery. There is a strong view that continual road closures, diversions, extended times needed to get staff and vehicles from “a to b” and the additional mileage costs will put a major strain and costs on local business such as funeral services. If funeral services have longer journeys to/from the UC/SEC, this could result in much shorter time between funerals and this, in turn, would mean fewer funerals being able to take 122 place at the Cemetery. Ultimately, this would lead to a reduced level of income for this Council operated facility. Other nearby facilities, such as Public Houses used for wakes, will also be affected. The Huntsman and Hounds is the nearest pub to the Cemetery and can sometimes hold up to three wakes in a day. The loss of this trade would adversely affect its long term future.</p>
<p>Applicant's Response</p>	<p>The Applicant refers to the answers provided to paragraphs 9.2.2 to 9.2.5, 9.3.2 to 9.3.8, 9.4.3, 9.6.1 to 9.6.3 and 9.8.1 to 9.8.12, above.</p>
<p>Paragraph 9.9.1 and 9.9.2 Page 122</p>	<p>Compensation/Financial Mitigation</p> <p>The Council is extremely concerned that works for the scheme could see a significant loss of revenue as a result of a project being delivered within the Borough by another organisation and through no fault of the Council. The Council therefore considers that it is within its right to seek financial recompense from NH for the injurious effects of any loss of revenue for UC and SEC during the extended construction period.</p>
<p>Applicant's Response</p>	<p>The Applicant would refer to the answers provided to paragraphs 9.2.2 to 9.2.5, 9.3.2 to 9.3.8, 9.4.3, 9.6.1 to 9.6.3 and 9.8.1 to 9.8.12, above.</p>
<p>Paragraph 9.10.1 to 9.10.4 Page 122</p>	<p>Discussions with National Highways</p> <p>The Council formally wrote to NH in August 2022 raising concerns as set out above. The Council has formally received a response from NH who have stated that compensation would not be applicable in this instance. The relevant extract from the letter is set out below: Regarding your concerns about the potential loss of income at the site, whilst we do sympathise with the owners of businesses faced with problems during our construction work, we must ensure the safety of all road users as well as the teams who are working on our project. For certain activities there is no practicable alternative to a road closure. With any road improvements there will be some disruption and inconvenience to those living and working nearby but we will try to minimise this in accordance with the objectives laid out in the oTMPfC . National Highways has a statutory duty to improve and maintain the strategic road network, and legally businesses have no rights to any maintained level of access to a road network. We have concluded that there would be no compensation payable with respect to the closure of Ockendon Road and its impact</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>on the South Essex Crematorium/Upminster Cemetery. Temporary or permanent changes to traffic flows are a commercial risk that all businesses are likely to face at some point. Compensation is only payable where there has been an interference with a private right of access to an individual site. Even then, compensation for business losses is not payable. However, if a claimant can prove a reduction in the value of the land in such a case, compensation could be claimed for this loss of value. Whilst LB Havering welcomes the indication from NH that through their appointed contractor they have made progress in reducing the proposed closure length down to ten months, such a closure length would still have a significant impact on the SEC and wider businesses in the area.</p>
<p>Applicant's Response</p>	<p>The Applicant would refer to the answers provided to paragraphs 9.2.2 to 9.2.5, 9.3.2 to 9.3.8, 9.4.3, 9.6.1 to 9.6.3 and 9.8.1 to 9.8.12, above.</p>
<p>Paragraph 10.1.2 to 10.1.6 Page 122 to 124</p>	<p>10 Non-Motorised Users Public Rights of Way (ProW)</p> <p>LB Havering is aware that several of its ProW are affected during the construction of the proposed scheme. These affected routes are cited in document 7.9 Transport Assessment Appendix A – Public Rights of Way and included in Appendix 4. Document 7.10 Health and Equalities Impact Assessment also recognises the construction and operational impacts that the proposed scheme will have on walkers, cyclists and horse riders. The latter states: “Severance relates to the extent to which the Project separates residents from the facilities and services they use within their community because of either changes in routes used or changes in traffic flows. Severance during the construction phase may arise because of road closures, Public Rights of Way (ProW) closures or diversions or use of roads as haul routes. During operation, severance may arise from changes in vehicle flows and speeds”. (page 30). Negative impacts are acknowledged for residents in North Ockendon and yet no mitigation is proposed to overcome these impacts. The national significance and need of the proposed scheme is considered to outweigh these impacts and therefore the need for mitigation. Havering does not agree with this approach and that no mitigation should be provided. Another point of concern is the timing of the closures and the proposed opening of diversions which in most cases is some 12 months after closure. Havering would seek to have in place diversions prior to the temporary closures of these facilities to ensure continuity of facilities during construction. LB Havering has expressed its concern regarding the proposed use of Folkes Lane for Walkers, Cyclists and Horse riders (WCH). Folkes Lane is not appropriate for these users due to its narrow lanes, inappropriate speeds and industrial uses that are situated along this lane as can be seen in Figure 25. [Figure 25 of the LIR has not been reproduced]</p> <p>The Council has been in discussions with NH regarding the provision of an alternative route which would lead users up to Folkes Lane car park. NH is investigating potential routes which can be developed through its Designated Funds Programme. Havering believe that the alternative route should be provided as mitigation for the scheme, not be left to the provision of Designated Funds as there is no surety that such funding would be available post 2025. In addition, Havering also has concerns about the</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>suitability of Moor Lane to be used as an NMU route on the approach to the proposed A127 footbridge from the south. This route needs to be upgraded with surfacing improved given it is likely to be used by a significant larger number of NMUs once the footbridge is in place.</p>
<p>Applicant's Response</p>	<p>With regards to PRow diversions and their impacts, this matter is addressed by SoCG [REP1-105] item 2.1.73, as follows: <i>The Applicant provided listings of these impacts with accompanying maps on 8/8/22. This matter is under discussion pending a technical meeting between the Applicant and London Borough of Havering to review the Council's response to the listed impacts.</i></p> <p>The Applicant will continue to discuss this issue and will continue to work with the Council to seek to develop an agreed understanding of the issue and resolution of the concern raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p> <p>With regards to Folkes Lane and Moor Lane, this matter is being addressed through the SoCG [REP1-105] item 2.1.70 which describes how additional provision for WCH is currently being investigated through designated funding for onward connections to the wider WCH network:</p> <p><i>It is noted that improvements to Moor Lane and Folkes Lane may be needed to upgrade existing WCH provision. However, although improvements may be achievable on Moor Lane, this may not necessarily be the case for Folkes Lane, due to factors including the narrow road and overlapping properties. The Applicant is currently investigating the opportunity to include these as part of designated funding whereby a feasibility study would be needed to assess potential improvements to these existing WCH routes, for implementation prior to the Project opening. The study is currently underway and a workshop was held with the Council on 8/3/23 to take feedback on the initial proposals, including an off-road WCH route parallel to Folkes Lane. A further meeting will be held to demonstrate progress.</i></p> <p>The assessment of traffic-related severance is presented in Section 7.3 of the Health and Equalities Impact Assessment [APP-539] for both construction and operational phases of the Project. No specific locations have been identified within London Borough of Havering where additional mitigation is considered necessary. Section 7.5 relates specifically to active travel and the PRow that would be affected during construction and operation phases. Key points to note in paragraph 7.5.17 include that the impact on footpaths (including roadside footways), cycleways and bridleway links along the route of the Project has been reduced, in so far as reasonably practicable, through the design process; and that the general approach to mitigation includes constructing new PRows before closing any existing PRows, where reasonably practicable.</p>
<p>Paragraph 10.1.8 to 10.1.11 Page 125</p>	<p>Access to Hole Farm from Folkes Lane Woodland</p> <p>The scheme currently proposed means that residents accessing the new woodland area being delivered at Hole Farm in the borough of Brentwood will be able to access this site from an existing footbridge that goes over the M25 at Folkes Lane Woodland. The location of this new trip attractor at Hole Farm is anticipated to generate a significant increase in use of the</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>footbridge over the M25 as it will be the main source of accessing Hole Farms for residents of Havering. The current condition of both the parapets and the surfacing are not acceptable as can be seen in the photographs submitted by the council [photos from the LIR have not been reproduced]. The Council is seeking suitable mitigation for this footbridge to enable safe access of NMUs and this is detailed further in chapter 12 of this LIR.</p>
<p>Applicant's Response</p>	<p>The Applicant continues to work with the Council to develop a solution to this concern regarding the existing footbridge over the M25 linking Folkes Lane woodland and Hole Farm. The Applicant will report progress on these discussions through the SoCG at the relevant examination deadlines.</p>
<p>Paragraph 10.1.13 to 10.1.15 Page 125 and 126</p>	<p>Footpath 252 and ongoing maintenance</p> <p>Havering is concerned that this approach to lack of mitigation is proposed for the 60-month closure of FP252. Temporary closures of a shorter nature of less than one month with no mitigation is also proposed for FP 254 and FP 151. Havering urges the applicant to put in place processes to consult non-motorised users, specifically on these proposals. NH have indicated to the Council that the section of footpath 252 that goes over the Essex Thameside line would come under Havering's responsibility once in place. It is also stated in Article 10 of the draft DCO. Whilst it can be considered reasonable for the Local Highway Authority to maintain the footpath surface itself, maintenance of the bridge structure, is considered unreasonable. At a time when local authority maintenance budgets are under severe pressure, the Council does not consider maintenance of the structure acceptable. The structure over the railway would be built for NH's convenience and, as such, the Council believes it should be maintained by NH.</p>
<p>Applicant's Response</p>	<p>The Applicant would refer back to the answers provided to paragraphs 10.1.2 to 10.1.6, above.</p> <p>The Applicant will continue to discuss this issue and will continue to work with the Council to seek to develop an agreed understanding of the issue and resolution of the concern raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p> <p>In relation to LBH's comments on Article 10, the Applicant considers it appropriate that the maintenance of roads which will form part of the local road network is a function which is proposed to be discharged by the local highway authority. The maintenance of both local highways and the strategic road network is funded by the DfT. Local highway funding is mainly based on a formula linked to the total mileage of A roads, B and C roads, and unclassified roads in each area, together with the numbers of bridges, lighting columns, cycleways and footways. This funding is refreshed every few years to take account of changes in road length and number of highway structures. Accordingly, as local highway works are carried out under the DCO, the amount of funding that each local highway authority receives will be amended to recognise these additional responsibilities. Given that this process already exists, it is not appropriate to require the Applicant to provide funding for the maintenance of parts of the local network out of the money given to it to maintain the strategic road network. The Applicant notes that it is making a significant and substantial capital contribution to the delivery of these assets, and in light of the existing funding arrangements, it is not</p>

