



Application by National Highways for the Lower Thames Crossing
The Examining Authority's written questions and requests for information (ExQ1)
Issued on 15 August 2023

The following table sets out the Examining Authority's (ExA's) first written questions and requests for information - **ExQ1**. If necessary, the examination timetable enables the ExA to issue further rounds of written questions in due course. If this is done, the further round of questions will be referred to as ExQ (number), with the number rising in sequence from 2.

The ExA has screened issues and questions into two parallel streams: those included in written questions and those for oral examination. Whilst there may be a small amount of overlap between the issues addressed by these two methods, in general terms if an issue is raised here then it will not be a primary issue for oral examination in the September hearings. That is why the time allowed for responses to these questions extends beyond the period in which the next round of hearings will be held (4 to 15 September 2023).

Questions are set out using an issues-based framework derived from the Initial Assessment of Principal Issues (IAP) provided as Annex B to the Rule 6 letter of 25 April 2023. Questions have been added to the framework of issues set out there as they have arisen from representations and to address the assessment of the application against relevant policies. There are also some general questions which range across multiple issues, and questions which address issues that have arisen since the IAP was concluded. Not all issues give rise to questions in this round. Where no questions are set out, this is because they have been identified as issues for oral examination, issues to be addressed in later questions (if required) or issues where the ExA is not seeking further information at this stage.

Column 2 of the table indicates which Interested Parties (IPs) and other persons each question is directed to. The ExA would be grateful if all persons named could answer all questions directed to them, providing a substantive response, or indicating that the question is not relevant to them for a reason. This does not prevent an answer being provided to a question by a person to whom it is not directed, should the question be relevant to their interests.

Each question has a unique reference number which starts with 1 (indicating that it is from ExQ1) and then has an issue number and a question number. For example, the first question on project definition issues is identified as Q(1)1.1.1. When you are answering a question, please start your answer by quoting the unique reference number.

If you are responding to a small number of questions, answers using the 'make a submission' portal or by email will suffice. If you are answering a larger number of questions, it will assist the ExA if you use a table based on this one to set out your responses. An editable version of this table in Microsoft Word is available on request from the case team: please include 'LTC Request for ExQ1 in Word' in the subject line of your email and contact: lowerthamescrossing@planninginspectorate.gov.uk

Responses are due by Deadline 4: Tuesday 19 September 2023



Abbreviations used:

PA2008	The Planning Act 2008	NMU	Non-Motorised Users
Art	Article	NPS	National Policy Statement
ALA 1981	Acquisition of Land Act 1981	NPSNN	National Policy Statement National Networks
BoR	Book of Reference	NRTP	National Road Traffic Projections
CA	Compulsory Acquisition	NSIP	Nationally Significant Infrastructure Project
ComMA	Combined Modelling and Appraisal Report	NTEM	National Trip End Model
CPO	Compulsory purchase order	PoTLL	Port of Tilbury London Limited
DPWLG	DP World London Gateway	R	Requirement
dDCO	Draft DCO	SI	Statutory Instrument
EM	Explanatory Memorandum	SoS	Secretary of State
ES	Environmental Statement	TAG	Transport Assessment Guidance
ExA	Examining Authority	TMPfC	Outline Traffic Management Plan for Construction
LIR	Local Impact Report	TP	Temporary Possession
LPA	Local planning authority	WCH	Walkers, Cyclists and Horse riders
MP	Model Provision (in the MP Order)	WNIMMP	Wider Network Impacts Management and Monitoring Plan
MP Order	The Infrastructure Planning (Model Provisions) Order 2009		



The Examination Library

References in these questions set out in square brackets (eg [APP-001]) are to documents catalogued in the Examination Library. The Examination Library can be obtained from the following link:

[TR010032-001818-C - LTC Examination Library.pdf \(planninginspectorate.gov.uk\)](https://www.planninginspectorate.gov.uk/tr010032-001818-C-LTC-Examination-Library.pdf)

The library is updated as the examination progresses.

Citation of Questions

Questions in this table should be cited as follows:

Question reference: issue reference: question number, eg ExQ(1) 1.1.1 – refers to question 1 in this table.



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ExQ1	Question to:	Question:
1.	Project definition	
Questions relating to project definition were raised orally at Issue Specific Hearing 1 (ISH1) on 23 June 2023. The ExA has no further questions on this issue at the present time.		
2.	Climate change and carbon emissions	
2.1	Methodology	
Q2.1.1	Applicant	Carbon Valuation Toolkit Can the Applicant provide a copy of its Carbon Valuation Toolkit in addition to any results, input assumptions and other relevant information pertaining to its valuation of embodied carbon emissions?
Q2.1.2	Applicant	Carbon Valuation Toolkit Can the Applicant provide a calculation using the higher carbon value and explain why this has not been provided for LTC when it has provided it for other NSIPs.
Q2.1.3	Applicant	Electrification: Carbon Savings The Applicant assumes carbon savings if policies in the Transport Decarbonisation Plan are implemented. However, given that DEFRA's Emissions Factor Toolkit (EFT) v11 has factored in increased usage of electric vehicles (EVs) and a reduction in tailpipe emissions, is the Applicant potentially double-counting carbon savings from electrification of the vehicle fleet?
Q2.1.4	Applicant	Emissions Factor Toolkit DEFRA's Emissions Factor Toolkit (EFT) v11 already accounts for carbon savings from the electrification of the vehicle fleet. Has the Applicant double counted carbon savings from electrification by assuming that further carbon savings can be achieved through the implementation of policies in the Transport Decarbonisation Plan?
2.2	Localised Assessment	
Q2.2.1	Thurrock Council	Localised Climate and Carbon Assessments In its Deadline 1 submission at Appendix K [REP1-292], Thurrock Council appears to be calling for a localised assessment of climate and carbon. Can the Council explain the national policy and scientific basis for such an assessment? Please refer to any other made DCO's where such an approach has been taken.

ExQ1	Question to:	Question:
2.3 Implications of Caselaw		
Q2.3.1	All IPs	<p>Carbon and Climate Considerations: R (oao) Boswell v Secretary of State for Transport</p> <p>What are the implications of the recent Boswell v Secretary of State for Transport High Court Judgement [2023] EWHC 1710 (Admin) in relation to the treatment of carbon and climate in NSIP decision-making for the A47 Blofield to North Burlingham, A47 North Tuddenham to Easton and A47/A11 Thickthorn Junction applications for the consideration of carbon and climate matters in the LTC Examination and decision?</p>
3. Consideration of alternatives		
3.1 EIA Regulations		
Q3.1.1	All IPs	<p>EIA Regulations 2017: Consideration of Reasonable Alternatives</p> <p>Regulation 11(2)(d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) imposes a duty on the Applicant to include <i>'a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment'</i> within the Environment Statement (ES). This obligation needs to be met through consideration of alternatives in terms of <i>'design, technology, location, size and scale'</i> (EIA Regulations Schedule 4). The Applicant has sought to meet this obligation in ES Chapter 3 [APP-141].</p> <p>The ExA is aware of issues raised in relation to this duty in Deadline 1 and 2 responses. However, it is important that if any remaining IP considers that this duty has not been addressed, that they identify their position and the reasons for it in writing in response to this question. Any response must identify the specific element(s) of the duty that in the IP's view has not been addressed.</p>
3.2 Alternatives: Modes and Alignment Corridors		
Q3.2.1	IPs concerned that alternative modes/ solutions have not been adequately considered, Thurrock Council, TCAG	<p>Consideration of Alternatives: Other Modes/ Solutions</p> <p>Concerns have been raised that insufficient attention has been devoted to the consideration of alternative modes and to solutions making use of public transport.</p> <p>ES Chapter 3 [APP-141] summarises the statutory and policy requirements for the consideration of alternatives and the three main phases in which alternative modes and solutions were evaluated.</p>

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> • The DfT 2009 study (paragraphs 3.6.1-3) reviewed a range of options including road alignment options, other modes (light and heavy rail and bus), works to the existing Dartford Crossing and composite modes (consisting of road alignment options with other modes) were considered. • The 2016 non-statutory consultation raised concerns about the degree to which non-road or composite modes and solutions had been considered. Flowing from that exercise, the Post-Consultation Scheme Assessment Report (Highways England, 2017) (paragraphs 3.6.5-6) considered: <ul style="list-style-type: none"> a) No road building and more provision of public transport, including a new rail link and enhanced bus services across the existing Dartford Crossing. b) A combined road/rail link for passengers and freight. c) More priority for bus services on the new crossing and provision of more bus services. d) New ferry services across the Thames. e) A revised national ports strategy. <p>Walking, cycling and horse-riding (WCH) measures were also considered, albeit as augmentations rather than as alternatives to the main proposed development.</p> <ul style="list-style-type: none"> • A strategic options re-appraisal was carried out in 2022 which reached a conclusion that the preferred road option remained as the preferred solution (paragraph 3.6.8). <p>Any IP making submissions to the extent that the consideration of alternative modes and solutions has not been appropriately carried out because relevant statutory or policy measures providing for the consideration of alternatives have not been adequately identified and applied; or because there has not been a sufficient consideration of alternative modes and solutions is requested to address the positions summarised in ES Chapter 3 and explain their detailed case.</p>
Q3.22	IPs concerned that alternative modes/ solutions have not been adequately considered, Thurrock Council, TCAG	<p>Consideration of Alternatives: Other Routes</p> <p>Concerns have been raised that insufficient attention has been devoted to the consideration of alternative routes for the LTC.</p> <p>ES Chapter 3 [APP-141] summarises the six broad route corridor options that have been considered (section 3.7, plate 3.1):</p> <ul style="list-style-type: none"> A. Additional capacity at the existing Dartford Crossing. B. Swanscombe Peninsula link to the A1089. C. East of Gravesend and link to the M20. D. M2 to A130 links:

ExQ1	Question to:	Question:
		<ol style="list-style-type: none"> 1. M2 link to A130 via Cliffe/Pitsea; and 2. M2 link to A130 via Canvey Island. <p>E. Isle of Grain link to east of Southend.</p> <p>Any IP making submissions to the extent that the consideration of alternative corridors have not been appropriately carried out is requested to address the positions summarised in ES Chapter 3 and explain their detailed case.</p>
4. Traffic and transportation		
4.1 Modelling		
Q4.1.1	Applicant	<p>Modelled Traffic Effects: Dartford Crossing</p> <p>In terms of the first scheme objective, does the Applicant accept that free-flowing traffic conditions at the Dartford Crossing (i.e. above 85% V/C) will not be achieved in most 2037 modelled scenarios? If yes, does it therefore follow that the scheme would not provide “free-flowing” capacity at Dartford?</p>
Q4.1.2	Applicant	<p>Modelled Traffic Effects: Covid</p> <p>Concerns have been raised that the Lower Thames Area Model (LTAM) used to assess the impacts of the LTC is based on out-of-date data which takes no account of a reduction in traffic flows since the Covid-19 pandemic and reflected in the latest National Trip End Model (NTEM) forecasts (v8.0). In light of the foregoing, does the Applicant consider that LTAM remains reflective of current network conditions and is any further sensitivity testing proposed to deal with the latest NTEM datasets?</p>
Q4.1.3	Applicant	<p>Modelled Traffic Effects: Transport Analysis Guidance Unit M4</p> <p>What are the implications of the recently published Transport Analysis Guidance (TAG) “<i>TAG Unit M4 - Forecasting and Uncertainty</i>” for the modelling work already undertaken and does the Applicant intend to carry out any further work in response to the guidance, for example it is noted the ‘p’ value has been revised from 2.5 to 4 %? Please identify any other areas where the new guidance could potentially affect the Applicant’s modelling work.</p>
Q4.1.4	Applicant	<p>Modelled Traffic Effects: TAG Unit M4 Scenario-based Assessments</p> <p>Various parties have queried the Applicant’s use of low and growth scenarios instead of a scenario-based assessments as advocated in the latest Department for Transport (DfT) guidance of modelling uncertainty. How does the Applicant respond to those criticisms and is it proposing to undertake any additional modelling to take account of the latest guidance?</p>

ExQ1	Question to:	Question:
Q4.1.5	Applicant	<p>Modelled Traffic Effects: Large and Heavy Goods Vehicles</p> <p>Has the Applicant considered the latest forecasts for large (LGVs) and heavy (HGVs) goods vehicles contained in the National Road Traffic Projections (NRTP2022)? Do these latest projections materially affect the Applicant's traffic assessments.</p>
Q4.1.6	Applicant	<p>Modelled Traffic Effects: Accuracy of the Lower Thames Area Model</p> <p>It has been suggested that the accuracy of the LTAM could have been improved by validating the model against turning counts at key junctions. Was this approach considered by the Applicant and is there a requirement within TAG for such checks?</p>
Q4.1.7	Applicant	<p>Modelled Traffic Effects: Lower Thames Area Model and the Local Road Network</p> <p>It is noted that LTAM uses an AM peak of 0700-0800 whereas the AM peak on the local road network (LRN) is 0800-0900. What are the possible implications of this in terms of the traffic forecasts particularly at those locations where LTC interfaces with the LRN?</p>
Q4.1.8	Applicant	<p>Modelled Traffic Effects: Thames Freeport</p> <p>Can the Applicant explain how it has modelled the impact of the Thames Freeport, the implications for the LTC and also why the results of the work have not been shared with Port of Tilbury London Limited (PoTLL)?</p>
Q4.1.9	Applicant	<p>Modelled Traffic Effects: Traffic Flow Simulation: Orsett Cock</p> <p>Given the use of 'actual' rather than 'demand' flows and also the omission of Freeport traffic from the Vissim modelling, is it fair to say that the Applicant's microsimulation modelling of the Orsett Cock roundabout submitted at Deadline 1 could represent an underestimation of flows through the roundabout?</p>
Q4.1.10	Applicant, Thurrock Council, PoTLL, DPWLG, LRN stakeholders	<p>Modelled Traffic Effects: Traffic Flow Simulation: Orsett Cock</p> <p>If the traffic impacts at Orsett Cock roundabout have not been fully understood and/or modelled, what are the wider implications for the Applicant's Transport Assessment?</p>
Q4.1.11	Applicant	<p>Modelled Traffic Effects: Lower Thames Area Model and Development Plan Proposals</p> <p>A number of local authorities have raised concerns that the LTAM Core Scenario does not take sufficient account of planned future growth set out in existing and emerging development plans, how does the Applicant respond?</p>

ExQ1	Question to:	Question:
Q4.1.12	DPWLG	<p>Modelled Traffic Effects: Ports Access: Orsett Cock and Manorway</p> <p>DP World London Gateway (DPWLG) states that the Applicant has not submitted detailed modelling to demonstrate that the status quo in terms of access to the port will be maintained. However, additional modelling work was submitted at Deadline 1 [REP1-187]. What is DPWLG response to the additional information insofar as it relates to the Orsett Cock and Manorway junctions?</p>
Q4.1.13	Thurrock Council	<p>Modelled Traffic Effects: Lower Thames Area Model and Further Localised Traffic Modelling</p> <p>Thurrock Council state that the Applicant has relied solely on LTAM to inform the operational impacts of LTC. However, the Deadline 1 submission “Localised Traffic Modelling” [REP1-187] clearly sets out that localised traffic modelling work was completed by the Applicant during the development of the LTC. In light of that, can Thurrock Council clarify its position and identify if any further specific localised traffic modelling work ought to be undertaken in its view?</p>
Q4.1.14	All	<p>Modelled Traffic Effects: Lower Thames Area Model: TAG Compliance</p> <p>Does any party disagree with the Applicant’s conclusion that the LTAM is TAG compliant? If so, please explain why.</p>
Q4.1.15	Brentwood Council	<p>Modelled Traffic Effects: Lower Thames Area Model and Future Development Proposals</p> <p>Concerns have been raised regarding future development that has been excluded from LTAM’s core scenario. To what extent are these concerns addressed by the Applicant’s high growth scenario which assumes that travel demand will exceed current government forecasts in TEMPro.</p>
4.2 Mitigation		
Q4.2.1	Applicant	<p>Draft National Policy Statement National Networks (NPSNN): Policy Approach to Mitigation</p> <p>Para 5.280 of the draft NPSNN contains a significant strengthening of policy around the issue of mitigation and expects all adverse effects on the transport network to be mitigated. How will the Applicant’s approach to mitigation change if the draft NPSNN is adopted in its current form?</p>
Q4.2.2	Applicant	<p>Monitoring Timing, Period and Frequency</p> <p>Bearing in mind that there would be LTC construction traffic on the network one year before opening and advice in NH’s Post-opening Project Evaluation (POPE) manual, does the Applicant consider that the timing, period and frequency of traffic monitoring currently set out in the Wider Network Impacts Management and Monitoring Plan (WNIMMP) is appropriate? If so, please explain why.</p>
Q4.2.3	Applicant	<p>Monitoring and Mitigation: Effects on Public Transport Services</p> <p>Does the Applicant intend to compensate public transport providers for delays incurred during the construction phase of the scheme? If not, why?</p>

ExQ1	Question to:	Question:
Q4.24	Applicant	Monitoring and Mitigation: Effects on Travel to School Trips Does the Applicant agree that it is responsible for monitoring travel to school distances during the construction period and to mitigate any adverse impacts should they arise?
Q4.25	Applicant	Mitigation Security: Orsett Cock The Applicant's Deadline 1 submission "Localised Traffic Modelling" [REP1-187] suggests that changes to the traffic light layout, timings and sequencing would be required at Orsett Cock to optimise flows. How would this work be secured in the DCO?
Q4.26	DPLGW/PoTLL	Mitigation Design: Orsett Cock and Manorway Is it accepted that adequate mitigation at Orsett Cock would obviate the need for the same at the Manorway junction?
Q4.27	Local Authorities	Wider Network Monitoring Approach It has been suggested that the Applicant's approach to monitoring wider impacts contained in the WNIMMP is not compliant with the NPSNN. However, it appears established practice for made DCO's to include provision for wider network monitoring along similar lines as proposed here. Accordingly, please explain why such an approach would be unacceptable in this instance?
Q4.28	DPWLG	Policy Approach to Maintaining Existing Network 'Status Quo' Can DPWLG explain what sections of the NPSNN support its view that the ' <i>status quo must be maintained</i> '?
4.3	Operational Traffic	
Q4.31	Applicant	Missing Journey Times In terms of journey time reliability can the applicant explain why in Transport Assessment Appendices B & C important routes have been omitted from the comparison tables, for example for Tilbury Port only movements 7-12 have been presented? Where are the comparisons for movements 1-4?
Q4.32	Applicant	Orsett Cock - DTA Analysis Analysis by DPWLG indicates that extensive queuing would occur the LTC and A13 off- slips to the Orsett Cock roundabout as well as the A128 approach. Does the Applicant agree with the findings of the DTA? If not, please provide clear reasons why.
Q4.33	Applicant	U-turning Vehicles at Orsett Cock Can the Applicant quantify the number and type of U-turning vehicles at Orsett Cock roundabout in the various assessment scenarios?

