

Application by Port of Tilbury London Limited for an Order Granting Development Consent for a Proposed Port Terminal at the Former Tilbury Power Station ('Tilbury2')

Deadline 2

Highways England Response to the Applicant's Response to First Written Questions

Response to the Examining Authority’s First Written Questions and requests for information

Application by Port of Tilbury London Limited for an Order Granting Development Consent for a Proposed Port Terminal at the Former Tilbury Power Station (‘Tilbury2’)

Issued on Tuesday 20th March 2018

- 1.1 This document outlines the Applicant’s responses to the Examining Authority’s (ExA) First Written Questions and requests for information (FWQs).
- 1.2 The Applicant’s responses to the ExA’s FWQs are divided into individual tables by the topic chapters provided by the ExA.
- 1.3 In some cases the FWQs have been answered through appended documents. References to these papers will be indicated in the individual FWQ responses.

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1.0 GENERAL AND CROSS-TOPIC QUESTIONS

FWQ	Question to:	Question:	Response:	Highways England comments on response
1.0	General and Cross-topic Questions			
1.0.1	Applicant	The Applicant is requested to review the Mitigation Route Map document [APP-168] and provide an updated version into the Examination which provides details of all mitigation and compensation measures and explains how they are secured in the draft Development Consent Order (dDCO). While this will need to be reviewed and updated as the Examination progresses, some of the mitigation proposed in the ES [APP-031], for example in relation to marine ecology and dredging, does not seem to be identified. Please ensure that all proposed mitigation is identified and is cross referenced to details explaining where/how in the dDCO it would be secured.	Clean and tracked changed versions of the Mitigation Route Map have been submitted at Deadline 1- see document reference numbers PoTLL/T2/EX/52 and PoTLL/T2/EX/53. The Applicant agrees that this document will be updated as necessary throughout the Examination.	No comment
1.0.2	Applicant	The Applicant is requested to provide an update to its position statement in respect of consents and agreements [APP-167] at deadline 1 and throughout the Examination, including the last deadline in August 2018.	The Applicant confirms that it will provide updates of the Consents and Agreements Position Statement to the ExA throughout the Examination. For the purpose of Deadline 1, there are no amendments required to the Statement at this stage.	No comment
1.0.3	Applicant	Please could the Applicant provide a plan showing: a) all of the land under its control (that is land that is owned or occupied by the Port of Tilbury London Limited, or any of its parent or subsidiary companies) in and around Tilbury, including any industrial estates or	a) The current land owned by PoTLL for the Port of Tilbury is identified in Plan A, Appendix 6 of the CMAT Clarification Statement (Appendix E attached). b) The uses on site are shown in Plan B, Appendix 6 of the CMAT Clarification Statement. For reasons of commercial confidentiality, PoTLL is unable to provide the individual details of each occupier.	No comment



FWQ	Question to:	Question:	Response:	Highways England comments on response
		<p>parks, in the vicinity of Tilbury Docks; and</p> <p>b) the current usage and names of tenant/occupiers of the various areas within the land identified as under its control.</p> <p>Whilst Figure 7 in the Outline Business Case provides some of this information, it is not comprehensive.</p>		
1.0.4	Applicant	<p>The Errata version of the Outline Business Case [AS-016] identifies in paragraph 1.30 that the Construction Materials and Aggregate Terminal (CMAT) would handle 1,600,000 tonnes of aggregates per year. Are these marine dredged aggregates, crushed rock or recycling/secondary aggregates? If a mix is proposed, please provide an estimate of the volume and percentages of each type of material?</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.</p>	No comment
1.0.5	Applicant	<p>The Environmental Statement (ES)[APP-031] in paragraph 18.222 states that the crushing and screening of materials would occur on site.</p> <p>a) Are these processing facilities for marine dredged aggregates or recycled/secondary aggregates?</p> <p>b) Please specify the percentage of imported aggregates that would need to be processed through the screening/crushing plant.</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.</p>	No comment
1.0.6	Applicant	<p>The Errata version of the Outline Business Case [AS-016] does not identify how much cementitious material would be</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.</p>	No comment