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	<p>appropriate for the Applicant to have an ongoing and indeterminate responsibility. The Applicant notes that this position has been endorsed, with limited and rare exceptions, on a number of transport DCOs (see, for example, article 14 of the M42 Junction 6 Development Consent Order 2020, article 12 of the A428 Black Cat to Caxton Gibbet Development Consent Order 2022 and article 9 of the A303 (Amesbury to Berwick Down) Development Consent Order 2023).</p>
<p>Paragraph 10.1.17 and 10.1.18 Page 126</p>	<p>Public Transport Users</p> <p>As has already been stated in the Borough Context section of this Local Impact Report, Havering enjoys extensive bus connectivity. This includes some services that provide connectivity further east to beyond the GLA Boundary. Bus route 370 operates between Romford and Lakeside shopping centre in Essex. The proposed 19 month closure of Ockendon Road will severely impact on the operation of this service and will require a substantial diversion route. It is imperative that National Highways work with TfL Buses and the respective bus operators to agree on a suitable diversion route months in advance to minimise the impact for passengers. Such a diversion route should be publicised a number of weeks prior to the closure taking place so that passengers are adequately informed. In addition, St Mary's Lane is served by a dedicated school bus service (route 646) which operates during the school pick up and drop off times. The Council welcomes the LTC St Mary's Lane Working Group that has been established to discuss how construction works in the vicinity of schools can be mitigated and monitored and this should include school bus services.</p>
<p>Applicant's Response</p>	<p>In relation to traffic impact mitigation (including reduction of the Ockendon Road closure) and stakeholder engagement, which extends to bus operators, the Applicant would refer to its answer to paragraphs 6.4.7 to 6.4.10 and 7.2.4 to 7.2.11. The Traffic Management Forum would be the appropriate mechanism by which the practicalities of bus route diversion planning and publicity would be managed with bus operators and local highway authorities. This is secured through the oTMPfC [REP1-175]. The other comments are noted and the Applicant welcomes the Council's ongoing support for the Schools Working Group.</p>
<p>Paragraph 11.1.4 and 11.1.7 to 11.1.10 Page 126 and 127</p>	<p>11 Local Resident Discount</p> <p>NH propose that the charging regime is consistent with other crossings in the area. This is something that Havering supports, to avoid traffic reassignment towards cheaper tolling regimes elsewhere. It should be pointed out, however, that this is not a matter which is controlled by NH alone, as TfL operate crossings further to the west. As yet, no agreement has been reached between TfL and NH on a consistent charging regime. LB Havering has consistently argued for residents of Havering to be eligible for the Local Resident Discount Scheme (LRDS) as it will be a host authority for the project. There are no proper grounds for distinguishing between Havering, and Thurrock and Gravesham. Each of these three authorities 'hosts' parts of this project. Each of these three authorities is impacted in materially similar ways. Havering residents are in close proximity to the scheme and suffer significant impacts from the schemes construction without significant benefits of mitigation of legacy. A resident's discount would offer residents a legacy benefit which would offset the significant disruption during construction. Havering is already concerned about the impending extension of the Ultra-Low Emission Zone (ULEZ), which will cover the whole of the</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>borough from 29th August 2023. For some businesses, having to pay a daily charge of £12.50, in addition, to a further Road User Charging cost for using the LTC will prove to be too much. Providing the LRDS to Havering residents will not offset the adverse impacts of the project. However, this will go some way to demonstrate that impacts (both construction and operational) on Havering's residents have been considered, that Havering is being treated fairly alongside other local authorities, and that the wellbeing of our local communities has been – and will be – taken properly into account. There is no sensible argument as to why Havering's residents and businesses should not benefit from the LRDS given the small proportion of trips to and from Havering that is forecast to use the crossing. It should be recognised that Havering is a host local authority for this scheme just like Thurrock and Gravesham and the Council considers this a matter of equity.</p>
<p>Applicant's Response</p>	<p>As set out in the Road User Charging Statement [APP-517]:</p> <p><i>2.1.1 The DCO would permit the Secretary of State to impose road user charges at the Tunnel Area that are equal to the charges that apply at the Dartford Crossing from the date at which the Project opens for traffic.</i></p> <p>Hence the charging regime at Lower Thames Crossing will be consistent with that at Dartford.</p> <p>The Applicant notes that Silvertown Tunnel is a Public Private Partnership scheme with different financing arrangements, objectives and governance which is why different charging arrangements may be necessary.</p> <p>The statement further says:</p> <p><i>2.2.5 The DCO would allow the Secretary of State to enter into the same discount arrangement, at the same rates as offered to Dartford and Thurrock residents on the Dart Charge, with residents who pay their council tax to Gravesham Borough Council or Thurrock Council. This aligns with the Dartford Crossing LRDS [Local Residents' Discount Scheme] by limiting eligibility to residents of local authorities in which the tunnel portals would be situated.</i></p> <p>Any extension of the LRDS is a matter for the Secretary of State and not the Applicant. LRDS is not available to a vehicle registered to a company.</p> <p>Without prejudice to any decision by the Secretary of State on the grant of development consent, the DfT has reviewed details of the proposed road user charging regime for the Project and confirmed, in a letter to the Applicant on 8 November 2022, that they are in line with government policy.</p>
<p>Paragraph 12.1.5 to 12.1.9 Page 128</p>	<p>12 Management Plans General Comments</p> <p>As a general comment, the documents lack consistency between each other and lack firm commitments managing the impact of the scheme. Targets are not explicitly set and much relies on the trickle-down effect of requiring lower tier plans and activities to comply with the higher tier document. Whilst in principle this approach based on conformity is sound, the higher tier documents offer no clarity on the mechanisms that would compel compliance.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>The overarching Code of Construction Practice (CoCP) has not been reviewed in detail, but it clearly commits to SMART travel plan targets (specific, measurable, assignable, realistic and time-related targets) which fails to follow through down the document hierarchy. The oTMPfC and the FCTP operate in parallel but isolated structures. An overarching Traffic Manager and overarching Travel Plan Coordinator will be appointed with the only formal link between these and their supporting organisations and processes at the Joint Operations Forum of senior managers (the JOF). At a practical level this is not a workable structure; decisions taken on either area will affect the other with potential adverse consequences.</p> <p>The oTMPfC and the FCTP provide no certainty that NH alone will be responsible for submissions to the SoS for the discharge of requirements. Requirements are the formal mechanism by which the detail of the implementation of the DCO is controlled. The draft DCO similarly fails to require the Undertaker alone to make such submissions. This has potential for the lines of accountability for traffic issues to become unclear which may be a significant issue as and if problems emerge. The FCTP offers only objectives not commitments and targets. The only targets seen are generic targets for single occupancy car trips to sites. These are based on the size of the work site or compound and not the locations specific characteristics; nor is this guaranteed as being a feature of the lower-level plans. This is a fundamental flaw which, in turn, will affect the required trickle-down effect to lower tier plans. The oTMPfC lacks control over the Utility related work sites; the wording is such that only control over NH's contractors is proposed, however this does not appear to include other contractors in the chain such as utility contractors. As the scheme is a single entity this approach is flawed.</p>
<p>Applicant's Response</p>	<p>The Control Documents are a suite of documents that sit within the Control Plan and would be secured by the DCO. The documents are intended to provide a framework and set out processes that the Contractors would follow whilst recognising and maintaining a degree of flexibility.</p> <p>The Framework Construction Travel Plan (FCTP) [APP-546] sets out at Section 7.1 that targets within the Site Specific Travel Plans would be SMART.</p> <p>As is noted by the Council, a Traffic Manager and Travel Plan Manager would be appointed. The Applicant envisages that informal communication would occur between those on the TMF and Travel Plan Liaison Group (TPLG), in particular the Traffic Manager and Travel Plan Manager. In addition, a formal route is established through the Joint Operations Forum (JOF).</p> <p>National Highways, as the Applicant would be responsible for all submissions to the SoS for discharge. The control documents are clear that the Applicant would be employing contractors to deliver the construction of the Project and as such they would have a role in preparing the submission material.</p> <p>The overarching aims and objectives of the FCTP are secured as commitments to be delivered by the Project. The FCTP sets out that, given the uncertainties, setting specific mode share targets at a Project-wide level is difficult especially prior to undertaking initial baseline travel surveys (which will provide real-world data from the Project's workforce). Therefore, we cannot currently produce this level of detail at this stage of project development. Project-wide targets would also be related to site-</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>specific targets, which have not yet been prepared. The FCTP, however, sets out a framework and overarching principles for the future Site Specific Travel Plans (SSTPs). This approach would provide the flexibility required to respond to and adapt to changing conditions over the duration of the Project. As set out in the FCTP, all targets will be developed and included within the SSTPs in consultation with the relevant highway and local planning authorities. No part of the authorised development is to commence until a SSTP for the construction of that part, which is substantially in accordance with the FCTP, has been submitted to and approved in writing by the Secretary of State.</p> <p>The Applicant would be ultimately responsible for all works delivered under the DCO, including work undertaken by statutory undertakers.</p> <p>In relation to the Council's concerns regarding lack of control mechanisms for utility works, the active participants in the TMF include the utility companies responsible for delivering relevant aspects of the Project and the local highway authorities. With several contractors involved in the Project's execution, the Traffic Manager's role within the TMF framework ensures a robust and integrated approach to managing temporary traffic measures. Moreover, the Traffic Manager acts as a single point of contact and adopts an integrated approach to address the specific traffic management requirements of each contractor involved in the works. More detailed information on the Traffic Manager's role can be found in paragraphs 3.3.14–3.3.19 of the oTMPfC [REP1-175].</p>
<p>Paragraph 12.1.11 to 12.1.32 Page 128 to 130</p>	<p>Outline Traffic Management Plan for Construction Comments</p> <p>Section 2.3.4 is unclear what party will be responsible for submissions to seek approval of the SoS for the oTMPfC. The potential for this to be the contractor is unacceptable. The establishment of a Traffic Management Forum (the TMF) fails to provide any surety as to the outcomes it may secure, as the decision-making powers and remit are not set out. What has been proposed is, in effect, a discussion body that will have limited, if any, decision-making powers. The oTMPfC fails to make clear how the Requirements in terms of traffic and transport will be enforced against the various utility contractors on the project. As these are not directly in the main NH supply chain this issue will need to be addressed in the final DCO.</p> <p>Section 2.4.11 lists a number of proposed monitoring criteria but without reference to the London HGV standard. A series of monitoring sites are recorded in section 2.4.18. The lack of coverage in Havering is stark with only two sites monitoring traffic flows in the borough. The proposals do not consider how the effect of the temporary M25 slip roads will be assessed. Also given its strategic importance to construction traffic, no assessment of the Ockendon Road / A127 junction is a significant oversight. It is also noted that no monitoring locations west of the M25 are proposed in the south of the borough. The OTMPfC makes no reference to the impact that construction of the LTC will have on access to school of pupils who attend schools in Havering. School pupils are entitled to statutory free school transport if they live more than 2 miles (under 8 years old) and 3 miles away if over 8 years old. Should the closures of local roads in Havering for construction trigger this statutory requirement due to increased travel distances for lengthy periods of time LB Havering will seek mitigation through the OTMPfC. As pupil home</p>