ExQ1	Question to:	Question:
Q4.34	Applicant	<p>Variation in the number of A13/A1089 Turning Movements</p> <p>There appears to be a very significant difference between the forecasts of the Applicant and DPWLG in respect of the number of U-turning vehicles. For example, paragraph 2.2.8 of the DTA Report [Annex A, REP1-333] refers to 1,000 and 1,300 in the AM/PM peak hours respectively while the Applicant's Deadline 2 submission [REP2-050] (Table A.2) refers to 231 and 204 PCUs. How does the Applicant explain these differences?</p>
Q4.35	Applicant	<p>Diversion Routes</p> <p>Can the Applicant explain the strategic diversion routes in the event of a closure of the Dartford Crossing once the Lower Thames Crossing is operational?</p>
Q4.36	Applicant	<p>Dangerous Goods Vehicles at Dartford</p> <p>What is the justification for retaining provision for Dangerous/Oversized Goods Vehicles at Dartford once LTC is operational?</p>
Q4.37	Thurrock Council	<p>Balanced Assessment on Thurrock's Network</p> <p>Thurrock's representations including its Local Impact Report (LIR) are focused almost exclusively on the adverse effects of LTC on its road network when in reality many existing locations which currently experience severe congestion will see significant benefits to journey times. Has Thurrock Council carried an overall assessment of the effect of LTC on its network which weighs the positive and negative effects in the balance? If not, please give reasons why.</p>
Q4.38	Tonbridge & Malling Council	<p>Benefits to Tonbridge & Malling's Network</p> <p>Paragraph 3.4 of the Council's LIR acknowledges that positive, neutral, and negative should be identified. Save for flows west of junction 4 M20, no other traffic benefits are identified in the LIR. Can Tonbridge and Malling Council confirm that there are no other locations in the borough that would experience positive effects?</p>
Q4.39	DPLGW/PoTLL	<p>Overall Comparison of journey times to/from Ports</p> <p>Has DPWLG carried out an overall assessment of journey times to/from the port with/ without the scheme? If so, does DPLGW agree with the Applicant's view that despite increased delays at Orsett Cock the overall effect on the port would be beneficial? (See Transport Assessment Appendices B and C).</p>

ExQ1	Question to:	Question:
4.4	Scheme Design	
Q4.4.1	Applicant	<p>Brentwood Enterprise Park</p> <p>It is noted by Essex County Council that the scheme would sever the existing egress from the Brentwood Enterprise Park. References are noted to a replacement joint access from the B186 Warley Street as well as the existing overbridge – Can the Applicant clarify what is proposed in relation to the Brentwood Enterprise Park?</p>
Q4.4.2	Applicant	<p>Separate A13 Interchanges</p> <p>Why was Thurrock Council's suggestion of separate interchanges north and south of the A13 discounted?</p>
Q4.4.3	Applicant	<p>Segregated Public Transport</p> <p>Bearing in mind the direction of Government policy set out in the draft NPSNN, what consideration has been given to providing segregated public transport access at locations proximate to tunnel portals to create attractive and competitive public transport journey times?</p>
Q4.4.4	Applicant	<p>Emergency Access Modification</p> <p>Could the emergency accesses be modified to create such public transport provision either now or in the future?</p>
Q4.4.5	Applicant	<p>Reduction in A2 Running Lanes</p> <p>Concerns have been raised by the reduction of the number of running lanes on the M2/A2 at the LTC interchange (4 to 2 eastbound). Would this reduction create a bottleneck restricting through flows on the SRN? If not, please explain why.</p>
Q4.4.6	Applicant	<p>Capacity at A2/LTC Interchange</p> <p>Modelling work undertaken by Kent County Council (KCC) using the Kent Transport Model has shown that certain nodes within the proposed LTC/A2 junction would operate over capacity in the opening year (see para 8.20 of KCC's LIR). How does the Applicant respond?</p>
4.5	Walkers, Cyclists and Horse riders (WCH)	
Q4.5.1	Applicant	<p>WCH routes</p> <p>Various stakeholders have complained about inaccurate or insufficient details in respect of WCH routes. Can the Applicant clarify where this information can be found in the Examination Library?</p>

ExQ1	Question to:	Question:
Q4.52	Applicant	LTC/A2 crossings Can the Applicant clarify how Non-Motorised Users (NMUs) would cross the LTC/A2 interchange?
Q4.53	Applicant	Cycling and Severance of Routes The Cycle Advocacy Network have stated that the proposal fails to provide a coherent cycle network at overbridges adjacent to the Marling Cross, Hares Bridge, Henhurst Road and Brewers Road. They are to footpath standard only requiring cyclists to dismount. The Applicant is asked to explain why have these provisions not been designed into the proposal. The ability to improve cycle provisions and thus health opportunities should be maximised.
4.6	Construction Traffic	
Q4.61	Applicant	Excavated Materials Assumptions Can the Applicant explain the assumptions used to identify the quantities of both excavated material generated and to be placed within the order limits?
Q4.62	Applicant	Scope of Outline Traffic Management Plan for Construction (oTMPfC) Are utility work sites excluded from the scope of the oTMPfC [REP1-174] ? If so, please explain how the Requirements in terms of traffic and transport will be enforced against the various utility contractors on the project.
Q4.63	Applicant	Provision for mitigation Outline Traffic Management Plan for Construction Concerns have been raised that the oTMPfC [REP1-174] as currently drafted has no mechanism for delivery of mitigation if modelling indicates issues will occur. Can the Applicant clarify its position and amend the oTMPfC to strengthen the commitment to mitigation?
Q4.64	Highway Authorities	Realistic Extent of Construction Phase Mitigation Notwithstanding the provisions of various control documents such as the Traffic Management Plan (TMP), is it accepted that it would be impossible to prevent or mitigate all adverse effects on local communities during the construction phase? If that is not accepted, please provide details of what further measures could be incorporated into the oTMPfC at this stage.
Q4.65	PoTLL	Asda Roundabout Concerns Notwithstanding the Applicant's commitment to provide a microsimulation model of the A1089 Asda roundabout at Deadline 3, concerns are raised regarding the operation of the Asda roundabout during the construction period. However, PoTLL is specifically listed as a TMP consultee. Moreover, the requirements of the ports are clearly set out in Table 2.3 of the oTMPfC [REP1-174] under 'Logistics Centres'. Accordingly, it appears that the Applicant is alive to the concerns of the ports in terms of

ExQ1	Question to:	Question:
		access and that the TMP would provide for modelling on sensitive parts of the network before commencement of the relevant construction phase. Can PoTLL therefore explain why its concerns are not capable of being addressed by Requirement 10 of the draft DCO?
Q4.6.6	Applicant	Sourcing of Aggregates In keeping with the proximity principle, would the Outline Materials Handling Plan [APP-338], benefit from a commitment to source aggregates from nearby wharves wherever possible?
4.7	Road Safety	
Q4.7.1	Applicant	Construction Phase Accident Analysis Has the Applicant carried out an accident assessment for the construction phase? If not, please explain why?
Q4.7.2	Applicant	Combined Modelling and Appraisal Report (ComMA) Figures Can the Applicant explain why the accident reduction figures presented in the ComMA Appendix D [APP-526] are presented in terms of PIC/km rather than PIC/mvkm?
Q4.7.3	Applicant	Casualty Rates Is it the standard practice for the Applicant to express accident savings as a rate per kilometre as opposed to providing absolute savings in casualties and accidents? If so, please provide examples from other made DCOs.
Q4.7.4	Applicant	Accident Analysis Can the Applicant explain why monetised impact of accidents is the same across the three traffic scenarios? Intuitively one would expect accidents to increase proportionally with flows.
Q4.7.5	Applicant	Queuing onto Orsett Cock Does the Applicant agree that if queuing were to extend back along the Orsett Cock slip roads onto the A13/LTC mainline carriageways, this would present an unacceptable safety risk?
5.	Air quality	
5.1	Effects on Human Receptors	
Q5.1.1	Applicant	Baseline Can the Applicant explain why they consider 2016 as a base year remains representative for the air quality assessment? Has this base year been agreed with stakeholders?

ExQ1	Question to:	Question:
Q5.1.2	Applicant	<p>Baseline and Legislative Requirements</p> <p>The Air Quality Standards (AQS) Regulations 2010 states that the pollutant limit values for PM_{2.5} (by 2020) is 20 µg/m³, however, Table 2.4 of ES Appendix 5.2 – Air Quality Baseline Conditions [APP-346] states it is 25 µg/m³. Can the Applicant explain and rectify this anomaly?</p>
Q5.1.3	Applicant	<p>Methodology: Open Spaces for Human Users</p> <p>Paragraph 5.3.111 of ES Chapter 5 – Air Quality [APP-143] sets out the various human receptors which have been included in the assessment, but this does not include areas such as parks, open spaces and recreational facilities. Can the Applicant explain how the air quality impacts on human users (by people and communities) of such public amenity areas have been assessed?</p>
Q5.1.4	Applicant	<p>Methodology: Air Quality and Junctions</p> <p>DMRB LA 105 states that “<i>areas around junctions identified as sensitive to changes in air quality that can result in exceedances of air quality thresholds shall be assessed in greater detail</i>”.</p> <p>Can the Applicant clarify whether any junctions were highlighted as those sensitive to change and that speed banding has been applied sensibly across the model domain?</p>
Q5.1.5	Applicant	<p>Methodology</p> <p>Paragraph 5.6.11 of ES Chapter 5 – Air Quality [APP-143] states that PM_{2.5} has been considered through the results of the PM₁₀ modelling. The ExA notes that Paragraph 2.21.4 of DMRB LA 105 states that “<i>there should be no need to model PM_{2.5} as the UK currently meets its legal requirements for the achievement of the PM_{2.5} air quality thresholds and the modelling of PM₁₀ can be used to demonstrate that the project does not impact on the PM_{2.5} air quality threshold.</i>”</p> <p>However, given the recent governmental focus on reducing long-term average concentrations of PM_{2.5} (noting the adoption of The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (Jan 2023) and the Environmental Improvement Plan (2023)) can the Applicant provide further justification as to why the approach of considering the results of PM_{2.5} through the results of PM₁₀ is considered acceptable, especially as DMRB LA 105 does not categorically state that there is no need to model PM_{2.5}?</p>
Q5.1.6	Applicant	<p>Legislative Requirements</p> <p>Does the Applicant agree that The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (Jan 2023) and the Environmental Improvement Plan (2023) should now be included in Tables 1.1 and 1.3 of ES Appendix 5.5 – Air Quality Legislation and Policy [APP-349] respectively?</p>

ExQ1	Question to:	Question:
		<p>Can the Applicant also explain what implications the Environmental Improvement Plan's interim target of the highest annual mean concentration of PM_{2.5} not exceeding 12 µg/m³ by 31 January 2028 will have for the project and its human receptors noting that the interim target is within the construction period?</p> <p>Is it the Applicant's intention to update the Air Quality Assessment in light of the new Fine Particulate Matter Regulations and the Environmental Improvement Plan's interim target? If not, why not?</p>
Q5.1.7	Applicant	<p>Construction Phase Traffic Impacts</p> <p>The methodology for assessing construction traffic air quality impacts is explained in Paragraphs 5.3.22 to 5.3.35 of ES Chapter 5 – Air Quality [APP-143]. Whilst it is recognised that the assessment has followed DMRB LA 105 guidance, can the Applicant clarify that there would be no exceedances of AQS limit values during the construction phase?</p>
Q5.1.8	Applicant	<p>Operational Phase Impacts</p> <p>The modelled Annual Mean NO₂, PM₁₀ and PM_{2.5} in Base 2016, Do-Minimum (DM) 2030 and Do-Something (DS) 2030 Scenarios is presented in Tables 1.1 and 1.2 in ES Appendix 5.4 [APP-348]. The results are listed in Receptor ID number order.</p> <p>The Applicant is requested to update these Tables to advise of the corresponding map page for each Receptor in ES Figure 5.6 – Operations Phase Receptors and Results Maps [APP-180, APP-181, APP-182, APP-183] to provide easier cross referencing and to aid the ExA's understanding of the locations of receptors either already exceeding AQS limit values and/or those locations that will experience notable air quality change.</p> <p>The Applicant is also requested to provide two additional tables that extrapolate the NO₂ data from Table 1.1 and reorders it from the receptor experiencing the highest increase in NO₂ to the receptor experiencing the highest decrease. The same exercise shall be carried out for PM₁₀. A third table should also be provided following the same reordering process for PM_{2.5} from Table 1.2. All three tables should also show the sum total of receptors with increased concentrations and the sum total of receptors with decreased concentrations.</p> <p>Whilst the Applicant concludes that the Air Quality effects of the Project on human health are not considered to be significant, the revised tables requested above will enable the ExA and interested parties to more easily interrogate the data and to contemplate if and where mitigation may be required.</p>
Q5.1.9	Applicant	<p>Operational Phase Impacts</p> <p>While it is noted that the Applicant has followed DMRB LA 105 guidance to inform its judgement of significant air quality effects, the analysis demonstrates that increases in concentrations are substantially greater than decreases.</p>

ExQ1	Question to:	Question:
		<p>As Paragraph 5.12 of NPSNN requires the Secretary of State to give air quality considerations substantial weight where a project would lead to a significant air quality impact in relation to EIA, the Applicant is requested to provide clear presentation on the summary of impacts on human receptors where there is a more than 1% change in the air quality threshold but where the AQS limit values are not exceeded.</p>
Q5.1.10	Applicant	<p>Monitoring – Construction Phase</p> <p>Details regarding actions to be taken in case of air quality monitoring exceedance from dust is set out in Paragraph 5.5.10 of ES Chapter 5 – Air Quality [APP-143]. Measure i. in the list for “Actions in case of air quality monitoring exceedance (REAC Ref. AQ008)” states <i>“the Contractor, or a delegated representative, shall at the earliest reasonable opportunity, investigate activities on the site to ascertain whether any visible dust is emanating from the site or activities are occurring that are not in line with dust control procedures.”</i> Register of Environmental Actions and Commitments No. AQ008 (contained in ES Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan) [REP1-157] also repeats the measure.</p> <p>Can the Applicant clarify ‘earliest reasonable opportunity’?</p> <p>Can the Applicant also clarify if a detailed monitoring strategy has been developed, when monitoring will be undertaken, how the results will be interpreted (and by whom) and/or how mitigation measures will be secured for any exceedances?</p>
Q5.1.11	Applicant	<p>Monitoring – Operational Phase</p> <p>It is noted that the Applicant does not consider there to be any need for operational air quality monitoring for human health or compliance with AQS limit values but the ExA would like the Applicant to explain why it does not consider it necessary to monitor those receptors identified by the air quality assessment that have the greatest negative change in concentrations because of the Project.</p> <p>Can the Applicant also explain why monitoring wouldn’t be undertaken to test the long term trends and ensure that predictions in the ES are correct?</p>
Q5.1.12	Applicant	<p>River Traffic</p> <p>It is stated that emissions from river vessels have been considered within the Air Quality ES chapter [APP-143] and have been screened out. This is said to be considered appropriate based on the number of river vessels likely to be used.</p> <ul style="list-style-type: none"> • Is this not a contractor issue based on the methodology of construction alongside such choices as the number of tunnelling machines?