FWQ	Question to:	Question:	Response:	Highways England comments on response
		imported annually, or how much would be stored within the proposed silo. Please provide estimated annual volumes, capacity of the silo, and details of likely sources of this material and size of ships used for importing this material?		
1.0.7	Applicant	Please explain what percentage of the imported cementitious material that would be stored in the proposed silo would be used on-site and what percentage would be moved off-site? Would the off-site movement of this material be by river? Please provide details of movements of ships /barges importing/exporting the cementitious materials and explain where the impacts associated with these Proposed Development activities are assessed in the ES chapters.	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.0.8	Applicant	Please justify the scale of the cementitious materials silo. Please reference comparable examples in the UK including photographs if possible.	<p>The silo would be capable of storing 20,000mt of powdered bulk product. The storage volume reflects an optimum level for shipment size and allow the customer of the CMAT to benefit from the economies of scale associated with utilising larger vessels and reduced freight costs. The need for such economies of scale within the aggregates market is fully explained in Appendix 2 to PoTLL's Response to Relevant Representations Document (PoTLL/T2/EX/32). It also allows for predicted vessel sizes in the future.</p> <p>It should be noted that the impact of the silo has been sought to be mitigated by requiring the colouring of the structure to be approved by Thurrock Council, in consultation with Historic England and Gravesham Borough Council.</p> <p>An example of a similar height silo (although these are fatter and wider) can be found at Lafarge's West Thurrock depot, which is supplied by boat.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments on response
			 <p>Copyright: Getty Images</p> <p>A further, thinner example, can be found at the Remix Dry Mortar Limited site at the Port of Bristol, shown below in two pictures to give the sense of height.</p> 	
1.0.9	Applicant	The Environmental Statement (ES) [APP-031] in paragraphs 6.18 and 6.19 explains that the capacity to handle deep sea aggregate vessels at a deep water berth is a vital element of the proposals as large scale	<p>The CMAT at Tilbury 2 will take the following main types of aggregate</p> <ul style="list-style-type: none"> • Crushed rock aggregate • Marine dredged aggregates <p>The requirement for a deep water berth is driven predominantly by the requirement for importing crushed rock. This is delivered in larger vessels such as the Yeoman Bridge</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments on response																				
		aggregates are handled in deep draft vessels. Does this relate to marine dredged aggregate dredgers or ships carrying crushed rock/recycled aggregates?	<p>and Yeoman Bontrup (as specified and illustrated in response to FWQ 1.0.10). These types of vessels are bringing in imported aggregates normally quarried from places like Norway or Scotland where there is deep water access.</p> <p>Marine dredged aggregate vessels currently comprise predominantly smaller payloads and generally are more shallowly drafted. These vessels and product are also proposed to be facilitated on the berth at Tilbury 2 along with any recycled aggregates.</p>																					
1.0.10	Applicant	Please supply details of likely carrying capacity, length and draught of examples of the types of ships and/or marine aggregate dredgers that would bring aggregates to the Proposed Development? Whilst paragraph 5.10 of the ES supplies the dimensions of the largest operational self-discharging aggregate vessel (the Yeoman Bridge), what would be the range of sizes of aggregate vessels that would utilise the facility?	<p>As set out in paragraph 5.10 of the ES, the dimensions of the vessels assumed for the purposes of visual impact assessment are as follows: RoRo vessels 200m in length with a draught of 7.5m, and aggregate vessels of 250m in length with a draught of 15m.</p> <p>Further detail on these dimensions was also set out in table 14.4 of the ES, which is restated below.</p> <table border="1"> <thead> <tr> <th>Ship Type</th> <th>RoRo</th> <th>Bulk Aggregates</th> <th>Export Barge</th> </tr> </thead> <tbody> <tr> <td>Proposed Berth</td> <td>Both RoRo berths</td> <td>Aggregates berth</td> <td>Aggregates berth</td> </tr> <tr> <td>Length</td> <td>150 - 200m</td> <td>200 - 250m</td> <td>60-80m</td> </tr> <tr> <td>Beam (width)</td> <td>20 - 26m</td> <td>30 - 38m</td> <td>8-12m</td> </tr> <tr> <td>Draught</td> <td>7.5m</td> <td>15m</td> <td>3.1m</td> </tr> </tbody> </table> <p>To provide further context, the below photographs and descriptions are examples of the types of self-discharging aggregate vessels that may visit Tilbury2.</p> <p>Vessel : Fitnes Cargo : imported aggregates(crushed rock) Carrying Capacity : 33,000 m/t Length / draught 176m / 10.7m</p>	Ship Type	RoRo	Bulk Aggregates	Export Barge	Proposed Berth	Both RoRo berths	Aggregates berth	Aggregates berth	Length	150 - 200m	200 - 250m	60-80m	Beam (width)	20 - 26m	30 - 38m	8-12m	Draught	7.5m	15m	3.1m	No comment
Ship Type	RoRo	Bulk Aggregates	Export Barge																					
Proposed Berth	Both RoRo berths	Aggregates berth	Aggregates berth																					
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FWQ	Question to:	Question:	Response:	Highways England comments on response
			 <p>Vessel : Yeoman Bontrup (sister ship to Yeoman Bridge) Cargo : imported aggregates (crushed rock) Carrying Capacity : 96,000 m/t Length / draft 225m / 15.0m</p>	