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	<p>addresses and numbers will change through the construction programme the clear need is for monitoring on an annual basis through the OTMPfC to confirm if the statutory travel distances are exceeded due to the LTC works and if the mitigation to supply free school travel is required. The burden of providing or funding such transport should fall on the LTC scheme. The suggestion at section 2.4.20 that localised junction modelling for construction traffic will be contemplated is to be welcomed. However, there is no clear view as to how and why junctions would be selected, who would be responsible for these exercises and how the local highway authority would be engaged. Section 2.4.21 introduces for the first time the role of the scheme Traffic Manager. Please see the comments above about the structure of the Traffic Manager role and the alignment of the role with the FCTP and the JOF / TMF. The stakeholders listed in Table 2.3 has no formal reference to frontages. A clear omission is the need to record safety of accesses as a key issue for stakeholders, in particular frontages.</p> <p>Deemed consent for approvals is considered in sections 3.1.4 and 5. As this negates the role of the local highway and planning authorities the basic concept is unacceptable.</p> <p>Section 3.2.2 introduces the concept of Local Operating Agreements (LOA). Whilst this follows the recommended DMRB approach for major projects the agreement will not be examined. Havering expects that the content of the LOA be subject to protective provisions in the draft DCO.I</p> <p>The concept of a comms and engagement plan is introduced at section 3.3.4. This only has NH’s approvals, whereas in reality the wide range of communications required to reach out to a full spectrum of stakeholders should require the plan to have local authority input and agreement. The Communications Plan also establishes community liaison groups, but these are undefined in terms of structure, resourcing and remit. It appears that NH select who is appointed which is wholly inappropriate (section 3.3.7). Section 3.3.10 promotes the involvement of “community leaders”. These are undefined and the lack of clarity suggests that their involvement is simply a token gesture.</p> <p>The Traffic Manager reports directly to the JOF, which is an executive level forum made up of NH and its Contractors (section 3.3.14), without any requirement to formally report or consider the views of the proposed TMF. Given the importance of the JOF in decision making this is a case of ‘marking one’s own homework’. It is suggested that the Traffic Manager should be under an obligation to report dissenting views to the JOF and that the JOF records how these are dealt with.</p> <p>The plan in plate 4.4 doesn’t highlight the M25 slip roads although these are implicit in the routes detailed. As this is fundamental to the delivery of effective construction traffic routing in Havering, it deserves greater prominence.</p> <p>The committed routes set out are confirmed in 4.2.6 as being “committed” for HGVs only with cars and staff transport being able to take any route. Given the anticipated volumes of non-HGV traffic, there is a strong case for routing control of all construction vehicles using public roads.</p>