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> Some assumptions have been made in relation to river traffic. What level of sensitivity testing has been completed on the number of vessels and their usage? Should the contractor decide to make more use of river vessels than anticipated, what areas of the submission would be required to be amended and, what could be the resultant changes to the level of mitigation required?
5.2	Effects on Ecological Receptors and Designated Habitats	
Q5.2.1	Applicant	<p>Methodology</p> <p>Paragraphs 5.3.92 and 5.3.106 of ES Chapter 5 – Air Quality [APP-143] outline the approach taken regarding background nitrogen at ecological sites. Can the Applicant confirm which guidance was followed in developing the methodology set out in paragraphs 5.3.92 to 5.3.106?</p>
Q5.2.2	Applicant	<p>Methodology</p> <p>Paragraph 5.3.106 of ES Chapter 5 – Air Quality [APP-143] explains that different approaches were taken for different habitat types “<i>whether moorland (short vegetation) or forest (tall vegetation)</i>”. Can the Applicant explain how robust this approach is, given the differing ecological habitat types in the locality of the Proposed Development which do not consist of uniformly short or tall vegetation. What variables or flexibility have been included in the assessment to ensure that a worst-case scenario has been assessed?</p>
Q5.2.3	Applicant	<p>Sensitive Receptors</p> <p>DMRB LA 105 lists public open spaces as sensitive receptors in relation to their biodiversity and ecological functions. Can the Applicant confirm if there are any such spaces in respect of which biodiversity and ecological open space functions could be affected by the Proposed Development and how they have been included within the assessment?</p>
Q5.2.4	Applicant	<p>Nitrogen Deposition</p> <p>Can the Applicant provide details regarding the tool which was used to calculate nitrogen deposition associated with the road ammonia (NH₃) component and explain how this tool was used to assess impacts on NH₃ on designated sites?</p> <p>Can the Applicant explain how the nitrogen deposition sites were selected? Can the Applicant also provide clarity on the link between impacted sites and compensation sites?</p>
Q5.2.5	Applicant	<p>Modelling NO₂</p> <p>Plate 6.2 in ES Appendix 5.1 [APP-345] shows that there are three monitoring locations which are outside of the recommended 25% variation between the modelled and monitored total NO₂.</p>

ExQ1	Question to:	Question:
		<p>Gravesham Borough Council have identified a particular concern with site GR142, which is close to 60µg/m³, suggesting that at this limit there is a greater chance of exceedances of the 1-hour short term objective for NO₂. However, the modelling is predicting concentrations around 20µg/m³ lower than this at this location.</p> <p>Site GR142 is located adjacent to the A2 within the existing Air Quality Management Area (AQMA). It is located close to the Shorne and Ashenbank Woods SSSI. There is a risk therefore that results in this area may be underpredicting.</p> <p>The Applicant is requested to revisit the model verification around GR142 to demonstrate that it is not significantly underpredicting the impacts on the area. The Applicant shall report the reassessment to the ExA.</p>
Q5.26	Applicant	<p>Assessment</p> <p>Whilst it is recognised that the assessment has followed DMRB LA105 in considering effects from construction of under two years will not result in significant effects, can the Applicant confirm that there would be no exceedances of the AQS limit values at any receptors relevant to ecological function and biodiversity significance during the construction phase?</p>
Q5.27	Applicant	<p>Mitigation</p> <p>Mitigation measures for biodiversity are set out in the Project Air Quality Action Plan (PAQAP) [APP-350]. Can the Applicant confirm where in the DCO the PAQAP is secured?</p>
Q5.28	Applicant	<p>Additional Monitoring Sites</p> <p>The ExA has been advised [REP1-228] that the Applicant has been discussing additional monitoring sites.</p> <p>What is the effect on the proposed development and the dDCO if further mitigation is found to be required through the additional monitoring?</p>
6. Geology and soils		
6.1 Contamination		
Q6.1.1	Applicant	<p>Contaminated Land and Unexploded Ordnance (UXO)</p> <p>There are concerns, particularly with the land north of the Thames, relating to the spread of contamination as identified in Appendix 10.6 – Preliminary Risk Assessment Report [APP-427].</p>

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> • Can the Applicant set out the pre-commencement processes and where these are secured to provide assurance that all potential risks are found before damage occurs particularly in the areas where there have been highlighted data gaps? • Can the Applicant describe the remedial measures expected to be undertaken, when these are to be undertaken, how these will be reviewed for effectiveness and where these are secured? • How has the Applicant assessed the potential for any release of contaminants to have an effect on mitigation or habitat creation as a result of the Proposed Development?
Q6.1.2	Applicant Environment Agency (EA)	<p>East Tilbury Landfill</p> <p>It has been stated by the Environment Agency that the East Tilbury Landfill has potentially high levels of contamination including leachates. There are also concerns with the potential failure of the river frontage.</p> <ul style="list-style-type: none"> • How has the Applicant assessed the risk of the Proposed Development increasing the rate of failure of the river frontage? • Should the frontage show signs of deterioration either during the construction or operational periods, can the Applicant or the Environment Agency confirm that appropriate access routes and working space are available to enable works to reinforce the bank to take place? • Has the Applicant assessed the effect that such an event would have on riverine/ marine biodiversity? • Can the Applicant confirm that such risks are to be monitored and remediation will be undertaken if necessary? • How is monitoring and remediation secured in the dDCO?
<p>7. Tunnelling considerations</p>		
<p>Questions relating to tunnelling are due to be raised orally at Issue Specific Hearing 5 (ISH5) on 5 September 2023. The ExA has no further questions on this issue at the present time.</p>		
<p>8. Waste and materials</p>		
<p>8.1 Waste and materials: General</p>		
Q8.1.1	Applicant and Environment Agency	<p>Permitting</p> <p>Please provide an update in respect of the on-going permitting discussions? In the event that these do not progress as necessary can the Environment Agency set out the implications of this and whether any remedial mitigation could be secured through the DCO to overcome any outstanding matters?</p>

ExQ1	Question to:	Question:
Q8.1.2	Thurrock Council	<p>Excess Excavated Materials</p> <p>With particular regard to excavated material associated with the northern tunnel portal construction compound, please indicate if/ how you consider that the applicant's strategy for handling excess waste is adequate or otherwise? What measures do you consider should be secured within a DCO to ensure any excess excavated materials (ie those not re-used within the Order Limits) is handled appropriately?</p>
Q8.1.3	Applicant and Thurrock Council	<p>Waste Quantities</p> <p>Please provide an update on the preparation of the technical note being prepared by the Applicant and any on-going discussions between the parties?</p>
Q8.1.4	LPAs	<p>Waste Management</p> <p>Can the Local Authorities set out whether you consider:</p> <ul style="list-style-type: none"> • The measures in the dDCO, specifically the commitments in the Register of Environmental Actions and Commitments (REAC) [REP1-157] (eg Commitment MW007) to adhere to the waste hierarchy, are adequate in terms of waste management? • If not, please identify what alterations or additions you would consider to be necessary?
Q8.1.5	Applicant	<p>Waste Management (Recycling)</p> <p>Can the Applicant clarify its strategy for off-site recycling including an assessment of capacity at local facilities. Is it necessary to update the Commitments in the REAC [REP1-157] accordingly?</p>
Q8.1.6	LPAs and Environment Agency	<p>Waste Management</p> <p>Beyond the matters secured by the dDCO as currently drafted, and the consenting/ environmental permitting requirements that will apply, are there other matters in terms of waste management that you consider need to be clarified/secured?</p>
Q8.1.7	Applicant and LPAs	<p>Materials Handling</p> <p>Please could the Parties provide comments on what, if any, further use of wharves close to the Order Limits for the delivery of materials, particularly aggregates, could be utilised? If so, how should the Outline Materials Handling Plan [APP-338] be updated?</p>
Q8.1.8	Applicant	<p>Waste Material Monitoring</p> <p>The Applicant has indicated [REP2-064] that the Contractor(s) will report on waste generated, including that exported off-site. Can the Applicant provide details of how any deviations above the</p>

ExQ1	Question to:	Question:
		predicted amounts would be managed and how such procedures are/ could be secured in a DCO and the relevant certified documents?
Q8.1.9	LPA's and Environment Agency	<p>Monitoring Consultation/ Approval/ Timescales</p> <p>Section 11.8 of ES Chapter 11 – Noise and Vibration [APP-149] deals with monitoring. Can you provide your views on:</p> <ul style="list-style-type: none"> • The Applicant's strategy for waste and material management during construction? • The Applicant's strategy for waste and material management during the operational phase? • The Applicant's suggested approach to consultation and approval of these matters through the dDCO [REP2-004], as currently drafted, and the associated REAC within the CoCP [REP1-157]?
Q8.1.10	Applicant	<p>Monitoring:</p> <p>In the event that waste, or the provision of materials, rose above the anticipated levels, what measures would be put in place to manage and mitigate this? How would any remedial action be secured?</p>
9. Noise and vibration		
9.1 Baseline		
Q9.1.1	Applicant	<p>Survey/ Baseline</p> <p>With reference to the Baseline Noise Survey Information [APP-445], can the Applicant:</p> <ul style="list-style-type: none"> • Justify why data from 2018 represents a suitable baseline? • Explain why different time periods for monitoring were utilised at different locations? • Whether peak flows have been used for the noise assessment? • Why there are a number of locations where it is reported that the $L_{Aeq,T}$ is higher than the $L_{A10,T}$ for these receptors?
Q9.1.2	Applicant	<p>Baseline</p> <p>Can the Applicant confirm the date of the future baseline year?</p>
Q9.1.3	Applicant	<p>Baseline</p> <p>At paragraph 2.2.6 of ES Appendix 12.4 – Construction Noise and Vibration Assessment [REP1-169] it is indicated that there has been a reduction in model flow from the future year 2030 by 20% to be representative of 2025. Can the Applicant please provide a justification for this degree of reduction?</p>

ExQ1	Question to:	Question:
Q9.14	Applicant	<p>Receptors</p> <p>Thamesview School (southern portal), and Gravelpit Farm (northern portal) where not identified as a Noise Sensitive Receptors in ES Figure 12.4 [APP-312]. Can the Applicant explain the methodology for selecting the identified Noise Sensitive Receptors and why these sites were not identified as such?</p>
Q9.15	Applicant	<p>Receptors</p> <p>Can the Applicant explain what, if any, approach was taken to considering the effect of noise and vibration on any sites with environmental designations?</p>
Q9.16	Applicant	<p>Receptors</p> <p>The Air Quality chapter [APP-143] notes that ecological receptors were modelled in areas within 200m of the construction Affected Route Network (ARN). Can the Applicant explain why a similar approach was not taken in respect of noise and vibration?</p>
9.2 Methodology		
Q9.21	Applicant	<p>Survey Timescales</p> <p>In paragraph 12.3.9 of ES Chapter 12 – Noise and Vibration [APP-150], it is noted that ‘short term’ and ‘long term’ temporal scales are utilised. With reference to policy and/ or guidance, can the Applicant explain the suitability of this approach for the noise assessments undertaken?</p>
Q9.22	Applicant	<p>Long/ Short term effects:</p> <p>ES Chapter 12 – Noise and Vibration [APP-150] sets out ‘short term’ and ‘long term’ effects. Please provide an explanation for these terms?</p>
Q9.23	Applicant	<p>Local Circumstances:</p> <p>On a number of occasions, results of the assessment [APP-150] are adjusted by considering ‘local circumstances’.</p> <ul style="list-style-type: none"> • Please provide an overview of the method for applying ‘local circumstances’? • Please provide clarity as to the nature of each ‘local circumstance’ and how these have been taken into account/ affected the conclusions for each of the relevant receptors?
Q9.24	Applicant	<p>Noise Assessment: Portals</p> <p>In respect of the Operational Ventilation Noise Assessments for the portals (ES Appendices 12.2 and 12.3) [APP-442- and APP-443], can the Applicant:</p>

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> • Explain why monitoring was undertaken for varying (ie inconsistent) times/ durations for the identified receptors (ie 24-hour and 3-hour)? • Why was this considered to be representative for each receptor? • Explain why monitoring location LT-NML-5 was considered to provide a robust baseline, noting that this location is some distance from the identified sensitive receptors? • Why there appears to be differences between the baseline (noise monitoring surveys) and assessment locations? In addition, please explain how this would allow the assessment to be representative?
Q9.25	Applicant and Local Authorities	<p>Duration of Effects</p> <p>ES Chapter 12 – Noise and Vibration [APP-150] utilises guidance in respect of the duration of an effect contained within the Design Manual for Roads and Bridges (DMRB), (ie 10 or more days in a consecutive 15 day period, or more than 15 days in a six-month period).</p> <ul style="list-style-type: none"> • Please indicate how/ why you could be confident that the duration of effects would not be greater than those predicted in the ES? • Please indicate if any measures would be necessary to monitor any exceedances and, if so, whether any associated reactive mitigation measures would be necessary?
Q9.26	Applicant	<p>Short term Effects</p> <p>In ES Chapter 12 – Noise and Vibration (paragraph 12.6.190) [APP-150] the significant adverse effects are referred to as ‘short term’. With reference to the methodology, can the Applicant provide an explanation as to why these have been characterised as ‘short term’?</p>
Q9.27	Applicant	<p>Reasonable worst-case scenario</p> <p>In respect of noise and vibration, can the Applicant provide clarity as to how the ‘reasonable worst-case scenario’ has been identified.</p>
Q9.28	Applicant	<p>Reasonable worst-case scenario</p> <p>Can the Applicant confirm whether the peak traffic flows have been used to represent a worst-case scenario for the operational noise assessment?</p>
9.3	Construction	
Q9.3.1	Applicant	<p>Preparatory/ Preliminary works</p> <p>Can the Applicant explain how the preparatory/ preliminary works have been assessed in terms of noise and vibration?</p>

ExQ1	Question to:	Question:
Q9.3.2	Applicant:	<p>Timing</p> <p>For some of the assessments, the effects are subdivided by year during the construction period.</p> <ul style="list-style-type: none"> • Please provide a justification for this approach? • Please explain how any delay in the construction period could affect this assessment?
Q9.3.3	Applicant	<p>Mitigation</p> <p>ES Chapter 12 – Noise and Vibration (paragraph 12.6.114) [APP-150] sets out that dwellings on Henhurst Road and Jeskyns Road are predicted to experience significant effects but also notes that further interrogation of the results was undertaken and sets this out. From this, it then goes on to set out a number of mitigation measures which are concluded as not possible to implement and one measure as being under investigation. Noting this, can the Applicant clarify its conclusion in terms of the significance of effects on these dwellings and provide an update on the mitigation proposed?</p>
Q9.3.4	Applicant	<p>Duration</p> <p>ES Chapter 12 – Noise and Vibration [APP-150] indicates that Receptor CN 77 would be unlikely to constitute a significant effect on the basis of duration. Can the Applicant indicate why a more robust conclusion can not be reached for this receptor?</p>
Q9.3.5	Applicant	<p>Tunnel Boring Method</p> <p>The Applicant has notified the ExA of proposed changes to the development [AS-083]. This includes reference to the use of a single Tunnel Boring Machine (TBM) rather than 2 TBMs. In respect of both noise and vibration, can the applicant set out what different effects could occur using a single compared to 2 TBMs.</p>
Q9.3.6	Applicant	<p>Tunnel Boring Method</p> <p>There are a variety of types of TBMs available. Can the Applicant explain how this potential variety in technology has been considered in the assessment?</p>
9.4	Operation	
Q9.4.1	Applicant	<p>Mitigation</p> <p>Can the Applicant explain how the commitments in the Register of Environmental Actions and Commitments (REAC) contained within the Code of Construction Practice [REP1-157] would be delivered during the operational phase?</p>
Q9.4.2	Applicant	<p>Maintenance</p>

ExQ1	Question to:	Question:
		Can the Applicant explain the scale of maintenance work used to inform the operational assessment? In doing so, please set out the type, location and duration of maintenance works likely to take place and any likely significant effects that could result.
Q9.4.3	Applicant	<p>Mitigation</p> <p>Please clarify if any mitigation is relied upon to avoid likely significant effects that could arise from maintenance works; if so, please clarify/identify these?</p>
Q9.4.4	Applicant	<p>Mitigation</p> <p>At paragraph 12.6.201 of ES Chapter 12 – Noise and Vibration [APP-150], it is concluded that no dwellings would qualify under the Noise Insulation Regulations assessment scheme. Can the applicant please explain:</p> <ul style="list-style-type: none"> • Whether this conclusion is contingent upon any design features/ mitigation? • How the final assessment and verification as to eligibility under the Regulations (to be undertaken within the first year of the Project opening) is secured through the dDCO? • If any noise insulation works are found to be required through the final assessment, what timescales would be likely for the mitigation/measures to be implemented?
Q9.4.5	All IPs	<p>Mitigation</p> <p>ES Chapter 12 – Noise and Vibration [APP-150] contains tables with a column titled “Justification of significance conclusions”. This includes mitigation secured through the robust implementation off Best Practicable Means (BPM) to reduce noise levels below the Significant Observed Adverse Effect Level (SOAEL) with reference to a XXdB(A) figure. With regard to the mitigation methods proposed, do IPs agree that the figure indicated is achievable, if not please provide reasoning?</p>
Q9.4.6	Applicant	<p>Night-time Effects</p> <p>ES Chapter 12 – Noise and Vibration (Paragraph 12.6.127 (b)) [APP-150] notes that “<i>Nine dwellings: one dwelling (No. 2 Potash Cottages, Orsett) which reports a Minor beneficial change above a SOAEL during the daytime and night-time periods, with a further nine dwellings reporting a significant effect during the night-time only</i>”. These night-time significant effects do not appear to be listed in the summary. Can the Applicant confirm whether these are adverse significant effects and explain any potential mitigation considered in the assessment for these receptors?</p>
Q9.4.7	Applicant	<p>Indirect Beneficial Effects</p> <p>ES Chapter 12 – Noise and Vibration [APP-150] indicates there would be a number of indirect significant beneficial effects. Please could each of these effects be listed and explained individually?</p>

ExQ1	Question to:	Question:
Q9.4.8	Applicant	<p>Road Surfacing</p> <p>Can the Applicant explain how the maintenance / replacement of low road noise surfacing throughout the operating phase of the project will be secured in the DCO. Over time the highway will experience surface decays resulting in the need to maintain or replace the surface. What assurance is provided in the DCO that any resurfacing will meet the ES noise assessment?</p>
9.5 Monitoring		
Q9.5.1	Applicant	<p>Monitoring baseline</p> <p>Within ES Chapter 12 – Noise and Vibration [APP-150], it is indicated that there are some limitations to monitoring of the operational effectiveness due to the baseline understanding and existing noise emitters in the area. Can the Applicant provide further clarity as to the baseline information and how this will inform the monitoring strategy?</p>
Q9.5.2	Applicant	<p>Monitoring Approval/ Timescales</p> <p>Within paragraph 12.8.7 of ES Chapter 12 – Noise and Vibration [APP-150], it is stated that physical monitoring of noise levels as a means of verification will not be undertaken as part of the Project. Rather these would be confirmed ‘pre-opening’. Can the Applicant confirm:</p> <ul style="list-style-type: none"> • How this would be secured? • To what extent the relevant local authorities would be consulted? • What protocols would be put in place to ensure any breaches are remedied? • Subsequently, how would any remedial works be monitored/ verified to ensure they are effective?
Q9.5.3	Local Authorities	<p>Monitoring Consultation/ Approval/ Timescales:</p> <p>Section 12.8 of ES Chapter 12 – Noise and Vibration [APP-150] deals with monitoring. Can you provide your views on:</p> <ul style="list-style-type: none"> • At what stage should the details for the nature/ form and locations for monitoring be settled (ie post consent or should a greater degree of detail/ expectations be secured within a DCO)? • The Applicant’s approach to long term monitoring including considering deterioration? • Whether measures beyond those that would be secured under the REAC [REP1-157] (such as Commitment NV015) are necessary (for the preliminary works, construction and operational phases)?