FWQ	Question to:	Question:	Response:	Highways England comments on response
			 <p> Vessel : Yeoman Bank Cargo : imported aggregates (crushed rock) Carrying Capacity : 43,000 m/t Length / draft 204m / 11.3m </p> 	

FWQ	Question to:	Question:	Response:	Highways England comments on response
			<p>Vessel : City Of Westminster Cargo : Marine Dredged Aggregates Carrying Capacity : 5,100 m/t Length / draft 99m / 6.67m</p> 	
1.0.11	Applicant	<p>The Errata Version of the Non-Technical Summary (NTS) [AS-025] erroneously refers to the application site being in 'Tilbury Borough in Essex'. Elsewhere in the ES it appears that the author(s) of various sections considered that Thurrock Council is 'Thurrock Borough Council' within 'Essex County Council'. Please undertake a review of all of the documents and provide updated sections where necessary to reflect the correct situation, that is that Thurrock Council is a Unitary</p>	<p>The sentence should state "The site is situated within <i>Thurrock Borough Council adjacent to Essex County Council</i>, to the south east of Tilbury town and directly across the river from Gravesend as shown in Figure 1 below." This error has been addressed in an updated NTS submitted for Deadline 1 (PoTLL/T2/EX/51).</p> <p>A review of all documents has been undertaken and there are no other similar errors.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments on response
		Council and it is adjacent to (not within) Essex County Council. Please also provide a summary table showing where these changes have been made.		
1.0.12	Applicant	The topographic survey (ES Appendix 15.D) [APP-082] contains so much detail, it can only be understood when it is blown up to a scale which is circa 800 times bigger than the filed copy, at which point it cannot be considered as a whole. Please can the Applicant provide a replacement, simplified topographic plan at A3 size, showing existing contours (possibly with half metre intervals), identifying the locations of depressions and ditches that would be filled.	<p>The topographic survey has been amended as per the comments. Please see the Topographic Survey Contour Plan in Appendix A.</p> <p>Locations of depression and ditches that would be filled are subject to detailed design. Any filling of ditches or depression will need to take account of the Construction Environmental Management Plan (PoTLL/T2/EX/38), Landscape and Ecological Management Plan (PoTLL/T2/EX/42), Ecological Mitigation and Compensation Plan (PoTLL/T2/EX/47), and all other controls set out within the DCO. Existing ditches to be retained are identified in Figure 10.13 of the Environmental Statement (AS-22), and the Landscape and Ecological Management Plan.</p>	No comment
1.0.13	Applicant	Please can the Applicant provide another plan, drawn to the same scale as the replacement topographic plan, showing the proposed contours of the site needed to create the development platform for the Proposed Development?	<p>A plan has been prepared showing the proposed levels for the development platform based on the illustrative design. Please see the Proposed Ground Levels plan in Appendix A.</p> <p>The illustrative design shown has sought to minimise the increase to the existing ground levels and is within the envelope of the environmental assessment. For example, the landscape and visual impact assessment has assumed a maximum finished ground level of 4 mOD across the CMAT and RoRo terminals. Any increase to the finished ground levels at these locations, compared to the illustrative design, are therefore restricted to 4 mOD.</p> <p>The final design will be dependent on the results of the ground investigation and the contractors preferred design and construction methodology. This will be subject to the controls secured through the Construction Environmental Management Plan (CEMP – Document Reference PoTLL/T2/EX/38) and the requirements of the Development Consent Order.</p>	No comment
1.0.14	Applicant	Please can the Applicant provide a material balance calculation explaining how much material (and what type(s) and their likely sources) would be necessary to create the development platform for the Proposed Development (described in dDCO Schedule 2,	<p>For the Work No. 3, 5, 6, 7 & 8, where “filling of land” is proposed, the existing ground will be levelled out and the paving constructed on top of this resulting in the proposed ground levels. This will result in the “filling of land” comprising of pavement sub-base and finishing surface only and not any general fill to increase the ground levels. The approximate volumes for the fill are included in table 1 below and are within the overall envelop assessed for environmental impact:</p> <p>Table 1: RoRo Terminal and CMAT Approximate Fill Volumes</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments on response																																				
		under various Works, as "filling of land"?)	<table border="1"> <thead> <tr> <th>Location</th> <th>Description</th> <th>Type</th> <th>Approximate Volume (m³)</th> </tr> </thead> <tbody> <tr> <td>Work No. 3 & 7</td> <td>Concrete paving</td> <td>Concrete</td> <td>55,000</td> </tr> <tr> <td>Work No. 3 & 7</td> <td>Cement Bound Granular Material</td> <td>Aggregates</td> <td>58,000</td> </tr> <tr> <td>Work No. 5</td> <td>Permeable Block paving</td> <td>Concrete</td> <td>1,150</td> </tr> <tr> <td>Work No. 5</td> <td>Cement Bound Granular Material</td> <td>Aggregates</td> <td>7,000</td> </tr> <tr> <td>Works No. 6</td> <td>Permeable Block paving</td> <td>Concrete</td> <td>1,700</td> </tr> <tr> <td>Work No. 6</td> <td>Cement Bound Granular Material</td> <td>Aggregates</td> <td>13,000</td> </tr> <tr> <td>Work No. 8 (a-d)</td> <td>Concrete paving</td> <td>Concrete</td> <td>5,000</td> </tr> <tr> <td>Work No 8 (a-d)</td> <td>Cement Bound Granular Material</td> <td>Aggregates</td> <td>37,650</td> </tr> </tbody> </table> <p>This will be subject to detailed design and will be controlled through the measures set out in the Construction Environmental Management Plan (CEMP).</p>	Location	Description	Type	Approximate Volume (m ³)	Work No. 3 & 7	Concrete paving	Concrete	55,000	Work No. 3 & 7	Cement Bound Granular Material	Aggregates	58,000	Work No. 5	Permeable Block paving	Concrete	1,150	Work No. 5	Cement Bound Granular Material	Aggregates	7,000	Works No. 6	Permeable Block paving	Concrete	1,700	Work No. 6	Cement Bound Granular Material	Aggregates	13,000	Work No. 8 (a-d)	Concrete paving	Concrete	5,000	Work No 8 (a-d)	Cement Bound Granular Material	Aggregates	37,650	
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1.0.15	Applicant	What was the height of the recently demolished Tilbury power station chimneys?	The height of the recently demolished Tilbury Power Station chimneys was 170m (photo below for reference).	No comment																																				