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	<p>The building of the M25 temporary slip roads are listed as being a 12-24 month activity (Table 4.1). This uncertainty remains unacceptable given the adverse traffic implications for Havering. The early contractor appointment should allow this time to be become more certain and potentially shortened.</p> <p>The B186 will have localised traffic control for 12 months with no details specified. St Marys Lane will have traffic control over a 2km length in 300m sections for 9 months. The OTMPfC offers 'local control of Local Road Network (LRN) junctions'. It is unclear how this will be achieved, how it will be controlled and how the junctions to be controlled will be determined. Given the issues that this uncertainty creates this is unacceptable.</p> <p>Table 4.47 indicates where HGV bans are to be located. This does not include roads in Havering that would require protection. The list of schemes in 5.2.2 that overlap with LTC needs to be updated to reflect the announced 2-year delay to the LTC scheme. It is noted that speed management at roadworks is only 'to be under consideration' (section 5.6.1). This would appear to be a basic pre-requisite for safe operation of roadworks, including on the Local Road Network. The oTMPfC sets out criteria for emergency diversions (section 5.9.3) which fails to ensure the capability of roads would be the key determinant of emergency diversion routes</p>
<p>Applicant's Response</p>	<p>Regarding the management of construction impacts on schools and school transport, the Applicant would refer back to the answers provided to paragraphs 8.1.1 to 8.1.11, above.</p> <p>Regarding the structure of the JOF/TMF and alignment with Traffic Manager role, the Applicant would refer back to the answers provided to paragraphs 12.1.11 to 12.1.32, above.</p> <p>The matter of deemed consent is addressed by SoCG [REP1-105] item 2.1.2 as follows:</p> <p><i>The Applicant considers the deemed consent provisions to be reasonable and necessary, having regard to the significance of this Project and the far-reaching consequences a failure to reach a decision in an expeditious manner could have on its delivery. The Applicant has proposed a reasonable period of time for the Council to determine such requests for approval, given the Council will have had time during the consultation and examination to better understand the particular impacts and proposals forming part of the DCO (in comparison to any usual approval unrelated to a DCO). The deemed consent provisions only take effect in relation to a failure to reach a decision, rather than a failure to give consent. If the Council consider insufficient time or information had been provided, it could refuse the relevant application. There is nothing in the draft DCO which would prevent the Council from refusing an application in this case. In circumstances where the Council does not consider it has received appropriate information, or it requires more than 28 days, there is no provision in the draft DCO which prevents the refusal of an application. Following such a refusal, the Applicant would determine whether it would utilise the appeal process (endorsed by the Council) or re-submit an application.</i></p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>The Applicant notes the comments made by the Council concerning Local Operating Agreements in its LIR and will provide a response along with the Applicant's comments on the Council's Deadline 1 Submission – Applicant's amended dDCO [REP1-251].</p> <p>With respect to the Council's concerns about monitoring location, the oTMPfC [REP1-175] secures a comprehensive framework for implementing a monitoring system as an integral part of the overall TMP. This system aims to effectively capture and report essential data concerning various construction activities and adapting monitoring requirements as construction works progress. Throughout the construction period, active engagement with the relevant highways authorities, including London Borough of Havering will be maintained through the Traffic Management Forum to oversee the management of the monitoring system and collaboratively determine appropriate monitoring locations. Plate 2.4 of the oTMPfC sets out monitoring locations as a start point for further development between the Contractors and local highways authority to represent suitable locations for monitoring the road network in relation to the construction works. The Applicant welcomes further engagement, should London Borough of Havering wish to identify and determine appropriate monitoring locations in their region.</p> <p>The Applicant has engaged with Transport for London (TfL) in regards to compliance of relevant standards of HGVs operating within Greater London. Further detail on this matter is included in the Statement of Common Ground between (1) National Highways and (2) Transport for London, submitted at Deadline 1 [REP1-108].</p> <p>With respect to the Council's concerns about safety of stakeholder access, Table 2.3 of the oTMPfC categorises residents as stakeholders, and the TMP outlines the minimum requirement of maintaining access and egress throughout the construction period, except for necessary night-time and weekend closures for specific planned works. Key to this will be the communication with residents, whereby the Applicant has committed to continuous engagement, particularly with impacted residents. Section 5 of the Code of Construction Practice [REP1-157], provides a comprehensive approach to inform stakeholders about the works and foster positive relationships with other parties.</p> <p>With respect to the Council's concerns about the communications plan and how its outputs including community liaison groups are structured and managed with local authority involvement, paragraph 5.2.2 of the CoCP [REP1-157] sets out the requirement for the Contractors to submit their Engagement and Communications Plan (ECP) to National Highways for acceptance, following engagement with the local planning authorities about priority communities, timing, frequency content and channels of communication. The ECP will be provided to the relevant local authority before the authorised development is commenced. Experienced community relations personnel/community liaison officers will implement the plan, provide appropriate information and provide support to the Contractors to resolve community issues.</p> <p>Table 4.1 of the CoCP [REP1-157] and paragraph 3.3.14 of the oTMPfC [REP1-175] set out the role of the Traffic Manager including the requirement to represent the TMF at the JOF which is an executive level forum made up of National Highways and its Contractors. The Traffic Manager will report to the JOF on traffic management performance and to escalate issues of concern raised by stakeholders</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>Although not highlighted in Plate 4.4, Table 4.1 of the oTMPfC establishes the use of the temporary access from the M25 for a number of compounds and ULHs.</p> <p>To establish and finalise a specific access route for the workforce to reach the compound, it is crucial to recognise the existence of several unknown factors and considerations at present. These include the specific locations that construction workers would commute from and to daily, as well as details about individual members of the workforce. Consequently, the access routes for the workforce are not finalised yet but will be developed as part of the SSTP, allowing for a tailored approach to address potential travel impacts in the most efficient manner.</p> <p>The FCTP [APP-546] sets out that SSTPs (for each compound or Utility Logistics Hub (ULH) or groups of compounds or ULH where they are closely located with similar levels of accessibility) will be produced and these would reflect the local environs at the time of production. The FCTP also sets out details of the TPLG, which LBH would be invited to, and this would offer an opportunity to raise such matters at the time.</p> <p>Regarding the delivery timescale for the M25 access roads, the Applicant refers to the answers provided to paragraphs 7.2.4 to 7.2.11, above.</p> <p>Details of site specific temporary traffic management (TTM) arrangements will be developed through the TMP, which Havering will be consulted on, as set out in the oTMPfC [REP1-175]. This will include the control of junctions within the TTM. Any junctions outside of TTM will remain under the control of Havering. The Traffic Management Forum will allow for the review of TTM performance and when required, consideration of changes to the TTM. This is set out in oTMPfC [REP1-175] paragraphs 2.4.7 to 2.4.10.</p> <p>The roads referenced in Table 4.4 were identified after conversations with the local highway authorities where they raised concerns about the suitability of local roads should they be subject to non-approved construction HGV movements. Although the Applicant discussed the draft oTMPfC on a number of occasions Havering did not raise any concerns regarding its own local highway network. The Applicant would be happy to have further conversations with Havering to explore these concerns.</p> <p>Table 5.1 is a reflection of adjacent projects known at the time of developing the oTMPfC. The Applicant acknowledges that by the time construction starts it is likely the list of adjacent projects would have changed. During construction the Contractors would review any active projects that interface with the Project when developing the TMP.</p> <p>As stated in paragraph 5.5.5 of the Interrelationship with other Nationally Significant Infrastructure Projects and Major Development Schemes [APP-550]:</p> <p><i>'Where construction activities for the Project are likely to proceed at the same time as the construction of other projects in proximity to it, Contractors will manage this in a coordinated way, maximising opportunities to reduce the overall impact on communities and the environment. A Traffic Management Forum (TMF) would be set up by National Highways to support integration with other projects on construction traffic and logistics matters. A National Highways</i></p>