ExQ1	Question to:	Question:
10.	Road drainage, water environment and flooding	
10.1	Consultation	
Q10.1.1	Applicant LLFAs Internal Drainage Boards (IDB)	<p>Consultation</p> <p>Appendix 14.2 – Water Features Survey Factual Report (1 of 2) [APP-454] paragraph 1.1.1 suggests that the extent of surveys were agreed with the Environment Agency. Were other statutory bodies consulted and if not, why not?</p> <p>What difference would be made to the survey limits if other Flood Risk Management Authorities were consulted?</p> <p>And consequently, what difference if any would be made to proposed development?</p>
10.2	Managing Surface Water	
Q10.2.1	Applicant	<p>Surface Water Flood Risk</p> <p>Document 6.3 Environmental Statement Appendices Appendix 14.6 - Flood Risk Assessment - Part 6, paragraph 8.2.4, [APP-465] suggests:</p> <p><i>“Some isolated pockets of surface water flooding within the curtilage of the highway would be lost and some would be partially lost. This may cause a minor redistribution of surface flooding beyond the curtilage of the Project road, but this is not considered to present a significant flood risk. Furthermore, any such redistribution would mostly lie within land for which National Highways would be seeking permanent acquisition.”</i></p> <p>There are similar paragraphs in the sections referring to the other lengths of the proposed highway. Considering the A13 junction at Baker Street in particular, although there is a similar concern wherever embankments or land raising are proposed, there have been instances of unintended consequences where isolated pockets of surface water flooding and/or redistribution of surface flooding has affected third party property. Can the Applicant advise the options that can be considered as being available to allow the detailed design process to deal with the redistribution of surface flooding without compromising existing property or existing drainage systems at the junction and other areas where embankments are to be sited adjacent to existing property?</p>
Q10.2.2	Applicant	<p>Infiltration Ponds</p> <p>For all the infiltration basins proposed:</p> <ul style="list-style-type: none"> • What method has been employed to determine the maximum size of the ponds, their depth and the necessary land take?

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> • Are the ponds intended to be dry ponds or have water in their base to support the project's ecological mitigation? • Should the ponds be expected to be dry, what allowance has been made for the infiltration rates with topsoil and grass / or other surfacing? • If the ponds are to be wet, again, what are their expected infiltration rates?
Q1023	Applicant	<p>Infiltration Ponds</p> <p>Overtopping of the infiltration basins has been noted as a residual risk in document 6.3 Environmental Statement Appendices Appendix 14.6 - Flood Risk Assessment - Part 6, [APP-465], however the mitigation suggests that "Overland flow paths would be established to manage any overtopped flows where appropriate [RDWE034].</p> <ul style="list-style-type: none"> • What has been considered as being suitable locations for this overland flow to discharge? Can it be confirmed that the discharge route has a likelihood of accepting the flow without detriment to existing land, property and infrastructure? • Have the submitted documents considered the risk of pollution or otherwise adversely affecting groundwater from potential overtopping of infiltration basins?
Q1024	Applicant	<p>Infiltration Pond at Park Pale</p> <p>Construction of a gravity highway drainage network incorporating new infiltration basin (Work No. 11 – as shown on sheet 3 of the works plans [APP-019]) is located to the east of the industrial development on Park Pale. On 6 July 2023 (USI-05), on Route 31: Bowesden Lane to Park Pale Farm it was noted that the proposed location of the pond is on land that is currently at a higher level than the existing highway and as such a gravity system is unlikely to work. Additionally, it is at the extremity of the proposed work areas surrounded by land that is to remain unaffected by the proposed works, Work parcel OSC1, 11 and to the north E3 (Ancient Woodland mitigation). The general fall of the land is high ground towards the North and East towards the A2/M2. The existing highway is the low point in the area.</p> <ul style="list-style-type: none"> • Can these works be implemented as proposed and, if so, how will they be implemented? • Have the potential effects of the excavation and subsequent rakes of banks been considered fully in the ES and other application documents? • What route would exceedance flows that could exit the pond basin follow and could they place existing or proposed infrastructure at risk?
Q1025	Applicant	<p>Embankments in Recognised Flood Plains</p>

ExQ1	Question to:	Question:
		<p>It is common for Flood Defences adjacent to 'Main Rivers', particularly those on flood storage areas to be considered falling under the provisions of the Reservoirs Act 1975.</p> <ul style="list-style-type: none"> • Has the Applicant considered all proposed embankments that would defend the highway or existing property etc from 'Main River' flooding as being subject to the requirements of the Reservoirs Act 1975? • If not previously considered, what changes would be required to the submitted documents should the appropriate embankments be classified as falling under the provisions of the Reservoirs Act 1975?
Q102.6	Applicant	<p>Embankments in Recognised Flood Plains</p> <p>It is noted that it is proposed to establish a pre-construction baseline for the Main River Defences adjacent to the River Thames while monitoring them during the construction period and for a period of at least two years after completion of the works to construct the tunnel.</p> <ul style="list-style-type: none"> • What is the level of expected ground movement, and the depth by which the flood embankments are expected to drop? • How quickly are the embankments to be reinstated? • Has the pre-raising of the embankments been considered, and if not, what could be the effect on the proposed embankment designs? • Do any effects in terms of risks to people or property arise from this consideration that have not already been documented in the ES? • Does the Environment Agency have requirements with respect to reinstatement timeframes?
Q102.7	Environment Agency	<p>Embankments in Recognised Flood Plains</p> <p>Which if any proposed embankments are likely, in your view, to require to be registered as a reservoir or be of such a nature that they should be maintained in such a manner required of impounding reservoirs etc?</p>
Q102.8	Applicant	<p>Hydraulic Models?</p> <p>Appendix 14.6 - Flood Risk Assessment - Part 10 [APP-477] suggests that there are models for specific areas of the project, namely the designated "Main Rivers" of Mardyke and West Tilbury Main. It is inferred that modelling has been undertaken for "Main Rivers" only.</p> <ul style="list-style-type: none"> • Have Hydraulic Models been produced for Ordinary Watercourse catchments?
Q102.9	Applicant	<p>Hydraulic Models</p>

ExQ1	Question to:	Question:
		<p>Appendix 14.6 - Flood Risk Assessment - Part 10 [APP-477] paragraph 4.1.2 suggests that there are no main rivers or ordinary watercourses in Catchment EFR-1. From the information provided it suggests that the adjacent land appears to have watercourses. There are also ponds within the wooded area.</p> <ul style="list-style-type: none"> • Have the potential effects for these water bodies been assessed and what effect on the proposals and the mitigation measures could there be if the effect could be detrimental? • How will the proposed project effect watercourses and the ability for future maintenance?
Q102.10	Applicant	<p>Overland Flow</p> <p>Paragraph 8.3.5 of Appendix 14.6 - Flood Risk Assessment - Part 6 [APP-465] suggests that there is no requirement to provide flood protection measures in Catchment EFR-1.</p> <ul style="list-style-type: none"> • Is there any concern about interrupting surface flow or dealing with exceedance flows?
Q102.11	Applicant	<p>Overland Flow</p> <p>Paragraph 9.2.17 of Appendix 14.6 - Flood Risk Assessment - Part 6 [APP-465] suggests that flow paths can be provided by culverting. Culverting can limit capacity in relation to overland flow.</p> <ul style="list-style-type: none"> • What modelling and design assumptions have been adopted in relation to afflux and how has this been minimised? • To what degree has exceedance flow management been considered within the current Rochdale Envelope?
Q102.12	Applicant	<p>Overland Flow</p> <p>In paragraph 9.2.18 of Appendix 14.6 - Flood Risk Assessment - Part 6 [APP-465], it is suggested that on at least one occasion there will be loss of a flow path. It suggests that part of the flow path catchment will be covered by the project road. What is likely to happen within the rest of the catchment?</p> <p>Could the project road act as a dam on the exiting flow path line? The degree to which the road will operate in this manner will be determined by its location in the surface water overland flow catchment. Water is likely to follow its own route to try to circumnavigate the dam. This could change the location of any offsite surface water flood risk and/ or give rise to afflux in areas of existing surface water flood risk.</p> <ul style="list-style-type: none"> • Have these possibilities been considered? • If so, how have they been managed? • If not, will these issues require any changes to project design?

ExQ1	Question to:	Question:
10.3	Managing Foul Water	
Q10.3.1	Applicant Water Companies (Anglian Water Services, Northumbrian Water Limited (operating as Essex & Suffolk Water))	<p>Foul Water Systems</p> <p>It is noted that connections to existing foul sewer systems will be required for some works such as the Tunnel Services Buildings, furthermore, being a rural area there may also be septic tanks or other small package sewage treatment plants and discharge systems etc that may be disturbed by the proposed works.</p> <ul style="list-style-type: none"> • Has the appropriate Water Company accepted that the buildings can be accommodated into the existing foul water sewer system, or is it envisaged that other methods of servicing these buildings and other works will be required? If other methods are envisaged, what are they? • What is the proposed method of dealing with any septic tanks and/or package treatment works that may be encountered as part of the proposed works?
10.4	Managing Water Supply	
Q10.4.1	Essex & Suffolk Water Applicant	<p>Water Supply</p> <p>It is noted that there is a draft agreement between the Water Company and the Applicant in relation to the supply of water for five years from commencement or 31 December 2031 whichever is the earlier. What are the possible consequences if water is required after the deadline noted and construction works are not completed?</p> <p>Is the quality of the water from the Linford Well adequate for use in the tunnel boring machines without treatment? If not, what treatment facilities will be required, what waste will be produced and how will that waste be managed? The Applicant should also set out how this has been assessed.</p>
Q10.4.2	Applicant	<p>Maintenance of Drainage Works</p> <p>The Applicant is requested to confirm that all watercourses, drains, sewers and other drainage and sewerage infrastructure within the construction sites, and those areas that are to be worked upon as mitigation areas, shall be the responsibility of the Contractor and/or the Highway Authority during the construction/operational period and returned to the appropriate authority and/or owner once the Construction/operational period is completed?</p> <p>Please list any specific sites where the above is not the situation alongside a description of the maintenance responsibilities and how these are actioned, and the reasoning for the position.</p> <p>Where mitigation works are proposed, such as tree planting or habitat construction, what allowances are being placed within the detailed design briefs etc as allowances for ordinary watercourse maintenance to occur? The Design Principles document [APP-516] commits to a bankside access</p>

ExQ1	Question to:	Question:
		track being incorporated into the design of the crossings on designated 'Main Rivers' only. (paragraph 14.5.9(a))
Q104.3	Applicant	<p>Calculation of Flows and Volumes</p> <p>It is suggested that the outline calculation of flows and volumes have been undertaken utilising indices and/or methodology that have recently been updated. The Applicant should confirm that the detailed design process will include the updating of these indices etc and the use of appropriate, up-to-date, software and processes.</p> <p>If the outline calculations have used, for example, different rates of increase on the different storm events than are now expected, or move from Flood Estimation Handbook (FEH) to Revitalised Flood Hydrograph model (ReFH) what would be the changes required to the submission to allow for the worst-case scenario?</p> <p>In low-lying land, for short duration storms in particular, it has been found that the worst-case scenario for small catchments can be found utilising Flood Studies Report (FSR) rainfall data. Would the use of this have any consequences to the submitted proposals?</p> <p>In Appendix 14.6 – Flood Risk Assessment - Part 5 [APP-464], paragraph 4.1.3 confirms “3 FEH delineated catchment boundaries are not reliable for small flat catchments, due to the resolution of the FEH national Digital Terrain Model.”</p> <ul style="list-style-type: none"> • Was use of the light detection and ranging process (LiDAR) the only method of checking the boundaries and if not, what other methods were employed?
Q104.4	Applicant	<p>Indirect effects</p> <p>In paragraph 2.3.6 in document 6.3 Appendix 14.5 – Hydrogeological Risk Assessment [APP-326], it suggests that “Watercourses or surface water bodies that have an impermeable or low permeability base and sides have a barrier to groundwater inflow ...” and that some ponds are similarly lined. It continues to conclude that the bodies will not be directly affected by the project, primarily through the influence of changes to the ground water regime, however has consideration of indirect effects been made?</p> <p>Could piling or other works that cause vibration have effects within the red line boundary and if so what effect could these effects have on the submitted documents?</p>
Q104.5	Applicant	Site Information

ExQ1	Question to:	Question:
	<p>Environment Agency Lead Local Flood Authorities (LLFA)</p>	<p>In document 6.3 Appendix 14.5 – Hydrogeological Risk Assessment [APP-326] (paragraph 3.6.16), it suggests that watercourse flow could be seasonal. Descriptions are not clear as to the results of the investigation.</p> <ul style="list-style-type: none"> • Is this flow into ground observed or assumed? • Could it have gone anywhere else? • Could it be weather dependent and/or reactive to ground water levels? <p>Additionally, within the submitted plans, 6.2 Environmental Statement - Figure 14.1 - Surface Water Receptors and Resources [APP-322], there are a number of ‘ordinary watercourses’ delineated which are isolated and connect to nothing.</p> <ul style="list-style-type: none"> • Where do these watercourses discharge? • What effect could interference with these watercourses have on the ground water and biodiversity of the area? • What measures are being proposed to protect these watercourses and have these measures accommodated within the submission or what amendments will be required? <p>In Appendix 14.2 - Water Features Survey Factual Report (2 of 2) [APP-455], it suggests in Figure 2 that the southern Ditch has “....Heavy vegetation etc...and discharge route could not be determined. Experience suggests that ditches not normally maintained from April to July or longer, dependent on a number of options. Is the provision of regular maintenance on these ordinary watercourses etc in this location considered to be particular important?</p> <p>It was suggested that there was no ditch in the location. Was there culverts or other discharge arrangements?</p> <p>For areas where maintenance operations are not clear from the Water Features Survey, what is being proposed, particularly in areas that are proposed for biodiversity or Nitrogen deficiency mitigation?</p> <p>Who is expected to undertake such maintenance works both during the construction phase and during the operational phase?</p> <p>How has this lack of understanding been accommodated in the analysis undertaken for the submission particularly in relation to the influence on biodiversity and/or flood risk? What effect would this have on the submission if not previously considered?</p>
Q104.6	Applicant	Construction phase drainage plan

ExQ1	Question to:	Question:
		It is noted that the Contractor is expected to develop a construction phase drainage plan to demonstrate how surface water runoff is to be managed both across the worksite and offsite. Given the programmed construction phase and the delays in commencing on site, should the temporary works design be undertaken to include climate change allowances up to 2030 or should they use the 'up to date' allowances over the construction period?
10.5 Water Bodies and Watercourses		
Q10.5.1	Applicant Environment Agency	<p>Mardyke</p> <p>In ES Chapter 14 [APP-152], it is suggested in paragraph 14.5.15 that:</p> <p>“k. A raised bund would be constructed to prevent formation of the new flow path from Golden Bridge Sewer to the Mardyke in Orsett Fen. The bund would be designed to provide the intended function during storm events up to the 1 in 1000-year with climate change allowance to 2130 and incorporate a freeboard allowance of 60mm.”</p> <ul style="list-style-type: none"> • 60 mm of freeboard seems small (just over 2 inches). What is the justification for the small freeboard allowance? What effect would a 'more normal' 300mm freeboard allowance have on the proposals? • Has the bund been considered as being subject to the requirements of the Reservoirs Act 1975? What effect would this designation have on the proposals?
Q10.5.2	Applicant	<p>Low Street Irrigation Reservoir</p> <p>Also in ES Chapter 14 [APP-152], it is suggested in paragraph 14.5.15 that:</p> <p>“o. The Low Street irrigation reservoir (located at Easting 567,023 and Northing 177,780) is groundwater fed. Utility corridors are proposed to the east, west and north of the reservoir (Work No. MU28 and Work No. MU33) and have the potential to form a barrier to groundwater flow, cause draining of groundwater that would otherwise flow towards the unlined reservoir or cause direct drainage from the reservoir. The spatial arrangement of the utility corridors and the below-ground materials shall be designed to prevent drainage from the reservoir, or barrier effects reducing groundwater flow to the reservoir (RDWE054).”</p> <p>Could the Applicant provide possible solutions at this stage to show that this can be delivered and are there any solutions that cannot be accommodated within the current Rochdale Envelope?</p>
Q10.5.3		The Thames and Medway Canal

ExQ1	Question to:	Question:
		<p>There is a proposed compound near the canal indicated on sheets 14 and 15 of the Works Plans [APP-019], which appears to have the potential of interfering with existing watercourse infrastructure. What mechanisms are proposed to minimise such interference?</p> <p>Additionally, it is suggested that use is to be made of the tow path as an access route. What is proposed to minimise damage to the tow path and likewise interference with the canal itself, (including the prevention of pollution etc)?</p>
Q10.54		<p>Watercourse Maintenance</p> <p>There are a number of watercourses within and on the red line boundary. What allowances have been made to enable the maintenance of watercourses, especially on the red line boundary and particularly where the Applicant may not control the watercourse?</p> <p>What measures are proposed to reduce the risk of flooding to third parties, particularly those sites outside the red line boundary, during both the construction and operational phases?</p> <p>Within the design briefs for the various construction works, including habitat creation, what is the expected methodology in protecting existing watercourses and retaining an ability to undertake future maintenance? What changes are required in the submitted documentation to secure such?</p>
10.6	Water Quality and Discharges	
Q10.6.1	Applicant	<p>Water Discharge</p> <p>In Chapter 14 [APP-152], it is suggested in paragraph 14.5.16 that there may be beneficial effects arising including</p> <p style="padding-left: 40px;">“a. Discharge rates from existing retention ponds retained by the Project shall be reduced by at least 50% by providing additional storage volumes, benefiting the flood regime of receiving watercourses in the Mardyke and West Mardyke Tributary catchments (RDWE035).”</p> <p>Are there environmental or other consequences of this action and are these all considered in the submitted documentation?</p>
Q10.6.2	Applicant Environment Agency	<p>Operational Surface Water Drainage Pollution Risk Assessment</p> <p>In Appendix 14.3 – Operational Surface Water Drainage Pollution Risk Assessment [APP-456] the assessment concludes that the objectives of the Water Framework Directive would not be compromised by discharge of routine runoff from the Project.</p> <ul style="list-style-type: none"> As the project has to go through the Detailed Design phase, what measures are envisaged and can these be accommodated within the Rochdale Envelope?