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1.0.16	Applicant and RWE Generation plc	Please provide an update in respect of the surrendering of the permit that covers part of the Order limits.	<p>PoTLL purchased the Tilbury2 site from RWE Generation plc (RWE), who agreed to progress the surrendering of the permit.</p> <p>PoTLL understands from RWE that this is being progressed at this time.</p>	No comment
1.0.17	Applicant	The Errata edition of ES Chapter 5 [AS-008] in paragraph 5.82 discusses sensitivity testing for different heights, uses and layouts within the parameters of the masterplan. Please can the Applicant explain where in the ES sensitivity testing has been considered and reported upon?	<p>As part of the preparation of the ES, each environmental topic considered the Rochdale envelope being proposed and considered the likely worst case in relation to that envelope for the topic concerned in order to determine the worst case environmental impacts of the proposals. This is explained at the beginning of each chapter. This approach is particularly relevant to transportation, landscape and visual impacts (and hence heritage), noise, air quality, and transportation.</p> <p>For the transportation assessment the worst case assessment for traffic is set out at para. 13.6 of the Environmental Statement [APP-031] and in the Transportation Assessment [APP-072]. The worse case assessment include <i>inter alia</i></p> <ul style="list-style-type: none"> • Worst case estimates of traffic generation with below average vehicle payloads; • Assumption that 100% of staff travel in single occupancy vehicles; • No allowance for the effect of the Active Travel Study and Framework Travel Plan; • No allowance for the effect of the Sustainable Distribution Plan (SDP) • all exports by road will be carried out by 16-tonne vehicles, well below the average payload for aggregates, • all RoRo movements have been assessed to be by road. <p>In addition, a sensitivity test based on the assumption that all aggregate leaving the site will do so by road provided for a 17% uplift in the traffic generation estimates.</p> <p>The resulting traffic data was then fed into other related environmental disciplines including noise and air quality. The sensitivity test in the TA is therefore reflected in the assessment of these environmental topics.</p>	Highways England is content with the use of the Rochdale envelope approach, and this explanation of where the sensitivity testing has been applied.