LIR Reference	Local Impact Report Extract / Applicant’s Response
	<p><i>Traffic Manager would also be appointed for the entire Project network (i.e. logistic routes and routes requiring temporary traffic management). Their role would include oversight of and coordination with third-party project construction activities to minimise the impacts on the public and stakeholders.’</i></p> <p>Details of any speed management requirements would be developed as part of the TMP. The performance of any such provisions will be discussed at the TMF.</p> <p>Section 5.9.1 of the oTMPfC [REP1-175] sets out the requirement for emergency diversion routes for the LRN to be discussed at the TMF. The parameters referred to in paragraph 5.9.3 are not inclusive however, the requirement to test a route in paragraph 5.9.1 would establish its suitability</p>
<p>Paragraph 12.1.34 to 12.1.44 Page 130 and 131</p>	<p>Framework Construction Travel Plan Comments</p> <p>The FCTP is designed to set out a framework with regard to the implementation of travel planning for the movement of personnel to and from the construction worksites and compounds during the construction phase of the LTC. The FCTP needs to accurately record all the transport authorities involved; Section 2.4.1 doesn’t consider TfL for example. The logic displayed in Section 3.1.4 is flawed; the idea that on site car parking supply can be extended to cater for any recorded car parking demand is an example of ‘predict and provide’. The contractors need to be required to manage their traffic impacts not offer a carte blanche of unfettered parking. Section 3.1.4 provides a list of potential interventions to manage construction traffic created by movement of employees. Included in the list is the proposal to have “works shuttle buses” linking to local rail stations.</p> <p>The draft DCO provides no authority for these vehicles to enter these stations, which are third party property rather than a public highway. The FCTP has no review of the physical characteristics of these stations to guarantee that access could be feasible. The line of accountability for the scheme wide Travel Plan Coordinator is unclear (Section 3.1.6). There is a generic diagram that indicates the scheme Travel Plan Coordinator reports to the JOF in a parallel process to the scheme Traffic Manager. In plate 4.1 the Travel Plan Liaison Group (TPLG) is separate from the equivalent Traffic Management group. This will lead, as noted previously, to disjointed thinking on site access, traffic management and use of the most appropriate travel solutions.</p> <p>The Travel Plan proposes ‘minimum requirements in Section 3.2.4. Whilst noting that a minimum level of Travel Plan activity is a useful backstop in terms of contractual matters, this is a further sign of the FCTP’s limited ambition to manage travel demand. It is not clear if the minimum requirements are to be construed as a target. Section 3.2 has a commitment to ensure lower tier travel plans are produced. Whilst the commitment is noted, the FCTP fails to deal with the question of lines of approval and accountability. With current wording the FCTP provides a canvass of objectives but not detailed commitments to manage staff and site travel. The wording of section 3.2.9 introduces a degree of flexibility that makes the FCTP worthless. Some headline worker statistics for the various compounds in Havering are recorded:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<ul style="list-style-type: none"> • M25 compound: 300 workers, 70% single occupancy car trips, 210 trips in peak hour – mostly to/from Romford, Ilford and Thurrock. • Ockendon Road: 57 workers 80% single occupancy car trips, 46 peak hour trips – mostly to/from Thurrock and Southend • Folkes Lane Utility Hub – no numbers provided but from trips manly to/from Brentwood and Romford areas. • The FCTP makes little comment on inter-compound movements (section 5.4.24). This is a significant weakness seen in other projects (e.g. HS2), where use of the emerging scheme formation was assumed to cater for inter-site movements, but actual access to the formation was not ring-fenced leading to adverse effects on local roads. The FCTP highlights a number of potential measures to reduce unsustainable travel. Commentary on these includes: • Car parking to meet demand (ideally reducing over time) is a flawed premise. Seeking to reduce car parking over time will not have the desired effect as travel habits will be ingrained before reductions may occur. • Minibus shuttles are committed zero emission but also subject to a no idling policy. This suggests a cut and paste of measures from other Travel Plans. • Personalised Travel Planning for construction employees is proposed but with no clarity as to how, where and when this will be delivered. • Section 9.1.1 introduces the concept of multiple Travel Plan Coordinators. How these will report to the scheme-wide Travel Plan Coordinator and how accountability will follow is not specified. • Table 9.1 gives no clear approval mechanism for the measures proposed. <p>The basis of the FCTP in terms of guidance is set out in Appendix A. A3.6 replicates the current DfT guidance that gives all modes equal consideration i.e. offers no priority to sustainable travel choices.</p>
<p>Applicant's Response</p>	<p>The Applicant notes the comments from the Council with regards to the FCTP [APP-546] and has responded to these below. The FCTP has been developed through stakeholder feedback; including from the Council, with many of their comments incorporated into the submission version of the document.</p> <p>Table 2.1 (and not paragraph 2.4.1 as quoted by the Council) of the FCTP details the relevant stakeholders who would be consulted with regards to SSTPs. This includes Transport for London.</p> <p>Paragraph 3.1.4 part b of the FCTP sets out that parking would be controlled at each compound and Utility Logistics Hub to ensure demand does not exceed supply. This does not mean that there would be a '<i>carte blanche of unfettered parking</i>'.</p> <p>With regards to the proposed shuttle buses, paragraph 6.4.3 notes that the hub locations would be refined by the Contractors producing the SSTPs and these matters of detail would be agreed with the relevant local highway authority and/or public transport operator and would follow their relevant approval processes.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>The Project wide Travel Plan Manager would be a suitably qualified person appointed by the Applicant, as set out at paragraph 4.2.1 of the FCTP. The TPM would be accountable to the Applicant and through the TPLG and JOF as shown in Plate 4.1. The Applicant envisages that informal communication would occur between those on the TMF and TPLG, in particular the Traffic Manager and Travel Plan Manager. In addition, a formal route is established through the JOF.</p> <p>The minimum requirements referred to in paragraph 3.2.4 relate to an obligation on the Contractors to produce SSTPs with regards to their content (specifically aims, objectives, measures and an action plan).</p> <p>The FCTP sets out a framework and overarching principles for the future SSTPs. This approach would provide the flexibility required to respond to and adapt to changing conditions over the duration of the Project. As set out in the FCTP, all targets will be developed and included within the SSTPs in consultation with the relevant highway and local planning authorities. No part of the authorised development is to commence until a SSTP for the construction of that part, which is substantially in accordance with the FCTP, has been submitted to and approved in writing by the Secretary of State.</p> <p>As noted by paragraph 8.2.5 part g, the level of parking provided would have to be consistent with achieving the objectives of the SSTP.</p> <p>With regards to zero emission buses and idling, part j of paragraph 8.2.5 relates to the wider commitments within the REAC [REP1-157].</p> <p>It would be for the Contractors when developing the SSTPs to set out the details of how personalised travel planning would be offered if applicable to the location the SSTP is being developed for.</p> <p>As set out at paragraph 4.6.1, the Travel Plan Coordinators would meet with the TPM at the TPLG.</p> <p>As set out at paragraph 8.2.4, measures set out in Table 9.1 (Project action plan) would need to be agreed with the TPLG. The Council would be invited to the TPLG.</p>
<p>Paragraph 13.1.1 Page 133</p>	<p>13 Mitigation Measures</p> <p>LB Havering has reviewed the application material and identified potential adverse impacts, some of which are severe, which are predicted to occur within the Borough as a result of the proposed scheme – during both the construction and operation phases. The Council has held lengthy discussions with the Applicant, over an extended period of time, in relation to the impacts which have not been mitigated as part of the application. Therefore, LB Havering would wish to see a comprehensive package of mitigation provided and secured through the Development Consent Order (DCO). This mitigation is set out in Table 18 below on a topic by topic basis. The mitigation identified is considered to be appropriate, proportionate and relevant to address the impacts of the proposed LTC scheme.</p> <p>[Table 18 is reproduced in Annex A to this document].</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
<p>Applicant's Response</p>	<p>The general approach to mitigation requests from the Council is addressed by SoCG [REP1-105] item 2.1.80 as follows: <i>The Applicant provided draft Heads of Terms for comment on 23/9/22 and provided a detailed update to the Council's response of 26/10/22 at a meeting on 21/2/23.</i></p> <p><i>With regards to the Council's comments that it remains concerned about the impacts of the Project, the need for mitigation and surety provided by the Section 106 Heads of Terms in this regard, it should be noted that the mitigation referred to in the Environmental Statement is secured directly through the legally binding Requirements of the DCO rather than a Section 106 Agreement.</i></p> <p><i>The Register of Environmental Actions and Commitments (REAC) presented within [APP-336], ES Appendices, Appendix 2.2, Code of Construction Practice, First Iteration of Environmental Management Plan, sets out the mitigation measures arising from the environmental impact assessment process. The delivery of these measures would be legally secured under Requirement 4 of Schedule 2 to the Development Consent Order (DCO).</i></p> <p><i>Notwithstanding the mitigations already proposed and secured as referenced above, the Applicant will continue to consider the justification for any additional measures proposed by the Council during negotiations, to be secured through a Section 106 agreement.</i></p> <p><i>This matter is under discussion pending further negotiations between the Applicant and the London Borough of Havering.</i></p> <p>The Applicant has responded to the LBHs 'package of mitigation' as presented in 'Table 18' of its LIR separately in Annex A to this document.</p>
<p>Page 139</p>	<p>Developing the Obligations</p> <p>S106 asks</p> <p>LB Havering is seeking a number of contributions through S106, as set out in table 17 below [sic].</p> <p>LB Havering is of the view that the obligations identified comply with planning conditions and obligations paragraphs 56 and 57 of the NPPF. The planning obligations that LB Havering is seeking meet paragraph 56 of the NPPF for the following reasons: a) LB Havering is seeking the contribution to make sure that the development is acceptable from a planning policy perspective. B) The obligations are reasonably related in scale and kind in terms of cost.</p> <p>Table 19 – S106</p> <p>Upminster Cemetery</p> <p>19th month closure of Ockendon Road will result in a loss of business and therefore revenue for Upminster Cemetery and South Essex Crematorium.</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p>The closure of the Ockendon Road will have an injurious effect on the operation of the Crematorium and the ability of the Council to discharge its statutory functions in respect of providing burial and crematorium services.</p> <p>Financial contribution is required to offset potential loss of revenue that will be experienced during construction because funeral directors will be advising their clients to use other crematorium outside of the borough which will also have long term impacts of loss of business.</p> <p>School Safety and Sustainability</p> <p>Financial contribution to TfL STARS and Road Safety Education programme for Schools along roads to be impacted by the scheme during construction including those along St Mary's Lane. Measures would include a contribution to Bikeability training, Road Safety Theatre productions.</p> <p>Financial contribution to be sought for TfL STARS and Road Safety Education programme for schools along roads that will be impacted once the LTC is operational.</p> <p>DCO Project Manager</p> <p>Financial contribution for 1FTE over the lifetime of construction to manage to DCO post Consent. This will include the coordination of management plan approvals coordination of NRSWA matters etc.</p> <p>Ongoing Technical Resource support</p> <p>Financial contribution for technical support to approve and sign off Management Plans post Consent received for the scheme. This to include Waste Management Plans, Drainage Strategy, LEMP and CEMP documents</p> <p>Skills and Employment</p> <p>LB Havering would seek to work with NH and their contractors to drive and monitor performance against local targets to realise any benefit to Havering residents.</p> <p>Community Funds</p> <p>LB Havering is of the view that the value attributed to the Community Fund is inadequate.</p>
<p>Applicant's Response</p>	<p>Regarding Upminster Cemetery, the Applicant would refer back to the answers provided to paragraphs 9.2.2 to 9.2.5, 9.3.2 to 9.3.8, 9.4.3, 9.5.1 to 9.5.6, 9.6.1 to 9.6.3, 9.7.1 and 9.7.2, 9.8.1 to 9.8.12, 9.8.14 to 9.8.16, 9.9.1 and 9.9.2, and 9.10.1 to 9.10.4, above.</p> <p>Regarding School Safety and Sustainability, the Applicant would refer back to the answers provided to paragraphs 8.1.1 to 8.1.11 and 8.2.1 to 8.2.5, above.</p> <p>Regarding the DCO Project Manager and Ongoing Technical Resource support, this matter is addressed by SoCG [REP1-105] item 2.1.81 as follows:</p>