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> • How are the requirements to be secured to prevent the unintended dewatering of ecosystems during the construction phase? <p>Additionally, are all expected outfalls shown in the approximate location? What level of confidence is there that no further outfalls will be required?</p> <p>Paragraph 4.4.3 states “The results confirm that following treatment, with one exception, cumulative discharges do not result in pollution of the receiving water environment” and describes the location and issue in paragraph 4.4.4.</p> <ul style="list-style-type: none"> • Is this acceptable? • What amendments would be required to nullify the potential pollution?
Q10.6.3	Applicant	<p>Discharge to the River Thames</p> <p>Paragraph 4.1.1 of Appendix 14.4 Hydromorphology Assessment [APP-457] suggests that there are no effects on any surface water features. However, during the construction phase, it is proposed to discharge treated rainfall runoff (southern entrance) to a ditch in Filborough Marshes.</p> <ul style="list-style-type: none"> • Is the ditch designated as a “Main River” or an ordinary watercourse? • Who is drainage authority? • Is discharge ditch going to be tidelocked and if so, what are consequences? • Would it have the potential to affect any other watercourses in the catchment, and if so, have the effects been considered in the submission or have they been part of watercourses that have been excluded from the analysis? • If the tributaries have been excluded, what are the potential effects on the proposals if there are potential detrimental effects determined?
Q10.6.4	Applicant	<p>Discharge to the River Thames</p> <p>Paragraph 4.1.4 of Appendix 14.4 Hydromorphology Assessment [APP-457] describes a new discharge pipeline to the River Thames, to provide “... a <i>subtidal mid-water discharge for effective dilution and dispersal ...</i>”, “... to <i>maximise available dilution and mixing ...</i>”.</p> <p>If the Thames is tidal, the discharge system will be required to act as a storage system until the water level reduces to a level that would allow a discharge to occur. During low levels in the Thames a method of stopping the discharge will need to be designed.</p> <ul style="list-style-type: none"> • What type of mechanism is envisaged for this discharge system? • When it was not “high water conditions”, what effect will the storage system have with the ground water system and where will the exceedance flows be stored?

ExQ1	Question to:	Question:
		<ul style="list-style-type: none"> • What effect will there be when exceedance flows flow to a location that is not the River Thames?
Q1065	Environment Agency LLFAs Natural England Wildlife Trusts Environment Agency Applicant	<p>Mammal Ledges</p> <p>The Applicant proposes to introduce mammal ledges in culverts on watercourses that suggest that watercourses may be used by commuting or foraging mammals.</p> <ul style="list-style-type: none"> • Is it expected that the culvert should be designed to the full storm design parameters (including appropriate climate change additions) with the ledge remaining “dry”? • If not to what design storm should the culvert design reach? • What reduction in capacity is appropriate if the mammal ledge is submerged? • What changes to the submitted documents are required if the proposals do not assume the culverts are sized to meet the full design storm with the ledges remaining “dry”. • What is the maximum length that it is considered that mammals will use such ledges? • What is the effect on the proposals if there are culverts longer than the longest appropriate length of culvert, or do not meet the suggested capacity for “dry” ledges, including what additional mitigation works are to be required? <p>Do the Environmental Consultees have an opinion?</p>
11. Biodiversity		
11.1 Biodiversity Effects: General		
Q11.1.1	Applicant	<p>Impacts of the Project on Saline Lagoon Fauna and Flora</p> <p>The Proposed Development at the north tunnel entrance proposes a surface water drainage discharge into adjacent watercourse systems, and in particular, a ditch system exhibiting characteristics of a brackish / saline lagoon habitat. To what extent has the potential to change habitat in this way been considered within the EIA and what mitigation is secured to maintain the saline lagoon flora and fauna?</p> <p>What amendments would be required to the submission in relation to potential saline mitigation in particular, and other watercourse flow regime habitat in general?</p> <p>There remains a level of uncertainty over the availability of water for the wetland habitat creation measures that are proposed. The Applicant is requested to be clear what sources are available to provide the level of water expected for the habitat creation without detriment to the existing water ecosystem in the marshes and sunken streams, and how these are secured.</p>

ExQ1	Question to:	Question:
		It is suggested that existing “sinking” streams at Swillers Lane and Shorne lfield Farm, [REP1-408] may contribute to the ecosystem. What measures are to be employed to protect these sources and how is this to be secured?
Q11.12	Applicant	<p>Tunnelling vibration on the marine environment</p> <p>Environmental Statement Chapter 9 – Marine Biodiversity [APP-147] includes consideration of the tunnel construction. Although mentioned in paragraph 9.6.132, vibration appears not to be mentioned in the following paragraphs, the emphasis being on noise effects. The Applicant should clarify the assessed effects of vibration on the marine environment, that is both the River Thames, the Thames and Medway Canal and the ordinary watercourses under which the tunnel is being constructed. In addition to the direct and indirect affect benthic infauna and fish receptors, are there possible effects on the bird population and its potential use of the marsh area both inside and outside the designated sites. Are the birds likely to be affected by the changes to benthic infauna and fish receptors, or indeed are birds likely to feel the vibration in their own right and become effected? If so, what mitigation could be provided?</p>
11.2	Species	
Q11.2.1	Applicant	<p>Species Surveys Limitations</p> <p>It has been noted by a number of IPs that some species surveys have not been conducted across whole areas in an appropriate fashion or at an appropriate time of year. This has the potential to affect the design of the mitigation proposed alongside the detailed design of the project.</p> <p>Can the Applicant provide examples where the alleged deficiency in the survey process is justified and compensated within the documentation, or are there areas that may require the submission to be amended, and if so, what amendments are expected?</p>
Q11.2.2	Applicant	<p>Species Surveys limitations</p> <p>What are the implications in the submitted documentation for the IPs’ suggestion that there is a lack of full bryophyte surveys?</p>
11.3	Mammals	
Q11.3.1	Applicant	<p>Badgers</p> <p>Interested Parties (IP) suggest that the data has limitations based on timing and areas surveyed. Does the Applicant consider that additional surveys are required in order to complete the Detailed Design phase? What effect could there be on the assessment provided following completion of the surveys considered as being required to complete the Detailed Design phase?</p>

ExQ1	Question to:	Question:
11.4	Birds & Bats	
Q11.4.1	Applicant	<p>Short-term Habitat Loss</p> <p>The documentation submitted suggests that there will be an overall gain of habitats post construction, however there could be reduced habitat for nesting, roosting and foraging birds during the construction phase, including disturbance to birds within and outside of the Order Limits alongside bat roost and/or foraging and commuting habitat. Given that habitats can take time to establish, what measures are being placed on any contractor to mitigate this during the construction period?</p>
Q11.4.2	Applicant	<p>Categorisation of Bird Species</p> <p>NE has raised a query in relation to the categorisation of bird species associated with the Shorne Woods SSSI being given a county status in the assessment when, in the view of NE, these should be assigned a national status. Can the Applicant either provide justification for the approach taken or update the assessment to take this change into account.</p>
Q11.4.3	Applicant	<p>Breeding and Wintering Birds – Thames Estuary and Marshes SPA</p> <p>Can the Applicant set out the impact on the creation of wetland habitat should the introduction of seasonal work limitations for both over-wintering and breeding bird seasons be required?</p> <p>Are there other issues additional to water chemistry that could affect the introduction of such wetland habitat?</p>
11.5	Environmental Mitigation	
Q11.5.1	Applicant	<p>Badgers</p> <p>It has been suggested by IPs that habitat connectivity and fragmentation need to be considered, particularly through the construction period where loss of foraging area has been suggested. What is the expectation to be placed on any design team or contractor to address this concern, and how is it intended to be secured and measured? Is there a potential for significant effects to occur which has not been captured by the EIA?</p>
Q11.5.2	Applicant	<p>Monitoring of Success</p> <p>It is suggested that the application would benefit from <i>'a robust approach to monitoring the success of all ecological and landscape mitigation measures'</i> and that it should be based upon <i>'an 'indicators of success' approach which looks not just at the habitat establishment but also the species groups'</i>. [initially RR-0784] To what level does the submission meet with these suggestions, and what measures would be required to be put in place to match this expectation?</p>

ExQ1	Question to:	Question:
		What effect would this have on the submitted documentation?
Q11.53	Applicant	<p>Indigenous Planting</p> <p>Can the Applicant confirm that the Proposed Development will utilise indigenous species grown from seeds of local provenance to tie in with local vegetation when incorporating screening, wider offsite and ‘compensatory’ planting, and other habitat creation measures etc. How is the providence of the seed stock to be measured and an appropriate source base secured? If not, how will such a commitment be secured?</p> <p>Will there be any influence on the timetable of the construction period and associated amendments to the assessments submitted should there be limitations on available seed stock?</p> <p>Noting that it is proposed that planting will be used to create a more naturalistic edge to proposed attenuation ponds/wetland areas, to avoid an overly engineered appearance, etc, what effect is that likely to have on the design of the attenuation and infiltration systems, their future maintenance and sustainability? Could this have an effect on the adequacy of the ponds shown within the submitted documents and if so, what effect will that have within the submitted documents and analysis?</p>
Q11.54	Applicant	<p>Design Principles [APP-516]</p> <p>Table 4.3 ‘Project-wide design principles: Connecting processes’ makes a number of statements, however the Applicant is asked to clarify what allowance has been placed within the submitted documents if the design is amended following the process PRO.01 where comments and suggestions are raised by the National Highways Design Review Panel and are subsequently implemented?</p> <p>Similarly, in PRO.04, what is meant by “where reasonably practicable, within the constraints of the DCO”?</p>
11.6	Structures	
Q11.6.1	Applicant	<p>West Tilbury Main Culvert</p> <p>Designated ‘Main Rivers’ are shown on the statutory ‘Main River Map’.</p> <p>It is noted that minimising the length of X-EFR-2-01 is an embedded measure that is secured by Design Principle S9.10 (Application Document 7.5) [APP-516] but:</p> <ul style="list-style-type: none"> • Has the possible degradation of upstream habitat due to the long culvert becoming a “no-go” area for mammals and fish, been considered in the submitted Environmental Statement, if so, where? • What could be the effects on the conclusions of such an occurrence happening? What additional mitigation is likely to be required to be secured?

ExQ1	Question to:	Question:
Q11.6.2	Environment Agency	<p>West Tilbury Main Culvert</p> <p>The 'Main River Map' appears to be a statutory document that can be changed following processes within the Water Resources Act 1991.</p> <ul style="list-style-type: none"> • Should the Applicant review the proposals and offer an option to reroute the watercourse and reduce the culvert length, would the Environment Agency be content to redetermine the route and change the statutory map accordingly? • What information would the Applicant be required to submit to allow this to occur and to whom should the submission be to? <p>Noting the limitations identified in ES Appendix 8.20 Paragraph 4.2.39 and comments submitted by the Environment Agency [RR-0298], what additional steps could be considered to overcome the effects from the installation of culverts both in terms of effectiveness and implementation impacts on the fragmentation of habitats?</p>
11.7 Statutory Processes		
Q11.7.1	Natural England	<p>SSSI Designation</p> <p>Can Natural England continue to provide an update on the progress with the notification of land at Tilbury as a possible Site of Special Scientific Interest and confirm when a decision is likely to be made? The ExA would welcome notification at times when the situation changes.</p>
11.8 Intra-project effects		
Q11.8.1	Applicant	<p>Intra-project effects</p> <p>Please identify where the intra-relationships between terrestrial biodiversity and cultural heritage / landscape and visual /population and human health aspect assessments are considered? What potential factors were considered and how were these assessed? Or provide justification as to why these assessments were scoped out of assessment.</p>
11.9 Habitats Regulations Assessment (HRA): Overarching Questions		
Q11.9.1	The Applicant, Natural England and Statutory Parties	<p>Technical and Advisory Notes</p> <p>The ExA seeks clarification whether all technical notes and advisory notes being developed and shared between the Applicant and statutory bodies have also been submitted to the Examination? Please provide a table signposting to the location of these within the Examination Library, or, where notes have not been submitted, supply copies.</p>

ExQ1	Question to:	Question:
		<p>The following documents are noted as examples of those understood by the ExA as not having been supplied to the Examination, but this is not a closed list:</p> <ul style="list-style-type: none"> • Natural England Advisory note on inconsequential nitrogen dioxide (NOx), 11 April 2023. • Technical notes on Coalhouse Fort water supply, June 2022 and February 2023. • Technical advice on underwater noise, 24 April 2023. <p>Please also ensure that where copies of documents are provided that they are consistently titled and dated so that where references are made in the main text, it is clear which document they refer to.</p>
Q11.92	The Applicant	<p>Updated HRA Report</p> <p>Please can the Applicant provide an updated HRA Report that incorporates all updated information relevant to the HRA process supplied in technical documents submitted to the Examination, such as [REP2-068]?</p>
Q11.93	The Applicant	<p>Apparently Unreferenced Effects on the Southern North Sea Special Area of Conservation (SAC)</p> <p>The ExA notes reference to the Southern North Sea SAC (and its harbour porpoise qualifying feature) in ES Chapter 9 - Marine Biodiversity [APP-147] as a receptor that could be affected by the Proposed Development. However, this SAC is not referenced within the HRA Report [APP-487]. Please can the Applicant explain why it was not considered within the HRA LSE screening and provide an update to the HRA Report as necessary?</p>
Q11.94	Natural England	<p>European Site and Features within Scope</p> <p>Please can NE state whether it considers that the Applicant's HRA Report [APP-487] has correctly identified the European sites and features that could be affected by the Proposed Development?</p>
Q11.95	The Applicant, Natural England and Statutory Parties	<p>Pathways to Likely Significant Effects (LSE) on European Sites</p> <p>Please can IPs state whether they agree that the Applicant's HRA Report [APP-487] identifies all the potential pathways that could lead to an LSE on the European sites, and if not, identify any additional pathways they consider should be included in the assessment?</p>
Q11.96	Natural England	<p>Baseline Ecological Data Collection</p> <p>Is NE satisfied that the Applicant's baseline ecological data collection has been sufficient to support the baseline for the HRA and the conclusions at each stage? If not:</p> <ul style="list-style-type: none"> • where do you consider there are any gaps in information? • what are the implications for the assessment conclusions?

ExQ1	Question to:	Question:
Q11.97	The Applicant	<p>Caveats on Mitigation: Adequacy of Security</p> <p>The ExA notes the comments of Natural England [REP1-262] and other IPs on the outline level of detail provided in the mitigation control documents and the use of caveats such as 'where reasonably practicable' in relation to the delivery of certain measures relied upon in the HRA. Please can the Applicant explain:</p> <ul style="list-style-type: none"> • how the SoS can be confident that required mitigation would be implemented such that the identified effects would be controlled; and • in the event that it was not practicable to implement the mitigation, how it would be ensured that significant effects would not occur?
Q11.98	The Applicant, Natural England and Statutory Parties	<p>In-combination Assessment Methodology</p> <p>The HRA Report [APP-487] states that it considered the list of plans and projects within ES Chapter 16: Cumulative Effects for the purposes of the in-combination assessment but notes that this was "amended for the HRA to ensure compliance" with that process. Several IPs have raised concerns in relation to the methodology for the selection of projects for the in-combination assessment and the ExA notes that there is ongoing discussion with NE in relation to the data used for traffic modelling.</p> <ul style="list-style-type: none"> • please can the Applicant provide a list of the other plans and projects that were considered in the HRA in-combination assessment; • please can NE and relevant IPs confirm if they are satisfied that the in-combination assessment correctly identifies other plans and projects that could potentially contribute to in-combination effects; and • please can NE and the Applicant provide an update on resolving the queries around the traffic modelling data used for the in-combination assessment?
11.10	HRA: Thames Estuary and Marshes SPA and Ramsar Site	
Q11.10.1	The Applicant	<p>Conservation Status of the Thames Estuary and Marshes SPA and Ramsar Site</p> <p>Please can the Applicant provide the current conservation status of the Thames Estuary and Marshes SPA and Ramsar site.</p>
Q11.10.2	Natural England	Underwater Noise

ExQ1	Question to:	Question:
		Please confirm whether you are satisfied that the Applicant's technical information contained in dSoCG Annex C.8 [REP2-009] provides sufficient evidence to confirm the conclusion of no LSE on Thames Estuary and Marshes SPA / Ramsar site from underwater noise?
Q11.103	The Applicant	<p>Dust Control</p> <p>Dust control measures considered integral to the project design are identified in HRA Report paragraphs 3.3.5 to 3.3.8 [APP-487]. Some of these measures are caveated with "where practicable" indicating that in some situations, there could be potential for dust emissions to occur. How would the Applicant ensure control at source such that there is no pathway for an impact to occur either alone or in combination with other plans or projects?</p>
Q11.104	Natural England	<p>Groundwater Quality, Monitoring and 'No LSE' Conclusion</p> <p>The Applicant has screened out groundwater quality and quantity effects on the Thames Estuary and Marshes Ramsar site both alone and in combination as no features of the Ramsar site are considered to be groundwater dependent. However, a commitment has been included within the REAC [REP1-157] for groundwater monitoring during construction for this site on the basis of potential for unexpected impacts. With reference to the potential for an impact pathway to the Ramsar site, can NE explain the reasons for requesting this measure, and whether this affects the conclusions of no potential for LSE for relevant qualifying features?</p>
Q11.105	The Applicant	<p>Coalhouse Fort Mitigation</p> <p>Can the Applicant provide an update on progress with the indicative detailed design discussions with stakeholders and the availability of sufficient water to meet the habitat goals at this site? Please also submit a copy of the technical note on flood modelling being prepared for the Environment Agency for the end of August 2023 once this is available.</p>
Q11.106	The Applicant	<p>Coalhouse Fort Mitigation</p> <p>Can the Applicant confirm how long it is anticipated it would take to provide fully ecologically functional land at Coalhouse Fort to mitigate for the effects on Thames Estuary and Marshes SPA / Ramsar site prior to the start of relevant construction activities?</p> <ul style="list-style-type: none"> • What effect would this have on the construction programme? • How would the Applicant demonstrate that the site is ecologically functional?
11.11	HRA: Epping Forest SAC	