FWQ	Question to:	Question:	Response:	Highways England comments on response
			<p>In addition, we would highlight the following.</p> <p>The LVIA has assessed the masterplan based on the maximum height parameters for each works area, assuming the structures in each area of the site consume that envelope to its fullest extent. The resulting assessment and 'wire frame' visibility analysis is expressed in Chapter 9 of the ES and in the Predicted Visual Effects at Appendix 9.F (APP-040/6.2.9.F). Any structures constructed that are less than these maxima would have a lesser visual and landscape impact.</p> <p>The noise chapter, as seen at paragraph 17.5 and 17.6 assumes a worst-case scenario that all plant would operate at a given location within the site closest to receptors, which is a conservative assessment as plant would typically be distributed over a wider work area. The operational noise predictions have assumed a worst-case scenario with all plant and activities in the CMAT and RoRo operating continuously, 24 hours a day, seven days a week. In practice, there will be periods where equipment is not in use which would result in a lower levels and a correspondingly smaller impact.</p> <p>The air quality chapter sets out a range of worst case parameters (see table 18.2) adjacent to paragraph 18.9). For example, it assumed CMAT operations occurring anywhere within the boundary of the CMAT aggregates work area, including adjacent to the boundary (and thus requiring the suggested mitigation measures) and that the RoRo terminal operates at the maximum 500,000 units p.a. from the outset of operation with all operations occurring at the same time.</p>	