LIR Reference	Local Impact Report Extract / Applicant's Response
	<p><i>The Applicant is considering a variety of options to address the Council's requests and provided a detailed update at a meeting on 21/2/23. This matter is under discussion pending further negotiations between the Applicant and the London Borough of Havering.</i></p> <p>The Applicant notes the mitigation requests. These will be considered, including against the Section 106 planning tests, and the Applicant will continue to work with the Council to seek to develop an agreed understanding of the issue and resolution of the concern raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p> <p>Regarding Skills and Employment, the Applicant would refer to the answers provided to paragraphs 6.7.8 and 6.7.9, 6.7.10, 6.7.13, 6.7.15, 6.7.17, 6.7.19 to 6.7.21, 6.7.23 to 6.7.25, 6.7.27, above.</p> <p>Regarding the Community Fund, this matter is addressed by SoCG [REP1-105] item 2.1.85 as follows:</p> <p><i>The Applicant provided a detailed update at a meeting on 21/2/23 and continues to engage with the Council regarding the fund in cross-authority working groups. This matter is under discussion pending further negotiations between the Applicant and the London Borough of Havering.</i></p> <p>The Applicant notes the request for more funding. This will be considered, including against the Section 106 planning tests, and the Applicant will continue to work with the Council to seek to develop an agreed understanding of the issue and resolution of the concern raised. If appropriate, the Applicant will report progress on this matter through the SoCG, throughout the examination process.</p>

Annexes

Annex A Applicant’s Response to Table 18 of the LBH LIR, Section 13, Mitigation Measures

Table A.1 The Applicant’s Response to Table 18 of the LBH LIR [REP1-249], Section 13, Mitigation Measures

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant’s Response
Archaeology	<p>There is a need to make sure that the key principles around archaeological mitigation and management are secured in Control Documents including the Code of Construction Practice (CoCP) and the Register of Environmental Actions and Commitments (REAC).</p> <p>Specifically, LB Havering requires the following in relation to archaeological matters:</p> <p>Ensuring the required pre-determination archaeological assessment in unexamined areas, specifically Thames Chase Forest and the Ockendon Compound, and suitable mitigation arising.</p> <p>Delivering public heritage mitigation, including a combined public archive and heritage centre.</p> <p>Securing appropriate management measures in relation to the Ockendon Channel archaeological feature.</p> <p>It is also noted that LB Havering would wish to see the NH’s <i>Archaeological Written Scheme of Investigation (ASWI)</i></p>	<p>To minimise the archaeological impacts associated with the scheme, with particular reference to the construction phase, in accordance with paragraphs 5.128 – 5.137 and 5.139 – 5.141 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	<p>Requirement 9 of the draft DCO [REP1-042] addresses the management and delivery of archaeological mitigation in line with the draft Archaeological Mitigation Strategy – Outline Written Scheme of Investigation (AMS-OWSI) [APP-367].</p> <p>Regarding the M25 compound at North Ockendon, approximately 66% of the compound has been trial trenched. The value (significance) of the archaeological resource of the remaining 33% of the M25 compound is well understood due to the clear cropmark evidence of the enclosures and ring ditches recorded there. Appropriate mitigation will be agreed with the archaeological advisor to LBH and recorded in the AMS-OWSI.</p> <p>Paragraph 8.7.1 of the draft AMS-OWSI [APP-367] states: ‘<i>The Project is likely to provide scope for additional and more complex reporting, through for example a period or regional journal, stand-alone ‘monograph’ publication and/or popular publication. In addition, popular publications that include, for example,</i></p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
	<p>document subject to Examination scrutiny to ensure that appropriate mitigation proposals are in place.</p>		<p><i>reconstruction drawings and non-technical summaries could be provided to make the results of the onsite mitigation recording more publicly accessible. A programme and strategy for the publication, and public dissemination of the results of the archaeological programme of works will be provided in the updated project design.</i> Annex A of the draft AMS-OWSI also sets out a strategy for Public Archaeology and Community Engagement.</p> <p>Ockendon Channel – the presence of important Middle Palaeolithic remains has been identified and assessed within ES Chapter 6 [AS-044]. The importance of these buried archaeological remains, and the complexity of the mitigation is reflected in the approach to the proposed mitigation and is set out in more detail in the AMS-OWSI [APP-367] and will be developed further with LBH's archaeological advisors. The Applicant's Palaeolithic specialists have updated their assessment based on further work within the area of the Ockendon Channel. The draft AMS-OWSI will be updated in consultation with London Borough of Havering's archaeological advisors to set out appropriate mitigation prior to consent.</p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
			<p>For Thames Chase Forest the boundary of the Project to the north of Thames Chase Forest has reduced and the impact is derived from a gas diversion running close to the existing M25, so no further trenching is required there. Within Thames Chase Forest the vast majority of the landed is wooded, so the Applicant took the decision not to remove trees to facilitate trial trenching prior to the Project being consented. The small area of open land was not trenched as it is located immediately adjacent to the Thames Chase Forest Visitor Centre. Furthermore, the Thames Chase Forest is located adjacent to the existing M25. Previous M25 widening schemes have been subject to archaeological investigations and as a result, the nature of the archaeological resource in this area is well understood.</p> <p>With respect to the request for examination scrutiny of the draft AMS-OWSI, the Applicant would refer back to its answer to paragraphs 6.3.28 to 6.3.33, above, which explains how this takes place.</p>
Air Quality	LB Havering would wish to see the scheme measures in relation to air quality management, monitoring and mitigation identified in the CoCP and the REAC	To minimise the air quality impacts associated with the scheme in accordance with paragraphs 5.10 – 5.12 of the NNNPS.	The Applicant would refer back to answers to paragraphs 6.5.17 to 6.5.22 and 6.5.24 of the LIR, above.