ExQ1	Question to:	Question:
Q11.11.1	The Applicant, Natural England	<p>Air Quality and M25 Junctions 26 – 27 Speed Limit</p> <p>It is noted that the reduction in speed limit between M25 Junctions 26 and 27 is only suggested to take effect for a duration of four years from the year of opening of the Proposed Development. What confidence does the Applicant have that the speed limit would only be required for four years and has this measure been agreed with Natural England?</p>
Q11.11.2	The Applicant	<p>Air Quality and M25 Junctions 26 – 27 Speed Limit</p> <p>As the reductions in the speed limit westbound between M25 Junctions 27 and 26 are not included in the Project Air Quality Action Plan and are currently identified on a 'without prejudice' basis, can the Applicant confirm how this reduction in speed limit would be implemented and which mechanism it would be secured through?</p>
Q11.11.3	Natural England	<p>Air Quality Measures</p> <p>Please can NE state, in light of the information contained within the Applicant's 'Without prejudice assessment of the air quality effects on European sites following Natural England advice' [REP2-068], whether it remains of the view that measures are required to mitigate potential air quality effects, alone and/ or in combination on Epping Forest SAC?</p>
12. Physical effects of development and operation		
12.1 Historic Environment & Archaeology		
Q12.1.1	Applicant	<p>Planning Statement Clarification</p> <p>Paragraph 6.5.216 of the Planning Statement [APP-495] states that "Table 6.10 within ES Chapter 6: Cultural Heritage provides a summary of cultural heritage significant effects."</p> <p>Table 6.10 does not exist in Application document 6.1, the Applicant should therefore correct this inaccuracy and advise the ExA of the correct reference point.</p>
Q12.1.2	Applicant	<p>Cultural Heritage Chapter 6 Clarification</p> <p>Paragraph 6.6.9 of ES Chapter 6 – Cultural Heritage (v.2) [AS-044] states that "Those assets that would be completely removed by construction of the Project are listed in the Assessment Tables (Appendix 6.10, Section 1.9 (Application Document 6.3))."</p> <p>There is no section 1.9 in Appendix 6.10 of Application Document 6.3 [AS-053]; the Applicant should therefore correct this inaccuracy and advise the ExA of the correct reference point.</p>
Q12.1.3	Applicant	<p>Cultural Heritage Chapter 6 Clarification</p>

ExQ1	Question to:	Question:
		<p>There are multiple inaccuracies in ES Chapter 6 – Cultural Heritage (v.2) [AS-044] where it cross refers to specific Tables within Chapter 4: EIA Methodology (Application Document 6.1) [APP-142]. Some examples are below:</p> <ul style="list-style-type: none"> Paragraph 6.3.74 states that <i>“the significance of effect is determined in accordance with Table 4.4 of Chapter 4: EIA Methodology. An effect of moderate adverse significance or higher is considered to constitute a significant effect (Table 4.5 of Chapter 4: EIA Methodology).”</i> <p>There is no Table 4.5 in Chapter 4: EIA Methodology [APP-142]</p> <ul style="list-style-type: none"> Paragraph 6.6.2 states that <i>“the assessment considers the value/sensitivity as presented in Table 6.3 and impact magnitude criteria based on DMRB LA 104 (Highways England, 2020b), and the significance of effects has been determined in accordance with the matrix provided in Table 4.4 of Chapter 4: EIA Methodology and through the use of professional judgement.”</i> <p>The significance of effect matrix is Table 4.3 (and not Table 4.4);</p> <ul style="list-style-type: none"> Paragraph 6.6.4 states that <i>“baseline information for the assets considered here is presented in Section 6.4 above and in more detail within the DBA (Appendix 6.1, Application Document 6.3). The assessment considers the value as presented in Table 6.4 of this chapter and the impact magnitude criteria set out in Table 4.3 of Chapter 4: EIA Methodology (Application Document 6.1).”</i> <p>The impact of magnitude criteria is set out in Table 4.2 (and not Table 4.3).</p> <p>In addition to the examples above, the Applicant should review all cross references to Chapter 4: EIA Methodology [APP-142] within ES Chapter 6 – Cultural Heritage (v.2) [AS-044] and make corrections. An updated clean and tracked changes version of ES Chapter 6 – Cultural Heritage shall be submitted at Deadline 4.</p>
Q12.14	Applicant	<p>Categorisation of Harm</p> <p>Paragraph 6.3.76 of ES Chapter 6 – Cultural Heritage (v.2) [AS-044] sets out the applicant’s position in terms of where the threshold for ‘Substantial Harm’ is met (being total loss of an asset). It adds that in DMRB LA 104 terms this would be described as a major adverse impact and large or very large adverse significance of effect.</p> <p>Can the Applicant clarify its position on what level of impact/significance of effect amounts to “less than substantial harm”?</p> <p>In the same paragraph of Chapter 6, the Applicant states that <i>“the assessment in Section 6.6 of this chapter identifies whether an effect is significant in EIA terms and whether it constitutes substantial harm or less than substantial harm to a designated, or equivalent value, heritage asset.”</i> Table 6.6 within Chapter 6 seemingly identifies those heritage assets that would experience substantial harm,</p>

ExQ1	Question to:	Question:
		<p>yet there is no corresponding Table identifying heritage assets that would experience less than substantial harm. The Applicant shall provide a corresponding table.</p>
Q12.15	Applicant	<p>Categorisation of Harm Paragraph 6.6.9 of ES Chapter 6 – Cultural Heritage (v.2) [AS-044] states that <i>“The Project would result in substantial harm (in NPSNN terms) to a number of designated heritage assets following mitigation, identified in the assessment text below and summarised in Table 6.6 of this chapter. Where the Project would result in less than substantial harm to a heritage asset following mitigation, this has not been stated explicitly in the text.”</i></p> <p>Why has the Applicant not explicitly identified the assets that are due to experience less than substantial harm? Paragraph 5.134 of the NPSNN 2014 and Paragraphs 199 and 202 of the National Planning Policy Framework are relevant considerations stating that the harm should be weighed against the public benefits. The assets experiencing a degree of less than substantial harm (with or without mitigation) therefore need explicitly documenting. The Applicant is requested to provide this information. The Applicant may wish to combine its response with Q12.1.4.</p>
Q12.16	Applicant	<p>Methodology – Significance of Effects Paragraph 4.5.21 of ES – Chapter 4 – EIA Methodology [APP-142] states that <i>“significance of effects have been determined taking into account the identified value (sensitivity) and impact magnitude, using a matrix approach as set out in DMRB LA 104 (Highways England, 2020c). This matrix is reproduced in Table 4.3 and descriptions of the significance categories in the matrix are provided in Table 4.4.”</i> In table 4.4 the significance category ‘slight’ is classed as an effect that is not material to decision making.</p> <p>These tables have been used to inform the cultural heritage assessment contained in ES Chapter 6 (v.2) [AS-044].</p> <p>However, ‘slight’ adverse significance of effects to heritage assets in the low, medium, high and very high value heritage asset categories would most likely be classed in national planning policy terms as “less than substantial harm” (see judgment James Hall v City of Bradford ([2019] EWHC 2899 (Admin))) which ruled that even minimal harm must fall to be considered within the category of less than substantial harm). As noted in Q12.1.5 above, less than substantial harm needs to be weighed against the public benefits of the proposal. The Applicant is asked to explain and justify why it is considered appropriate to disregard ‘slight’ adverse effects to designated heritage assets as not</p>

ExQ1	Question to:	Question:
		material to the decision making process when there would be clear conflict with national policy that gives weight to those impacts?
Q12.1.7	Applicant	<p>Methodology – Value of Heritage Assets</p> <p>Paragraph 5.131 of the NPSNN 2014 states that the designated heritage assets of the highest value comprise World Heritage Sites, Scheduled Monuments, Grade I and II* Listed Buildings, Registered Battlefields and Grade I and II* Registered Parks and Gardens.</p> <p>The Applicant is requested to explain why it has only given a ‘high value’ and not a ‘very high value’ to Grade I and II* Listed Buildings and to the Grade II* Cobham Hall Registered Park and Garden? Heritage Value Table 6.3 contained in ES Chapter 6 (v.2) [AS-044] is clearly at odds with Paragraph 5.131 of the NPSNN 2014.</p> <p>The Applicant is also asked to advise whether the underestimate of the value of such assets could affect the overall magnitude of impact and significance of effect assigned to such assets as a result of the project, and if not, why not?</p>
Q12.1.8	Applicant	<p>Maritime Archaeology</p> <p>The draft Archaeological Mitigation Strategy and outline Written Scheme of Investigation (oWSI) [APP-367] does not consider the river, or any marine or maritime archaeology, nor does the Application identify an inter-relationship with marine biodiversity.</p> <p>Whilst there is a requirement through Requirement 9 of Schedule 2 of the dDCO for the Applicant to produce a detailed archaeological written scheme of investigation, based on the outline scheme, there is no specific consideration of the river, nor any marine or maritime archaeology therein.</p> <p>The Applicant shall explain the strategy for dealing with potential marine or maritime archaeological material, particularly during construction of the tunnel and update the oWSI as appropriate.</p>
Q12.1.9	Applicant	<p>Organic Deposits – Baseline Monitoring</p> <p>Non-designated organic deposits and remains of possible national importance that owe their significance to waterlogging are not adequately considered in the ES nor in the draft Archaeological Mitigation Strategy and oWSI [APP-367]. Historic England require baseline monitoring for the hydrological environment of areas of impact to allow a model to be developed which can be considered in relation to the development proposals and so that appropriate mitigation by design and/or remedial works can be agreed upon.</p> <p>The Applicant shall provide comment on the feasibility of meeting the request of the Historic England and any timeframe for providing the information and/or outline any relevant concerns.</p>

ExQ1	Question to:	Question:
Q12.1.10	Applicant Local Authorities Historic England	<p>Waterlogged Organic Deposits</p> <p>A strategy has been included in the oWSI [APP-367] to address any unexpected finds (Sections 7.1.14 and 7.3.127). Section 7.1.14 adds that if the relevant local authority finds that further investigation is needed that no construction would take place within 10m of the remains until further investigation can take place. However, if waterlogged remains are discovered, a greater stand-off may be more appropriate to ensure that the area is not accidentally dewatered before the mitigation strategy is implemented.</p> <p>Does the Applicant agree to amending the oWSI to allow the relevant local authority to set a greater stand-off distance for unexpected waterlogged finds?</p> <p>Local Authorities and Historic England shall confirm what would be sufficient to address this issue.</p>
Q12.1.11	Applicant Gravesham Borough Council	<p>Missing Archaeological Fieldwork</p> <p>No archaeological fieldwork appears to have been undertaken in the area immediately east of Thong Lane, to the north of Cascades Leisure Centre. There is potential for the land to contain iron age assets, which may be harmed or lost when the land is subsequently regraded to create Chalk Park.</p> <p>Can Gravesham Borough Council advise when they would like this assessment undertaken and how they would like to see this captured in the oWSI [APP-367]?</p> <p>Can the Applicant explain any constraint to undertaking such fieldwork?</p>
Q12.1.12	Applicant	<p>Missing Archaeological Fieldwork</p> <p>Paragraphs 2.7.4 and 2.7.5 of ES Chapter 2 – Project Description [APP-140] state that “a series of desktop studies, geophysical surveys, and a programme of archaeological trial trenching (ATT) running from 2019 to 2021 was carried out across the Project. Further investigation, which could include geophysical survey, digging specialist test pits, fieldwalking and ATT, is likely to be required in a small number of locations where access was not available during the ATT programme.”</p> <p>Can the Applicant advise what sites are still subject to further investigation and when is it proposed to carry out the work?</p>
Q12.1.13	Applicant	<p>1-2 Grays Corner Cottages</p> <p>Can the Applicant advise whether it has assessed the feasibility of dismantling the assets and moving them to an alternative location for their reassembly, and the extent to which their significance could be retained by doing so. If the Applicant hasn't carried out a feasibility assessment it should justify why not or provide the assessment by Deadline 6.</p>

ExQ1	Question to:	Question:
Q12.1.14	Applicant	<p>Murrells Cottage, 1 and 2 Stanford Road</p> <p>The Applicant has stated that demolition is the only option for this subdivided listed building, however, the Applicant should set out</p> <p>a) a clear statement identifying what factors determine its demolition in terms of highway design and engineering, and</p> <p>b) why the asset cannot be dismantled and moved to an alternative location for its reassembly, and the extent to which its significance could be retained by doing so.</p>
Q12.1.15	Applicant	<p>Thatched Cottage, Baker Street</p> <p>Historic England consider that of the listed buildings proposed for demolition that the Thatched Cottage has the higher overall potential for relocation. Can the Applicant advise whether it has assessed the feasibility of dismantling the original part of the asset (not the later extensions or outbuildings) and moving it to an alternative location for its reassembly and the extent to which its significance could be retained by doing so? If the Applicant hasn't carried out a feasibility assessment it should justify why not or provide the assessment by Deadline 6.</p> <p>Can the Applicant also advise on whether the relocation of the building could be a candidate for a Legacy Project for training/upskilling in traditional building techniques? If not, why not?</p>
Q12.1.16	Applicant	<p>Undesignated Heritage Assets, Ockendon Road</p> <p>Historic England disagrees with the Applicant's assessment of significance for Project IDs 4153, 4154, 4155, 4156, 4157, and 4775 and 4776 (Estate House, 1, 2, 3 & 4 Bridge Cottages, Larwood Cottage and The Rosery), which are all proposed for demolition. They consider that their group value has been overlooked (along with Nos. 1-2 Cherry Orchard Cottages, which have not been assessed) and that their demolition would result in substantial harm and the total loss of significance of those assets.</p> <p>The Applicant is asked to revisit their assessment of these non-designated heritage assets with group value in mind and to provide the ExA with an updated position on the level of harm when assessed as a group as opposed to individually.</p>
Q12.1.17	Applicant	<p>Undesignated Heritage Assets, Homes for Heroes, Thong</p> <p>Historic England disagrees with the Applicant's assessment of significance for Project IDs 1561, 4401-4403, 4597-4600 (Homes for Heroes), whose setting would be notably altered. They consider that their group value has been overlooked and that the project's impact on the non designated assets would be higher than reported (moderate adverse).</p>

ExQ1	Question to:	Question:
		The Applicant is asked to revisit their assessment of these non-designated heritage assets with group value in mind and to provide the ExA with an updated position on the level of harm when assessed as a group as opposed to individually.
12.2	Landscape Impact including riverscapes and visual severance	
Q122.1	Applicant	<p>Methodology</p> <p>Can the Applicant affirm that it has followed the Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3)? Essex County Council have identified that recreational receptors on Public Rights of Way have been classed as having the same sensitivity as transport receptors, which does not align with GLVIA3. The Applicant should explain this circumstance.</p>
Q122.2	Applicant	<p>Nitrogen Deposition Sites</p> <p>Paragraph 4.4.4 of ES Chapter 4 – EIA Methodology [APP-142] states that “<i>the DCO application documents do not specify in detail the design and future management regime for the habitat creation sites proposed as compensation for the effects of nitrogen deposition. The design and management regimes for these locations would be further developed as part of the detailed design, in accordance with the control plan documents including the Outline Landscape and Ecology Plan (oLEMP) (Application Document 6.7), Design Principles (Application Document 7.5) and the Environmental Masterplan (ES Figure 2.4: Application Document 6.2).</i>”</p> <p>The Applicant should explain what affect this might have on the findings of the Landscape and Visual Impact Appraisal?</p>
Q122.3	Applicant	<p>Photomontage Reliability 1</p> <p>If detailed design of the bridges and structures has not been completed (particularly but not least the viaducts in Orsett Fen and Mardyke), how can the ExA be confident that the photomontages produced are an accurate representation of the impact of those structures in the landscape?</p> <p>Can the Applicant also advise whether the photomontages of other National Highways NSIP schemes have been revisited post construction to determine validity and success of the renditions?</p>
Q122.4	Applicant	<p>Photomontage Reliability 2</p> <p>The ExA is concerned that the maturity of some of the landscaping at year 15 after opening may be overestimated; this has also been identified by Natural England in their Written Representation [REP1-262] at Paragraph 6.1.58, with specific reference to viewpoint S-05a.</p>

ExQ1	Question to:	Question:
		<p>The Applicant is therefore asked to review the photomontage set contained in Figure 7.19 [APP-244, APP-245, APP-246, APP-247] and to make any adjustments necessary, not least to viewpoint S-05a. Any adjustments should be identified with a resubmission including tracked changes commentary.</p>
Q1225	<p>Local Authorities Kent Downs AONB Unit Natural England</p>	<p>Mitigation Planting and Photomontages</p> <p>It is noted that Register of Environmental Actions and Commitments No. LV003 (contained in ES Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan) [REP1-157] states that “<i>the first five years of vegetation establishment would be overseen by an Environmental Clerk of Works</i>” and that “<i>failed vegetation in this period would be replaced.</i>”</p> <p>Can the Local Authorities, Kent Downs AONB Unit and Natural England advise whether this period of time is sufficient when landscape mitigation is so heavily relied upon to minimise adverse landscape and visual effects and air quality effects of the project?</p>
Q1226	Applicant	<p>Landscape Character – Regrading of Sensitivity and Effects</p> <p>Several IP’s and Statutory Parties have identified that the Cobham Sub-area was assigned a ‘very high’ sensitivity in the 2020 version of the Landscape and Visual Impact Assessment (LVIA), and that no justification for the reduction in sensitivity to ‘high’ in the current assessment is provided and there has been no change in the baseline situation.</p> <p>The magnitude of effect on the West Kent Downs Sub-areas Shorne and Cobham has also been downgraded since the 2020 version from ‘Moderate Adverse’ to ‘Minor Adverse’ in the 2022 submission at Design Year resulting in a diminished significance of effect.</p> <p>Pursuant to DMRB LA 104 EIA Methodology, while ‘moderate’ residual effects can be considered to be material in decision making, ‘slight’ (or minor) residual effects are not material.</p> <p>The Applicant should provide justification for these downgrades as they have the potential to underplay the effects.</p>
Q1227	Applicant	<p>Weight of Adverse Effects on AONB</p> <p>Can the Applicant advise whether or not it agrees with the following proposition put forward by the Kent Downs AONB Unit?</p> <p><i>“We would contend that within a nationally designated AONB, adverse effects on an AONB do not have to be classed as ‘significant’ in order for the great weight applied in national policy to conservation and enhancement of AONBs to apply. For example, it is perfectly possible that ‘moderate’ and even ‘slight’ adverse effects on an AONB are material in the decision-making process and may mean that the adverse effects of a proposed development outweigh the potential benefits.”</i></p>