1.1 AIR QUALITY

FWQ	Question to:	Question:	Response:	Highways England response
1.1.	Air Quality			
1.1.1.	Applicant/ Gravesham Borough Council (GBC)	<p>GBC states [RR-019] that it is not convinced that Tilbury2 is fulfilling its potential as a strategically important infrastructure project:</p> <ul style="list-style-type: none"> a) Would GBC provide more detail on what it means by this statement? b) Would the Applicant state its position on GBC's statement? 	<p>It is not entirely clear what GBC mean by "<i>it is not convinced that Tilbury 2 is fulfilling its potential as a strategically important infrastructure project</i>", however, the GBC comment is made in the context of the previous sentence "<i>The PLA is developing an air quality strategy for the Thames that looks into shore-side power, emission monitoring and a port-wide air quality inventory for the river.</i>"</p> <p>A response that addresses the matter of shore-side power, was provided in Section 3 on page 21 of PoTLL's Response to Relevant Representations (PINS Document Reference TR030003-000557). The full response is replicated below.</p> <p>The number of large shipping vessel movements associated with the proposals is considered at paragraph 18.325 to 18.331 of the ES (Document Reference APP-031, 6.1). The DEFRA local air quality management guidance criteria for further assessment are not exceeded and there is no sensitive exposure in the vicinity of the shipping movements. The effect of emissions from shipping was therefore concluded not to be significant. This agrees with the Secretary of State scoping opinion (Document Reference 6.2.2A, paragraph 3.36).</p> <p>Air quality monitoring is undertaken by the local authorities and a site-specific survey was undertaken by PoTLL. The results were presented in Appendix 18.B of the ES (Document Reference 6.2.18A to E) and summarised in the ES (Document Reference APP-031, 6.1, paragraphs 18.168, 18.176). The results show that concentrations of nitrogen dioxide and sulphur dioxide in Tilbury are below the air quality objectives (Document Reference APP-031, 6.1, paragraph 18.330). The AQMAs for nitrogen dioxide in Thurrock and Gravesend are road traffic-related. They are also a substantial distance away from the shipping movements.</p> <p>As stated in the consultee response (Table 18.7 of the ES (Document Reference APP-031, 6.1)) existing technology on ships is not currently suitable for shore power to be utilised at Tilbury2. A further constraint, at present, is that the electrical capacity is extremely limited due to the National Grid infrastructure locally. This would require an upgrade at significant cost to provide more capacity in the local area.</p> <p>PoTLL understands from its RoRo customers that its vessels cannot presently connect to shore power. It is also understood that there is limited benefit for vessels with a short stay in port. The vessels that will call on the aggregate berths are likely to be large "self discharge" vessels or smaller dredgers. The age profile of the majority of "self discharge" aggregate vessels means they do not currently have the ability to take shore power.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>PoTLL will provide the infrastructure to ensure that shore power can be accommodated at the Tilbury2 site in the future should the vessel profile change.</p> <p>There is a commitment to this effect in the Operational Management Plan (Document Reference PoTLL/T2/EX/40), a document that will be certified through the DCO. In Section 6.3 of the OMP, it is stated that future improvements including the ability to provide shore power to vessels will be considered as and when the vessel fleet and local infrastructure can support such improvements.</p>	
1.1.2.	Applicant	<p>In resident Mr Colin Elliott's relevant representation [RR-001], he cites concerns regarding air quality, particularly with regard to the ASDA roundabout: What is the Applicant's response to this concern of Mr Elliott?</p>	<p>The applicant's response to Colin Elliott's Relevant Representation can be found in the Response to Relevant Representations (Document Reference PoTLL/T2/EX/32) and below.</p> <p><i>As stated in the Consultation Report, (Document Reference 5.1) Table 9.6, the air quality assessment considered the locations of the most sensitive receptors, including local schools. No hospitals or care homes were identified within the study area for air quality. An assessment of air quality was undertaken for the ES (Document Reference APP-031, 6.1). This was undertaken on a conservative basis including worst-case assumptions for the number of rail and vehicle movements. A detailed assessment of road and rail emissions was undertaken for 27 sensitive receptors, carefully selected to represent worst-case exposure (Document Reference APP-031, 6.1, paragraph 18.313), including along the new Infrastructure Corridor. The future concentrations of air pollutants were compared against national air quality objectives, which are consistent with the European Directive air quality limit values, set to protect human health. The assessment concluded (Document Reference APP-031, 6.1, paragraph 18.323), that there will be no exceedances of AQS objectives, therefore the effect of the proposals on local air quality is not significant. It is noted that these conclusions have been agreed by Thurrock Council's Environmental Health Officer.</i></p> <p><i>Mitigation measures have been developed and form part of the Operational Management Plan (OMP), compliance with which is secured in the draft DCO (Document Reference 3.1). These measures focus on the control of dust and fine particulate matter from the CMAT operational area.</i></p> <p>With specific regard to the ASDA roundabout, the effect of the proposals on driver delay was considered in Chapter 13 (Land-side Transport) paragraphs 3.119 to 13.122).</p> <p>As mentioned in Chapter 8 (Air Quality) paragraph 18.196 of the Environmental Statement (ES) (Document Reference APP-031, 6.1), no sensitive receptors were identified within 200 m of the ASDA roundabout (see also paragraph 18.58 to 18.59 of the ES). A receptor (R9) was included in the dispersion model representing a property on Dock Road (Link 20, between</p>	<p>Highways England is content that the air quality assessment presented within the ES, and includes ASDA roundabout, is compliant with the requirements of the DMRB, and that suitable mitigation has been proposed.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>ASDA roundabout to Calcutta Road). It is noted that no operational vehicles will use this link, see Table 18.20 - Change in Traffic Flow during Operational Phase; it was included in the model due to proximity to the rail corridor and the A1089.