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
	secured appropriately, which fully align with best practice guidance.	The mitigation sought is considered necessary, related and proportionate.	
Carbon	<p>LB Havering would wish to see the scheme mitigation measures in relation to carbon emissions identified in the Carbon and Energy Management Plan secured appropriately.</p> <p>Specifically, LB Havering requires the following in relation to carbon emissions:</p> <p>Securing the commitment to use zero emission generators during the construction phase.</p> <p>Securing the commitment for a requirement for a least 20% of the energy demand for site compounds and offices to be from onsite renewables.</p>	<p>To minimise the carbon impacts associated with the scheme in accordance with paragraphs 5.18 – 5.19 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	<p>The Applicant would refer to Section 3.4 of the Carbon and Energy Management Plan [APP-552] which sets out how carbon commitments have been secured in the DCO. Appendix E provides a comprehensive list of carbon commitments.</p> <p>While the measures suggested by the Council are not commitments at this time, the Applicant is keen to pursue their adoption as part of designation of the Lower Thames Crossing as a "pathfinder" project to explore carbon neutral construction. The Applicant has recently announced its aim to buy the supply, storage and distribution of over 6 million kilograms of hydrogen to use on the project, which will replace around 20 million litres of diesel and looks forward to exploring the possibilities this would facilitate with stakeholders at a suitable point.</p> <p>In addition, Contractors are incentivised to minimise travel emissions as these count towards their agreed carbon targets (commitment CBN11 in Appendix E, Carbon and Energy Management Plan [APP-552]). A further commitment is that the delivery partners are to promote the use of active transport for personnel to</p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
			and from the compounds and to provide managed electric charging facilities for e-bikes at each compound, in covered cycle parking areas, to satisfy demand (CBN10).
Noise and Vibration	<p>LB Havering would wish to see the scheme mitigation measures identified in the CoCP, the REAC and the Environmental Management Plan (EMP) secured appropriately.</p> <p>Specifically, LB Havering requires the securing of a set of mitigation measures to deal with noise and vibration impacts on the Ockendon Road Diversion Route.</p> <p>LB Havering seeks to secure manned monitoring at CV42 and CV44 on the first day of work on structures RWN000082 and RWN000085 to inform effective mitigation.</p> <p>LB Havering also seeks to secure appropriate noise and vibration mitigation (such as S61's) in relation to the M25 Compound to minimise its impacts on the residents of North Ockendon.</p>	<p>To minimise the noise and vibration impacts associated with the scheme (particularly on the residents of North Ockendon), with particular reference to the construction phase, in accordance with paragraphs 5.194 – 5.196 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	The Applicant would refer back to the answers provided to paragraph 6.4.29, above.
Non-motorised Users (NMUs)	<p>There is a need to make sure that users of the Non-Motorised User bridge to be built over the A127 between Folkes Lane and Moor Lane can safely and securely access Folkes Lane Woodland.</p> <p>It is also important that NMUs can also safely and securely access the new</p>	To minimise the impacts on NMUs associated with the scheme in accordance with paragraphs 5.205, 5.211 and 5.216 of the NNNPS.	The Applicant would refer back to the answers provided to paragraphs 10.1.2 to 10.1.6 and 10.1.8 to 10.1.11, above, including the ongoing dialogue between the Applicant and the Council.