ExQ1	Question to:	Question:
Q1228	Utility Diversions	<p>Utility Diversions</p> <p>Paragraph 5.6.7 of the Planning Statement [APP-495] states that <i>“as explained in the ES, a number of different options were considered for the [utility] realignments informed by environmental survey and close dialogue with stakeholders and the utilities companies.”</i> Paragraph 5.6.8 adds that <i>“the only engineering alternative, to avoid diversion within the AONB, would be to reconfigure local utility networks from Gravesend to the M2 junction 1 via the A226 and local road networks ... and such reconfiguration would give rise to significant impacts on traffic/air quality, programme length and entail engineering complexities, while still requiring work within the AONB.”</i> Paragraph 5.6.10 concludes that <i>“the options taken forward and the further design refinements demonstrate that the measures that have been adopted minimise their impact on these designations as far as practicable.”</i></p> <p>The ES provides limited information on the impact of Utility Diversions and specifically the impact that these would have on landscape character and visual receptors. The Applicant should provide a separate Chapter within the ES which covers these impacts.</p> <p>It is noted that Planning Statement Appendix B [APP-497] breaks down each section of the relevant Energy National Policy Statements and cross refers the ExA to other parts of the ES which may cover the energy requirements; however, this does not specifically address the potential impacts of the utility diversions. It is also noted that when referring to Landscape and Visual Impacts in Planning Statement Appendix B [APP-497] the Applicant states that <i>“as the energy infrastructure elements of the Project are for replacement infrastructure it is considered that any landscape and visual impacts will be no worse than those arising from the existing infrastructure even though some of pylons involved in Work No OH7 are taller than those that currently exist.”</i></p> <p>Nonetheless, the Applicant is required to undertake and provide the ExA with a specific Utility Diversions Assessment for LVIA purposes.</p>
Q1229	Applicant	<p>Compensation Fund</p> <p>The ExA is concerned about the impact on the Thames Chase Community Forest as a greenspace and community endeavour. Why has the Applicant not considered Thames Chase for a community environmental compensation fund to aid its conservation and enhancement after project delivery?</p> <p>The ExA is also concerned about the residual impact on the Kent Downs AONB and asks the Applicant to consider whether financial compensation for unavoidable harm to the AONB is appropriate. The Kent Downs AONB Unit has identified precedent for financial compensation in its Written Representation [REP1-378] and the Applicant is asked to update the ExA with any progress on an agreed financial compensation proposal. It is noted from the Statement of Common ground between the two parties [REP1-062] that this is a matter still under discussion.</p>

ExQ1	Question to:	Question:
Q122.10	Kent Downs AONB Unit	<p>AONB Environmental Enhancement</p> <p>The Kent Downs AONB Unit's Written Representation [REP1-378] states that should the principle of the project be found acceptable, it is considered that additional mitigation measures at a landscape scale need to be provided within the AONB.</p> <p>Can the Kent Downs AONB Unit advise in more explicit terms what type of mitigation is required and where?</p>
12.3 Visual Impacts		
Q123.1	Local Authorities Historic England Kent Downs AONB Unit	<p>Representative Viewpoints and Photomontages</p> <p>Can the Local Authorities, Historic England and the Kent Downs AONB Unit confirm they are in agreement with the LVIA methodology including the locations of visual receptor viewpoints and photomontages? Can they also confirm if any other viewpoints have been requested from the Applicant during rounds of stakeholder consultation which have not yet been provided?</p>
Q123.2	Applicant	<p>Representative Viewpoints – Regrading of Sensitivity and Effects</p> <p>The Kent Downs AONB Unit and Gravesham Borough Council have identified that the sensitivity of Representative Viewpoints with the highest degree of sensitivity (Very High) has reduced in number from 22 Representative Viewpoints in 2020 to 7 in 2022 (south of the River). The magnitude of effect and significance of effect on these receptors has also been notably regraded. For example, the overall magnitude/significance of effect on viewpoints S08 and S09 in Design Year has been assessed as 'Minor/Slight Adverse' in the 2022 documents (and therefore not 'significant') whereas in the 2020 documents they were both assessed as 'Major/Very Large Adverse' (i.e. the highest rating for negative effects) and therefore 'significant'. In addition, the overall effect on viewpoints S12, S13 and S14 has been assessed as 'Minor/Slight Beneficial' (and therefore 'not significant') whereas in the 2020 documents they were all assessed as 'Moderate/Large Adverse' (and therefore significant).</p> <p>The Applicant is required to clarify why the sensitivity and magnitude of effects have been notably regraded since the 2020 submission. Notwithstanding the information contained in Tables 3.1 and 3.3 in ES Appendix 7.10 - Schedule of Visual Effects [APP-385], the Applicant shall provide an additional Table similar to Appendix A in the Kent Downs AONB Written Representation [REP1-379] for all visual receptors north and south of the river with commentary to justify the regrading.</p>
Q123.3	Applicant	<p>Photomontage Reliability 3</p> <p>A number of photomontages showing the project in Winter Year 1 and Summer Year 15 included in Figure 7.19 [APP-244, APP-245, APP-246, APP-247] appear to use cropped images of the baseline images shown in Figure 7.17 [APP-235, APP-236, APP-237, APP-238, APP-239, APP-240, APP-241,</p>

ExQ1	Question to:	Question:
		<p>APP-242. For example, Viewpoint S-22 shown in Figure 7.19 is missing the properties in Singlewell on the left hand side of the photomontage shown in baseline Figure 7.17. This appears to misrepresent the possible visual and aural impact for some receptors.</p> <p>The Applicant shall revisit all Photomontages in Figure 7.19 and provide additional uncropped versions of Winter Year 1 and Summer Year 15 where relevant. The Applicant may wish to combine its response with Q.12.2.4.</p>
Q12.34	Applicant	<p>Photomontage Reliability 4</p> <p>The photomontage of Summer Year 15 for representative viewpoint N-25 shown in Figure 7.19 [APP-247] includes an extra overbridge railing visible behind the Woolings Close dwellings that is not shown in the Photomontage of Winter Year 1 for the same viewpoint. This appears to be an inconsistency between the photomontages which should be reviewed and rectified by the Applicant. This raises questions over other potential inconsistencies; as a result the Applicant is requested to review all photomontages in Figure 7.19 [APP-244, APP-245, APP-246, APP-247] for any other corrections that need to be made. The Applicant may wish to combine its response with Q.12.2.4 and Q12.3.3.</p>
Q12.35	Applicant	<p>Additional Photomontages</p> <p>Concerns have been raised by Gravesham Borough Council, the Kent Downs AONB Unit and Natural England about the visual impact of the proposed road from representative viewpoint S-03 (view from Kent Downs AONB on footpath NS161). The ExA shares those views.</p> <p>The Applicant shall provide photomontages for Winter Year 1 and Summer Year 15 for viewpoint S-03 or explain in explicit terms why the photomontages cannot be produced.</p>
Q12.36	Applicant	<p>Construction Compounds</p> <p>It is noted that Document 2.17 - Temporary Work Plans Documents Volumes B and C [AS-034] and [AS-036] provide indicative layouts for the construction compounds or utility logistics hubs but these are in floorplan only with no elevations. Similarly, none of the compounds and hubs are identified in any LVIA photomontages (noting the photomontages are for operational years only). Given the potential for 6m high earth and plant storage, 15m high accommodation blocks and 25m high concrete batching plant, the layout and appearance of the compounds and hubs is important to the landscape and visual impact assessment during the lengthy construction period.</p> <p>The Applicant shall provide photomontages of the compounds and hubs where they are sited within 100m of residential receptors and where those compounds or hubs are expected to remain in situ for more than 18 months. The Applicant shall use the Register of Environmental Actions and Commitments Nos. LV006/ LV007/ LV010/ LV012/ LV016/ LV018/ LV019/ LV020/ LV022/ LV025/ LV027/ LV033 (contained in ES Appendix 2.2 – Code of Construction Practice, First Iteration of</p>

ExQ1	Question to:	Question:
		Environmental Management Plan) [REP1-157] as a guide to the relevant locations of interest to the ExA.
13. Social, economic and land-use considerations		
13.1 Socio-Economics, Local Impacts and Health		
Q13.1.1	Gravesham Borough Council Kent County Council Essex County Council Thurrock Council London Borough of Havering Council Brentwood Borough Council	<p>Community Severance - Public Rights of Way</p> <p>Paragraph 13.3.25 of ES Chapter 13 – Population and Human Health [APP-151] states that baseline conditions for Public Rights of Ways were identified from definitive mapping on LPA websites. Definitive maps may only show made rights of way and village greens and not any application under consideration.</p> <p>Can the Local Authorities advise whether there are any live applications being considered by their Public Rights of Way departments for amendments to or establishment of new rights of way or village greens that may be affected by the Project?</p>
Q13.1.2	Applicant	<p>Methodology - Land Use and Accessibility</p> <p>Table 13.3 of ES Chapter 13 – Population and Human Health [APP-151] identifies that the environmental value for community land and assets in the ‘very high’, ‘high’, and ‘medium’ classifications are based on more than 50% of a community using the asset. The Applicant is asked to explain how the relevant ‘community’ are defined for this purpose and how the figure of 50% was arrived at?</p>
Q13.1.3	Applicant	<p>Community Woodland Hole Farm</p> <p>Paragraph 13.3.69 of ES Chapter 13 – Population and Human Health [APP-151] states that the environmental assessments for Population and Human Health have assumed that the mitigation and compensation planting areas at Hole Farm are in place and have begun to establish prior to the start of construction. The compensation at Hole Farm is noted to overlap with a community woodland legacy project.</p> <p>Can the Applicant advise whether the community woodland project has been delayed as a result of the Project and if so what effect the construction delay to the Project would have on delivery timeframes on this community woodland?</p>
Q13.1.4	Gravesham Borough Council Thurrock Council London Borough of Havering Thames Chase Trust	<p>Replacement Land</p> <p>Paragraph 13.5.9 of ES Chapter 13 – Population and Human Health [APP-151] states that replacement land for affected public open space would be equal to or greater in size than the land required for the Project and similar in terms of quality and accessibility.</p>

ExQ1	Question to:	Question:
		<p>Can the Local Authorities and Thames Chase Trust advise if they agree that the replacement land is of suitable size, location and purpose?</p> <p>It is also noted that public golf facilities in the Gravesend area are affected by the project and that the mitigation for this is not yet resolved. The ExA appreciates that the Statement of Common Ground and the Principal Areas of Disagreement Summary both note that Gravesham Borough Council are seeking replacement facilities, but can Gravesham Borough Council provide specific detail on what type of facilities they are seeking from the Applicant and where? The Council should refer to and provide clarification on Paragraph 2.3.77 of ES Chapter 2 – Project Description [APP-140] in its response.</p>
Q13.15	Applicant	<p>Tilbury Fields – Permissive Routes</p> <p>The creation of a new public park, known as Tilbury Fields at Goshems Farm, would include new permissive routes to allow users to reach the elevated areas. However, permissive routes can be closed at any time thereby limiting the benefit of the North Portal mitigation. Can the Applicant please clarify why dedicated rights of way have not been sought? In addition, if the permissive routes were subsequently extinguished, can the Applicant clarify what impact that would have on the usability of the new public park?</p> <p>Finally, the proposed new permissive routes proposed as part of Tilbury Fields are listed as not surfaced. These are routes that could experience significant use due to their location close to Coalhouse Fort. Their usability will be hindered as a result and the Applicant is asked to explain what incentive there is for the landowner to keep them appropriately maintained?</p>
Q13.16	Applicant	<p>Benefits and Outcomes</p> <p>Section 2.9 of ES Chapter 2 – Project Description [APP-140] implies that there are several legacy projects in play as part of the LTC proposal but does not explain what they are or how LTC aids their delivery.</p> <p>Chapter 5 of Document 7.20 - Benefits and Outcomes [APP-553] states that over £30 million of designated funds have been allocated to Lower Thames Crossing to deliver various improvements with local partners. The Projects in Tables 5.1, 5.2 and 5.3 (totalling over £5 million) are noted to have already been funded, so presumably are not direct benefits of the Project. The Applicant should clarify the relationship between the funded projects and the LTC application Project, as it is understood that Designated Funds are standalone funds independent of highway delivery.</p> <p>Chapter 6 of Document 7.20 - Benefits and Outcomes [APP-553] adds that the remaining funds from the £30 million have to be spent by 31 March 2025 which is not yet allocated.</p>

ExQ1	Question to:	Question:
		<p>Can the Applicant explain if that funding is committed regardless of the decision on the Project or if it only contingent on the Project being approved and construction commencing. The ExA needs to be clear if these funds are a benefit of the Project or not. Furthermore, can the Applicant clarify whether there is likely to be an extension to the spend date, because if the remaining funding pot is contingent on the Project being approved (and/or starting construction) then that date does not allow much time for LTC legacy projects to be developed and realised.</p>
Q13.1.7	Applicant	<p>Loss of Service Station</p> <p>It is understood that the ESSO Cobham Service Station is well used and that there are no plans for a direct replacement of this type of facility as part of the Project. The Applicant suggests that it is taking active steps to improve provision of roadside facilities, including making progress to explore the possibility of a new lorry park at Chigwell, and encouraging further service provision as a key element of the forthcoming Route Strategies in the region. Can The Applicant provide an update on this?</p> <p>Can the Applicant also confirm that such proposals would require a planning application separate to the Project DCO and so cannot be guaranteed to come forward?</p>
Q13.1.8	Applicant	<p>New Car Park Area to the west of Thong Lane</p> <p>A new car park area with provision for a kiosk, toilets, changing facilities and an area for cycle hire to the west of Thong Lane has been identified as a possible environmental enhancement opportunity to provide recreational access to the Public Right of Way network. It is noted that Work No. 1P in Schedule 1, Part 1 of the dDCO relates to the construction of a new car park next to the realignment of Thong Lane but this does not commit the applicant to the other suggested features.</p> <p>Can the Applicant confirm that the kiosk, toilets and changing facilities would require a planning application separate to the Project DCO and so cannot be guaranteed to come forward? Have any designated funds or s106 funds been earmarked for these facilities?</p>
Q13.1.9	Applicant	<p>Visual Bulk and Overshadowing</p> <p>Neither ES Chapter 13 – Population and Human Health [APP-151] nor the Planning Statement [APP-495] have addressed visual bulk or overshadowing impacts on individual properties as a result of the scale and proximity of new structures and embankments in close proximity to residential properties. For example, some of the properties at Woolings Close, Orsett will have an embankment immediately adjacent and a road above them. A visual bulk and daylight and sunlight assessment on residential properties (which includes care homes) is seemingly absent.</p> <p>The Applicant is requested to review the proposal to identify which residential properties may be affected by tall structures and embankments in close proximity to habitable room windows and to appraise the impacts. This appraisal shall be submitted at Deadline 5 at the latest.</p>

ExQ1	Question to:	Question:
Q13.1.10	Gravesham Borough Council	<p>Open Space Provision</p> <p>Gravesham Borough Council's Relevant Representation and its Written Representation both state that the proposed Chalk Park, and other mitigation/compensation areas, extend the open space offer but in an area that is already well provided for. However, Paragraph 7.4.34 of Document 7.10 – Health and Equalities Impact Assessment [APP-539] states that “<i>Chalk Park would provide a recreational landscape for north-eastern Gravesend and Chalk, currently an area of limited public open space provision as identified in Gravesham Borough Council's Open Space Assessment (Knight, Kavanagh and Page, 2016).</i>”</p> <p>Can Gravesham Borough Council please clarify the correct position on open space provision for Gravesend and Chalk in light of their own published assessment?</p>
Q13.1.11	Applicant	<p>Healthcare Services</p> <p>The Register of Environmental Actions and Commitments No. PH002 (contained in ES Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan) [REP1-157] states that “<i>the Contractor will provide an appropriate range of medical and occupational healthcare services (including on-site facilities) to meet the physical and mental health needs of the construction workforce. The range of services will be agreed with National Highways, following engagement with Integrated Care Partnerships (ICPs).</i>”</p> <p>The term ‘appropriate range’ is vague. Can the Applicant explain what dedicated healthcare services have been agreed with the ICPs (if any) and how such services will be secured?</p>
Q13.1.12	Applicant	<p>Whitcroft Care Home 1</p> <p>Paragraph 13.6.75 of ES Chapter 13 – Population and Human Health [APP-151] assesses the likely significant effects on Whitcroft Care Home. It identifies that the care home is of high sensitivity but concludes that the impacts are minor adverse due only to a discernible change in access during the construction period, which is not significant. Can the Applicant advise of the specific air quality and noise impacts on Whitcroft Care Home residents during construction and operation of the Project and whether any specific mitigation is required given the high sensitivity of the residents?</p>
Q13.1.13	Kathryn Homes, Runwood Homes Ltd Runwood Properties Ltd	<p>Whitcroft Care Home 2</p> <p>Without prejudice to their Compulsory Acquisition position can the representatives of Whitcroft Care Home clarify whether any special protective measures would be necessary at the existing care home to safeguard residents against risks to life, or negative health and wellbeing arising from construction or operation; what might those be; and would the residual effects on residents be acceptable in a normal nursing care setting?</p>