</p> <p>The results of the assessment are presented in Tables 18.44 to 18.46 of Appendix 18.E.1 (Document Reference 6.2 18A to 18.E). At R9, in the opening year, there is a slight increase in annual mean NO₂ concentrations, from 34.7 µg/m³ without the proposals to 36.6 µg/m³ with the proposals, compared to an existing baseline of 39.2 µg/m³. There are negligible changes in PM₁₀ concentrations, which are less than half the annual mean objective, with and without the proposals.</p> <p>Overall, given there are no exceedences of any AQS objective with the proposals in place, despite the conservative assumptions applied in the assessment, and given that at the majority of receptors there will be negligible or slight increases in concentrations with the proposals, and that concentrations will generally be lower in future than at present, the effect of the proposals on local air quality is considered not to be significant.</p> <p>Mitigation measures for landside transport are summarised in the Mitigation Route Map v1 (PoTLL/T2/EX/52).</p> <p>The draft Construction Traffic Management Plan (CTMP) is an appendix of the CEMP (Document Reference 6.9), compliance with which is secured by a requirement in Schedule 2 to the Draft DCO (PoTLL/T2/EX/35). The CTMP sets out measures for the management of construction traffic and proposed lorry routes that have been developed in consultation with Thurrock Council and Highways England to minimise the impacts on the road network, local communities and tourism receptors. The final CTMP will include:</p> <ul style="list-style-type: none"> • The use of appropriate and approved routes for larger construction vehicles, deliveries and for staff including approved routing plans • The management of working hours and delivery times to minimise disturbance caused by traffic (e.g. avoiding deliveries during peak hours) <p>In accordance with the Thurrock Air Quality and Health Strategy, the Operational Management Plan (OMP) (APP-165) that was submitted as part of the DCO application includes mitigation measures for cleaner and greener vehicles including:</p> <ul style="list-style-type: none"> • Lower emission engines for plant as they are developed • Adoption of electric vehicles as technology improves and makes this equipment viable for operational uses • Electrical charging points will be installed for staff vehicles • Euro 4 engines for all mobile plant on RO/RO and CMAT will be used as a minimum standard and will be upgraded as part of our ongoing programme of plant replacement 	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>A Framework Travel Plan (FTP) (Document Reference 6.2. 13.B) and Sustainable Distribution Plan (SDP) (Document Reference 6.2. 13.C) have been developed as mitigation of effects relating to operational traffic. These documents comply with the aims of national, regional and local transport policy guidance with the aim to deliver sustainable new development, whilst helping to resolve existing transport issues in the area.</p> <p>Compliance with the OMP, FTP and the SDP is secured by requirements in Schedule 2 to the Draft DCO (PoTLL/T2/EX/35).</p>	
1.1.3.	Applicant/ Thurrock Council (TC)	<p>In TC's relevant representation [RR-031], TC asserts that respiratory disease deaths, hospital admissions for Chronic Obstructive Pulmonary Disease (COPD) and premature mortality from cancer are experienced more often than average in Tilbury, and TC requests further discussion on the mitigation measures – in particular the use of cleaner and greener vehicles. Supply of shore power should also be given priority:</p> <p>a) Would TC supply its evidence for its assertion regarding the health effects stated above?</p> <p>b) Would the Applicant state its response to TC's points above?</p>	<p>b) The applicant acknowledges that rates of hospital admissions for COPD, levels of respiratory disease, and premature mortality from cancer are experienced more often than average in Thurrock, compared with the national average. Chapter 8 (Health) of the Environmental Statement (ES) (Document Reference APP-031, 6.1) presented these data for the Thurrock area, and Tilbury wards where such data were available (paragraphs 8.50 to 8.60 of the ES).</p> <p>Paragraph 8.59 of the Health Chapter specifically mentions COPD and respiratory health in the Tilbury area in relation to air quality: <i>Data from the Public Health Outcomes Framework for 2015 suggests that the fraction of mortality attributable to particulate air pollution is slightly higher in Thurrock (5.6) than for Essex (5.4) and Kent (5.1). Data also suggests that deaths from respiratory disease are higher in Tilbury St Chads (177.5), Tilbury Riverside (217.2) and Thurrock (119.6) compared with the national average (100). Emergency admissions for COPD also show similar patterns (Riverside 209.5, St Chads 209.5, Thurrock 111.8, National 100).</i></p> <p>Paragraph 8.53 of the Health Chapter specifically mentions cardiovascular disease and cancer: <i>In Thurrock, early deaths from cardiovascular disease and cancer are worse than the English average (APHO) (88.8 and 155.4 per 100,000 population aged under 75).</i></p> <p>In comparison, (see Table 8.5 of the ES), the national average for early deaths from cardiovascular disease is 75.7 per 100,000 population aged under 75 and for early deaths from cancer is 141.5 per 100,000 population aged under 75.</p> <p>The ES Chapter 8 (Health) did not comment on social conditions in relation to specific health outcomes, however, it is noted that the population profile shows high levels of deprivation in the borough, which are related to poorer health. Several of the health policies reviewed in Table 8.1 of the ES point to the social deprivation and inequality impact on health determinants in these wards.</p> <p>The health effects of the proposals, as assessed in Chapter 8 (Health), refer to the findings of the air quality assessment presented in Chapter 18 (Air Quality) of the ES. The air quality assessment considered embedded mitigation</p>	<p>Highways England is content that the air quality assessment presented within the ES is compliant with the requirements of the DMRB, and notes that Thurrock Council's Environmental Health Officer 'agreed that the operation of the proposals will not have significant adverse long-term effects on air quality at the closest residential receptors'.