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
	<p>woodland being built by the Applicant at Hole Farm within the borough of Brentwood.</p> <p>LB Havering does not consider Folkes Lane to be suitable for use by pedestrians, cyclists, or equestrians. The Council would like to see a new NMU route from the base of the bridge at Folkes Lane to Folkes Lane Woodland.</p> <p>The approach to the A127 Footbridge from the south needs to be redeveloped to ensure it is suitable for usage by pedestrians, cyclists and horse riders.</p> <p>The current footbridge over the M25 between Folkes Lane Woodland and the proposed Hole Farm site is considered unsuitable for NMUs in its current form. LB Havering seeks an improved surfacing including lighting. In addition, the parapets of the footbridge are unsuitable for horse riders who may use the facility to access Hole Farm.</p>	<p>The mitigation sought is considered necessary, related and proportionate.</p>	
<p>Materials and Waste</p>	<p>No specific mitigation is requested by LB Havering.</p> <p>However, it is noted that LB Havering would wish to see the scheme mitigation measures identified in the Outline Materials Handling Plan (oMHP), the Outline Site Waste Management Plan (oSWMP), the Excavated Materials</p>	<p>To minimise materials and waste impacts associated with the scheme (and reduce the need for off-site management), with particular reference to the construction phase, in accordance with paragraphs 5.43 and 5.44 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	<p>As noted above, the Applicant has proactively engaged with LBH to assist in their duties as Minerals Planning Authority. The Local Aggregates Assessment (October 2022) does not form part of the project assessment however it has been produced to assist the local authorities in forward planning of aggregate landbanks.</p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
	<p>Assessment (EMA), the CoCP and the REAC, secured appropriately.</p> <p>It is also noted that LB Havering would wish to see the NH's <i>Local Aggregates Assessment</i> document subject to Examination scrutiny to ensure that appropriate mitigation proposals are in place.</p>		<p>The CoCP, REAC, oMHP and oSWMP sit within a suite of documents known as the control plan, which is the framework for mitigating, monitoring and controlling effects of the Project. These are secured within the draft DCO Schedule 2. This framework is made up of a series of 'control documents' which present the mitigation measures identified in the application that must be implemented during design, construction and operation to reduce the adverse effects of the Project. In addition, REAC commitment MW012 commits the contractors to use the methodology described in the EMA to identify offsite facilities and/or schemes that score positively against a sustainability scoring system agreed with National Highways.</p>
<p>Flooding and Drainage</p>	<p>LB Havering would wish to see the scheme mitigation measures identified in the Flood Risk Assessment (FRA) and Construction Environmental Management Plan (CEMP) secured appropriately.</p> <p>Specifically, LB Havering requires the following in relation to flooding and drainage management and mitigation:</p> <p>The CEMP should provide evidence of how existing watercourses will be managed during the construction process to ensure that flood risk is not increased.</p>	<p>To minimise the flooding and drainage impacts associated with the scheme, in accordance with paragraphs 5.98 – 5.104 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	<p>Mitigation measures relevant to road drainage and the water environment are secured through their inclusion as Project commitments in the Register of Environmental Actions and Commitments (Section 7 of ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP1-157]).</p> <p>The Applicant would refer back to its answers provided to the following paragraphs, for these issues:</p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
	<p>NH should provide annual submissions of maintenance activities completed and correlated against the maintenance plan.</p> <p>Groundwater monitoring is proposed at several critical locations. LB Havering would expect NH to submit ongoing groundwater monitoring records, including an assessment of whether mitigation is effective.</p> <p>Secure the opportunity for LB Havering, as Local Lead Flood Authority (LLFA), to review and comment on the Flood Risk Assessment and Drainage Strategy for the construction phase of the project.</p>		<ul style="list-style-type: none"> • CEMP and management of existing watercourses during construction; paragraphs 6.6.32 to 6.6.34 • Annual submissions of maintenance activities; paragraphs 6.6.32 to 6.6.34 • Groundwater monitoring; paragraphs 6.6.10 to 6.6.13 and 6.6.32 to 6.6.34 • Review and comment on the Flood Risk Assessment and Drainage Strategy for the construction phase of the project; paragraphs 6.6.25 to 6.6.27 and 6.6.32 to 6.6.34.
Ecology	<p>Despite embedded mitigation, LB Havering requires bespoke compensation for the permanent loss of North Ockendon Pit SINC and to ensure that sufficient compensation is provided. The Council recommends that the construction compound would be an appropriate single location for the creation of compensatory brownfield habitats with low nutrients which could also act as a buffer for the retained SINC habitats.</p>	<p>To minimise the ecological impacts associated with the scheme, in accordance with paragraphs 5.25 – 5.26 of the NNNPS.</p> <p>According to GIGL (2020) Appendix 8.1 Designated sites (APP-390) North Ockendon Pit SINC is described as neutral grassland and secondary woodland providing habitat for a variety of birds. This site has been identified as containing Groundwater Dependent Terrestrial Ecosystems (GWDTEs). GWDTEs are wetlands which critically depend on groundwater flows and/or chemistries (European Communities (2011), shown in WFD-UKTAG (2014a).</p>	<p>The Applicant would refer back to the answers provided for paragraphs 6.9.21 to 6.9.24 regarding the impacts to North Ockendon Pit SINC.</p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
		<p>The site description for this SINC in the Havering SINC Review (2017) includes neutral grassland (semi-improved), tall herb, scrub, woodland, scattered trees, standing water and hedges and these habitats support significant populations of reptiles and invertebrate assemblage of national importance, including several rare bees, wasps and ants.</p> <p>LB Havering Policy 30 Biodiversity and Geodiversity protects SINC's from adverse effects and requires adequate compensation measures for impacts that cannot be avoided.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	
Landscape	<p>LB Havering would wish to see the scheme mitigation measures identified in the Landscape and Ecological Masterplan (LEMP) and the REAC secured appropriately.</p> <p>Specifically, LB Havering requires the following in relation to landscape matters:</p> <p>Securing a commitment to effective mitigation planting which is appropriately managed to be robust and future-proof, specifically in relation to Thames Chase Community Forest.</p>	<p>To minimise the impacts associated with the scheme on the landscape, in accordance with paragraphs 5.149, 5.156 and 5.159 – 5.161 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	<p>Section 5 of the outline Landscape and Ecology Management Plan [REP1-173] describes outline management requirements for the various habitat types proposed as part of the Project. The draft DCO [REP1-042] requires the submission of a Landscape and Ecology Management Plan for approval by the Secretary of State, in consultation with the bodies listed in Table 2.1 of the outline Landscape and Ecology Management Plan. The Landscape and Ecology Management Plan needs to be substantially in accordance with the outline Landscape and Ecology Management Plan and include details of</p>

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
			<p>commitments to aftercare, monitoring and maintenance activities relating to the landscaping and ecological features.</p> <p>Local planning authorities such as London Borough of Havering are noted as being part of the advisory group for the development of the Landscape and Ecology Management Plan in paragraph 4.1.13 of the outline Landscape and Ecology Management Plan.</p>
Built Heritage	<p>Section 20(1) allows for protective works to be carried out to any building on any land which may be affected by the development.</p> <p>Part 9 of Section 20 states that the undertaker of any protective works to a listed building must serve notice on the local planning authority and have due regard to any response received. This will allow for any works to listed buildings to be monitored.</p>	<p>To minimise the impacts associated with the scheme on the historic environment, in accordance with paragraphs 5.128 – 5.137 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	The Applicant refers the reader to the response provided for paragraph 6.10.35.
Upminster Cemetery (UC) and South Essex Crematorium (SEC)	<p>LB Havering requires the securing of appropriate mitigation to provide resilience on the Ockendon Road diversion route.</p> <p>The closure of the Ockendon Road will have an injurious effect on the operation of the Crematorium and the ability of the Council to discharge its statutory functions in respect of providing burial and crematorium services.</p>	The mitigation sought is considered necessary, related and proportionate.	Regarding Upminster Cemetery, the Applicant would refer back to the answers provided to paragraphs 9.2.2 to 9.2.5, 9.3.2 to 9.3.8, 9.4.3, 9.5.1 to 9.5.6, 9.6.1 to 9.6.3, 9.7.1 and 9.7.2, 9.8.1 to 9.8.12, 9.8.14 to 9.8.16, 9.9.1 and 9.9.2, and 9.10.1 to 9.10.4, above.

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
	The Council seeks to secure a significant reduction in the period of time that Ockendon Road is closed for, which is currently stated in the DCO Application as up to 19 months.		
Wider Network Impacts	<p>LB Havering has been working closely with Transport for London (TfL), and continues to do so, to identify fully the scheme impacts on the local highway network and to identify appropriate mitigation.</p> <p>LB Havering is seeking to secure a robust monitoring and management plan.</p> <p>LB Havering supports the creation of a Lower Thames Crossing Mitigation Management Group (for the operational impacts of the scheme).</p>	<p>To minimise the impacts associated with the scheme on the wider transport network, in accordance with paragraphs 5.206, 5.211, 5.212 and 5.215 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	<p>The Applicant refers to the answers provided to paragraphs 7.4.5 and 7.5.6, above.</p> <p>The Applicant considers the arrangements under Requirement 14 of the draft DCO to remain appropriate.</p>
Impacts during Construction (Highways)	Secure a commitment to work with LB Havering and Transport for London to further develop mitigation measures as set out in Table 9 and para 7.5.4.1-7.5.4.2 in the Traffic and Transport chapter of the LIR.	<p>To minimise the highways impacts associated with the scheme, with specific reference to the construction phase, in accordance with paragraphs 5.211, 5.215 and 5.216 of the NNNPS.</p> <p>The mitigation sought is considered necessary, related and proportionate.</p>	The Applicant refers to the answers provided to paragraphs 7.2.24 to 7.2.26 and 7.2.41 to 7.2.44, above.
Impacts during Construction (Schools)	LB Havering is seeking to secure fixed crossing points outside schools impacted by traffic during different construction programme periods including the junction of Front Lane and Isis drive for Engayne Primary.	To minimise the highway safety impacts associated with the scheme, with specific reference to the construction phase, in accordance with paragraph 5.216 of the NNNPS.	Regarding impacts on schools during construction, the Applicant refers to the answers provided to paragraphs 8.1.1 to 8.1.11 and 8.2.1 to 8.2.5, above.

Topics	LBHs Mitigation Requirement	LBHs Justification	Applicant's Response
		The mitigation sought is considered necessary, related and proportionate.	
Skills and Employment	LB Havering requires the Skills, Education and Employment Strategy (SEE Strategy) to offer Borough-specific local employment /apprentices/training targets for Havering residents.	To maximise the socio-economic benefits for Havering's resident and business communities, in accordance with paragraphs 3.3 of the NNNPS. The mitigation sought is considered necessary, related and proportionate.	Regarding impacts on schools during construction, the Applicant refers to the answers provided to paragraphs 6.7.8, 6.7.9 and 6.7.17 above.

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