ExQ1	Question to:	Question:
Q13.1.14	Applicant	<p>Treetops and Beacon Hill Schools</p> <p>Treetops and Beacon Hill Schools are both establishments for children with Special Educational Needs and Disabilities, which Paragraph 13.6.75 of ES Chapter 13 – Population and Human Health [APP-151] notes have an intake of children and young people with a variety of sensory and other issues. The Applicant notes that those schools have concerns over air quality and noise but does not specifically address the issues. Can the Applicant advise of the specific air quality and noise impacts on the aforementioned schools during construction and operation of the Project and whether any mitigation is required given the high sensitivity of the users?</p>
Q13.1.15	Applicant	<p>Work and Training</p> <p>Table 7.39 of Document 7.10 – Health and Equalities Impact Assessment [APP-539] states that “<i>The number of people that would experience beneficial changes as a result of the creation of new employment and training opportunities is high – supporting more than 22,000 jobs in the areas to the south and north of the River Thames, with 45% of employees to be from within 20 miles of the Project route, including within the host local authorities of Gravesham, Medway, Dartford, Thurrock, Havering and Brentwood. Creating a skills legacy is one of the ambitions for the Project as set out in the Skills, Education and Employment (SEE) Strategy.</i>”</p> <p>This commitment is also identified in Document 7.20 - Benefits and Outcomes [APP-553] at Paragraph 3.3.5, and in Section 7.2 of Document 7.3 – Section 106 Agreements [APP-505]. The SEE Strategy is supposed to be provided at Appendix B of Document 7.3 but it is blank.</p> <p>Can the Applicant please advise why Appendix B is noted as ‘intentionally left blank’? It is appreciated that Document 7.3 is a Heads of Terms document and detail is therefore to still be worked out with relevant stakeholders but it is difficult for the ExA and other stakeholders to determine how the measures will be realised.</p> <p>In addition, Thurrock Council have asked for the SEE Strategy to be included within the dDCO submission as a ‘Control Document’ to ensure its provisions and targets are adequately secured and followed by the contractors. Can the Applicant comment on this request?</p> <p>Finally, can the Applicant comment on Thurrock Council’s concern that the SEE Strategy does not seek to source more labour from Thurrock given that some 70% of the route falls within its area?</p>
Q13.1.16	Applicant	<p>Work and Training</p> <p>Several Local Authorities have raised concerns about how a large workforce would be sourced when other large projects would be built in the area at the same time (e.g. Tilbury2). Whilst the Applicant has expressed its aspiration to recruit locally, it remains that a substantial amount of the workforce required would be expert personnel. How realistic is it that 45% of the employees will be ‘local’?</p>

ExQ1	Question to:	Question:
		Can the Applicant advise whether it has proposed similar commensurate measures for other already constructed NSIP highways projects, such as the A14, and if so were the job targets realistic? How successful was the measure? The Applicant may wish to combine the answer with Q13.1.15.
Q13.1.17	Applicant	<p>Workforce Accommodation</p> <p>Notwithstanding the aspiration that 45% of the workforce would be local (within 20 miles of the Project route), the Workers Accommodation Report (Doc 7.18, [APP-551]) explains that most staff seeking temporary accommodation would use the private rented sector (PRS) with an estimated 305 workers requiring PRS accommodation at the peak in the south, and an estimated 1,055 workers requiring PRS accommodation at the peak in the north. It is concluded that there is sufficient capacity in the local accommodation market (within a 60 minute commute) for temporary workers.</p> <p>The ExA is concerned that reliance on 2011 Census data to determine the number of PRS homes and bedrooms in the catchment area may be outdated as there have been common press reports of a significant decline in numbers of homes available for rent nationally and a significant increase in the proportion of households renting. The impact of the workforce on rent values and availability of rented properties for local residents therefore requires a more up to date picture.</p> <p>The Applicant is asked to provide an updated Accommodation Assessment (Section 6 of the Workers Accommodation Report (Doc 7.18, [APP-551])) using 2021 census data where available?</p> <p>A 2019 report produced by Oxford Brookes University for The New Nuclear Local Authorities Group (NNLAG) on the impacts of the early stages of construction of the Hinkley Point C (HPC) Nuclear Power Station identified that the accommodation strategy for that NSIP DCO considerably underestimated the impact on the PRS and that monitoring and mitigation of the impact was not robust.</p> <p>It is noted that the Applicant intends to monitor workforce accommodation options/availability but can the Applicant advise if and how it intends to monitor and mitigate the impacts of the workforce on the local housing market across the construction period and specifically the impact on housing availability to local vulnerable groups if its tested scenarios prove to be wrong?</p>
Q13.1.18	Applicant	<p>Agricultural Land Loss</p> <p>Can the Applicant clarify how much productive agricultural land is being lost to the Project or severed from wider land holdings and why food security has been given so little consideration in the submission?</p>
Q13.1.19	Applicant	<p>Rights of Ways/Bridleways</p> <p>There seems to be limited detail regarding future design and maintenance for public rights of ways/bridleways (e.g. types of surfacing and future maintenance liabilities). Can the Applicant explain</p>

ExQ1	Question to:	Question:
		how rights of way are intended to be maintained, who does the burden fall on, and if it is local authorities what funding will be in place for future maintenance?
Q13.120	Thurrock Council Gravesham Borough Council London Borough of Havering Brentwood Borough Council	Green Belt The ExA acknowledges the Local Authorities' objection to the proposed development in the Green Belt. Without prejudice to those objections, the ExA would like to understand from the Local Authorities whether there are any particular locations within the Green Belt where the effects of the Project on openness would be particularly pronounced, and conversely, whether there are locations where effects on openness would be avoided or at the lower end of the harm scale.
14. The draft Development Consent Order (dDCO), planning obligations, agreements and the adequacy of security		
14.1 Response to dDCO Questions Raised at ISH2		
Q14.1.1	Statutory Party, Statutory Undertaker and other IPs who were not present at ISH2.	ISH2 on the dDCO: Agenda Annex A Questions Issue Specific Hearing 2 (ISH2) on the dDCO was held on Thursday 22 June 2023. The Agenda [EV-015] for that hearing included Item 4(j) and Annex A , a set of questions on dDCO drafting, on which oral submissions were sought from invited IPs in order to enable an early start to be made in the Examination on the ExAs dDCO drafting observations. IPs participating in the hearing were requested to make written submissions on matters raising in the hearing (including the content of Agenda Item 4(j) and the Annex A questions) at Deadline 1. To the extent that they have already done so, such IPs do not need to respond to this question. However, this question does seek responses to the Annex A questions from particularly Statutory Party and Statutory Undertaker IPs that did not participate orally in ISH2 or make written submissions on the matters questioned there at Deadline 1. Responses should address the questions in Annex A , but recognising that the Applicant has made changes to the dDCO in part to address these matters since ISH2 was held, intending respondents should review the latest version of the dDCO in tracked changes [REP2-005] and the latest Schedule of Changes to the dDCO [REP2-042] before doing so. Issue Specific Hearing 7 (ISH7) to be held on 11 September 2023 will examine matters arising from the Applicant's and IP's submissions on the dDCO at Deadlines 1 and 2. Remaining unresolved matters (if any) will be identified in the ExA's commentary on the dDCO which will be published if it is required on 14 November 2023. Any remaining complex, multi-factor and multi-party matters bearing on the dDCO may also be included in an ISH to be held in November (subject to notice).

ExQ1	Question to:	Question:
15.	The acquisition and temporary possession of land and rights (CA & TP)	
15.1	Due Diligence	
Q15.1.1	The Applicant	<p>CA & TP: Due Diligence and Monitoring of General CA & TP Objections</p> <p>With regard to the outcomes from continuing due diligence, the Applicant is requested to complete the attached Objections Schedule with information about any objections to the CA and/ or TP proposals, and at each successive deadline to make any new entries, or delete any entries that it considers no longer apply, taking account of the positions expressed in relevant representations (RRs) and written representations (WRs) and giving reasons for any additions or deletions.(See Annex A to ExQ1 below).</p> <p>The Objections Schedule should be titled ExQ1.15.1.1: Schedule of CA and TP Objections: LTC. The Schedule should be provided with a version number that rolls forward with each deadline. A revised schedule need not be provided at a deadline unless the Applicant becomes aware that data and assumptions on which the previous deadline schedule submission was made have changed. However, where a revised schedule is not provided, a confirming note of 'no changes' should be submitted at the deadline.</p>
Q15.1.2	The Applicant	<p>Crown Land and Consent Monitoring</p> <p>With regard to the outcomes from continuing due diligence, the Applicant is requested to provide and at each successive deadline to maintain and submit a tabulated schedule separately identifying any Crown interests subject to PA2008 s135 (with reference to the latest available Books of Reference (BoRs) and the Land Plans), to identify whether consent is required with respect to s135(1)(b) and/or s135(2) and what progress has been made to obtain such consent(s).</p> <p>The Schedule should be titled ExQ1.15.1.2: Crown Land and Consent: LTC. Written evidence of consent(s) obtained must be provided at the first available deadline and in any case by Deadline 8. If at any given deadline an empty schedule is provided, a revised schedule need not be provided at any subsequent deadline unless the Applicant becomes aware that the data and assumptions on which the empty table was provided have changed. However, where a revised schedule is not provided, a confirming note of 'no changes' should be submitted at the deadline.</p>
Q15.1.3	The Applicant	<p>Statutory Undertakers: Land or Rights: Monitoring</p> <p>The Applicant is requested to review RR and WRs made as the examination progresses alongside its land and rights information systems and to prepare and at each successive deadline update as required a tabulated Schedule identifying and responding to any representations made by statutory undertakers with land or rights to which PA2008 s 127 applies.</p>

ExQ1	Question to:	Question:
		<p>In relation to any such representations, the applicant is requested to identify:</p> <ul style="list-style-type: none"> a) the name of the statutory undertaker; b) the nature of the undertaking; c) the land and/ or rights affected (identified with reference to the most recent version of the Book of Reference (BoR) and Land Plan available at that time) (the ‘relevant land’ and/or the ‘relevant rights’); d) in relation to the relevant land, whether and if so how the tests in PA2008 s127(3)(a) or (b) can be met; e) in relation to the relevant rights, whether and if so how the tests in s127(6)(a) or (b) can be met; and f) in relation to these matters, whether any protective provisions and /or commercial agreements are anticipated, and if so: <ul style="list-style-type: none"> i. whether these are already available to the ExA in draft or final form, ii. whether a new document describing them is attached to the response to this question or iii. whether further work is required before they can be documented; and g) in relation to a statutory undertaker named in an earlier version of the table but in respect of which a settlement has been reached: <ul style="list-style-type: none"> i. whether the settlement has resulted in that statutory undertaker’s representation(s) being withdrawn in whole or part; and ii. identifying any documents providing evidence of agreement and withdrawal. <p>The tabulated Schedule should be titled ExQ1. 15.1.3: PA2008 s127 Statutory Undertakers’ Land/ Rights: LTC. Written evidence of the withdrawal(s) of any objections that are relied upon must be provided at the first available deadline and in any case by Deadline 8. If at any given deadline an empty schedule is provided, a revised schedule need not be provided at any subsequent deadline unless the Applicant becomes aware that the data and assumptions on which the empty table was provided have changed. However, where a revised schedule is not provided, a confirming note of ‘no changes’ should be submitted at the deadline.</p>
Q15.14	The Applicant	<p>Statutory Undertakers: Extinguishment of Rights and Removal of Apparatus etc.: Monitoring</p> <p>The Applicant is requested to review RRs and WRs made as the examination progresses alongside its land and rights information systems and to prepare and at each successive deadline update as</p>

ExQ1	Question to:	Question:
		<p>required a tabulated Schedule identifying and responding to any representations made by statutory undertakers with apparatus and rights to which PA2008 s 138 applies.</p> <p>In relation to any such representations, the applicant is requested to identify:</p> <ul style="list-style-type: none"> a) the name of the statutory undertaker; b) the nature of the undertaking; c) the relevant rights to be extinguished; and/or d) the relevant apparatus to be removed or altered e) how the test in s138(4) can be met; and f) in relation to these matters, whether any protective provisions and /or commercial agreements are anticipated, and if so: <ul style="list-style-type: none"> i. whether these are already available to the ExA in draft or final form, ii. whether a new document describing them is attached to the response to this question or iii. whether further work is required before they can be documented; and g) in relation to a statutory undertaker named in an earlier version of the table but in respect of which a settlement has been reached: <ul style="list-style-type: none"> i. whether the settlement has resulted in that statutory undertaker's representation(s) being withdrawn in whole or part; and ii. identifying any documents providing evidence of agreement and withdrawal. <p>The tabulated Schedule should be titled ExQ1. 15.1.4: PA2008 s138 Statutory Undertakers' Rights and Apparatus: LTC. Written evidence of the withdrawal(s) of any objections that are relied upon must be provided at the first available deadline and in any case by Deadline 8. If at any given deadline an empty schedule is provided, a revised schedule need not be provided at any subsequent deadline unless the Applicant becomes aware that the data and assumptions on which the empty table was provided have changed. However, where a revised schedule is not provided, a confirming note of 'no changes' should be submitted at the deadline.</p>

ExQ1	Question to:	Question:
16.	General and overarching questions	
16.1	General and overarching questions	
Q16.1.1	Applicant	<p>Draft National Policy Statement National Networks (dNPSNN) March 2023</p> <p>As the proposed scheme was accepted for examination before the designation of the dNPSNN, the 2015 NPSNN will remain in force in its entirety and will have affect as per paragraph 1.16 of the dNPSNN. However, the dNPSNN is potentially capable of being an important and relevant consideration in the decision making process.</p> <p>The Applicant is requested to produce for the ExA a dNPSNN Table as an addendum to document “7.2 Planning Statement - Appendix A - National Policy Statement for National Networks (NPSNN) Accordance Table” [APP-496].</p> <p>The ExA notes that this information has been provided for the A12 Chelmsford to A120 widening scheme, therefore there is precedent for the request.</p>
Q16.1.2	Applicant	<p>Detailed Design</p> <p>Can the Applicant provide clarity on:</p> <ul style="list-style-type: none"> • The design development process going forward and which parties will be consulted; • If it would be reasonable to set out the design development process and for it to be secured in the dDCO; • If the Proposed Development has been through independent design review; and • The scope and purpose of the detailed design stage and the engagement expected with parties during detailed design stage?
Q16.1.3	Applicant	<p>Construction Phases and Timeline</p> <p>Can the Applicant clarify whether the construction phasing order, as identified in Plates 4.4 - 4.7 of Document 7.10 – Health and Equalities Impact Assessment [APP-539], would change as a result of the announced two year delay to Project commencement?</p> <p>In addition and notwithstanding that the ExA has yet to provide a decision on the First Change Request application (specifically in relation to whether 1 tunnel boring machine is used or two), can the Applicant clarify if the use of one tunnel boring machine would have implications for the phasing order identified in Plates 4.4 - 4.7, and if so, what implications?</p>

ExQ1	Question to:	Question:
Q16.14	Applicant	<p>Mitigation Route Map</p> <p>It would be useful for the ExA and Stakeholders if the Applicant could provide a single document containing a mitigation routemap of the controls and mitigation measures that have been identified across a number of documents, which the Environmental Statement and related documents rely on to avoid, reduce and/or offset significant impacts of the development.</p> <p>The routemap should set out the way in which the mitigation measures have been, or will be, translated into clear and enforceable controls; either via DCO Requirements, protective provisions, conditions attached to deemed licences, Section 106 obligations, other consent regimes [such as Section 61 Consents (Control of Pollution Act 1974), or Environmental Permits (Environmental Permitting Regulations 2010)] or side agreements between the Applicant and a third party.</p>

ANNEX A

Lower Thames Crossing: Due Diligence and Monitoring of General CA & TP Objections

List of all objections to the grant of Compulsory Acquisition (CA) or Temporary Possession (TP) powers (ExQ1: Question 15.1.1).

In the event of a new interest in the land or Category 3 person being identified, the Applicant should inform those persons of their right to apply to become an Interested Party under s102A PA2008 and advise the ExA at the next available deadline.

Obj No. ⁱ	Name/ Organisation	IP/AP Ref No ⁱⁱ	RR Ref No ⁱⁱⁱ	WR Ref No ^{iv}	Other Doc Ref No ^v	Interest ^{vi}	Permanent/ Temporary ^{vii}	Plot(s)	CA? ^{viii}	Status of objection

i Obj No = objection number. All objections listed in this table should be given a unique number in sequence.

ii Reference number assigned to each Interested Party (IP) and Affected Person (AP).

iii Reference number assigned to each Relevant Representation (RR) in the Examination library.

iv Reference number assigned to each Written Representation (WR) in the Examination library.

v Reference number assigned to any other document in the Examination library.

vi This refers to parts 1 to 3 of the Book of Reference:

- Part 1, containing the names and addresses of the owners, lessees, tenants, and occupiers of, and others with an interest in, or power to sell and convey, or release, each parcel of Order land;
- Part 2, containing the names and addresses of any persons whose land is not directly affected under the Order, but who “would or might” be entitled to make a claim under section 10 of the Compulsory Purchase Act 1965, as a result of the Order being implemented, or Part 1 of the Land Compensation Act 1973, as a result of the use of the land once the Order has been implemented;
- Part 3, containing the names and addresses of any persons who are entitled to easements or other private rights over the Order land that may be extinguished, suspended or interfered with under the Order.

vii This column indicates whether the applicant is seeking compulsory acquisition or temporary possession of land/ rights.

viii CA = compulsory acquisition. The answer is ‘yes’ if the land is in parts 1 or 3 of the Book of Reference and the applicant is seeking compulsory acquisition of land/ rights.