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>incorporated within the design of the proposals, (see sub-heading "Mitigation" below), and made recommendations for further mitigation where appropriate. The assessment of air quality was undertaken on a conservative basis including worst-case assumptions, for example the number of rail and vehicle movements in the opening year (ES paragraph 18.8 and Table 18.2 - Parameters defining the "reasonably likely worst case scenario" for air quality assessment).</p> <p>Detailed modelling of road and rail emissions was undertaken for 27 sensitive receptors, carefully selected to represent worst-case exposure (paragraph 18.313), including along the new Infrastructure Corridor. As stated in the Consultation Report, (Document Reference 5.1) Table 9.6, the air quality assessment considered the locations of the most sensitive receptors, including residential properties and local schools, closest to affected roads. No hospitals or care homes were identified within the study area.</p> <p>The future concentrations of air pollutants were compared against national air quality strategy (AQS) objectives for NO₂, PM₁₀ and PM_{2.5}, which are consistent with the European Directive air quality limit values, which are based on WHO guidelines to protect human health (including the more vulnerable with existing health conditions such as respiratory disease). The air quality assessment concluded (paragraph 18.323), that there will be no exceedances of AQS objectives with a negligible to slight impact at the majority of receptors. A moderate increase in annual mean NO₂ was identified at one receptor, but concentrations here would be almost 10 µg/m³ below the AQS objective of 40 µg/m³. Concentrations will generally be lower in future years both with and without the proposals than presently. Changes in PM₁₀ and PM_{2.5} were negligible at all receptors.</p> <p>Considering the robust "worst case" approach taken in the air quality assessment, including quantifying emissions and receptor selection, the effect of these changes in local air quality was concluded not to be significant. It is noted that these conclusions have been agreed by Thurrock Council's Environmental Health Officer (Statement of Common Ground Update Report, Appendix 1, paragraph 4.5.3, Document Reference PoTLL/T2/EX/33): <i>"It is agreed that the operation of the proposals will not have significant adverse long-term effects on air quality at the closest residential receptors"</i>.</p> <p>Mitigation measures</p> <p>The applicant is aware of Thurrock Council's Air Quality & Health Strategy (2016), which was referenced in Chapter 8 of the ES (Document Reference APP-031, 6.1), Table 8.1. The Strategy aims to <i>"improve air quality in the borough to reduce the health impacts of air pollution"</i>. The Tilbury 2 proposals incorporate mitigation measures supportive of the policies for future developments, as summarised under the sub-headings below.</p> <p>The Operational Management Plan (OMP) (Document Reference APP-165) that was submitted as part of the DCO application includes mitigation measures for</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p><i>inter alia</i> "cleaner and greener vehicles" and construction dust emissions. A Framework Travel Plan (FTP) (Document Reference APP-073, 6.2.13B) and Sustainable Distribution Plan (SDP) (Document Reference APP-074, 6.2.13C) have been developed as mitigation of effects relating to operational traffic. These documents comply with the aims of national, regional and local policy guidance with the aim to deliver sustainable new development, whilst helping to resolve existing transport issues in the area. Compliance with the OMP, FTP and the SDP is secured by requirements in Schedule 2 to the DCO.</p> <p><u>Design and layout of the development</u></p> <ul style="list-style-type: none"> • The proposals include embedded mitigation within the design of the infrastructure corridor, as set out at paragraph 13.70 of the ES (Document Reference APP-031, 6.1). • The infrastructure corridor provides a shorter, more direct, link onto the strategic road network and thus lowers the vehicle kilometres travelled by 50% (ES paragraph 13.101) with associated reductions in emissions. • HGVs accessing Tilbury 2 development will not go through Tilbury Town, including the AQMA on Calcutta Road, due to the existence of the new link road. <p><u>Promoting infrastructure to promote low impact modes of transport</u></p> <ul style="list-style-type: none"> • The Sustainable Distribution Plan (SDP) (Document Reference 6.2.13C) sets out proposals for distribution of materials handled by the proposed development. • The SDP proposals include a substantial investment in a new rail link to promote modal shift: <ul style="list-style-type: none"> – Paragraph 5.2.4 indicates that 53% of the aggregates to be handled will be imported / exported by alternatives modes to HGV. – Paragraph 5.2.8 indicates that Tilbury 2 has been designed to facilitate use of the rail network by the Ro-Ro terminal • The creation of new berths will also enable a proportion of the material from the CMAT to be exported by barge along the river. <p><u>Reducing emissions</u></p> <ul style="list-style-type: none"> • The Framework Travel Plan (FTP) (Document APP-073, 6.2.13 B) will deliver benefits to the local community and environment, reducing CO₂ emissions through fewer car journeys (paragraph 4.2.5). • The FTP sets out PoTLL's approach to manage staff travel demand through the promotion of walking, cycling and public transport use as alternatives to the private car. • PoTLL, and each tenant within the Tilbury 2 site, will nominate a Sustainable Travel Co-ordinator with responsibility for implementation of sustainable travel measures (Section 5). • An Active Travel Study, agreed with Thurrock Council, which is secured by inclusion through the DCO within the Order Limits, and through a Section 	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>106 agreement for measures outside the Order Limits (Document Reference 5.3 B) includes:</p> <ul style="list-style-type: none"> - a new footway/cycleway alongside the infrastructure corridor - new crossings providing enhanced facilities for pedestrians and cyclists - improvements to footpaths, cycleways, crossing points, way marking and interpretation to encourage outdoor activity, - improvements to the access to the riverside and the river walk. <ul style="list-style-type: none"> • Section 7.4 of the Operational Management Plan (OMP) (Document Reference PoTLL/T2/EX/40) states that PoTLL and its tenants will consider implementation of future improvements and technologies to further improve air quality and reduce emissions, as and when viable options emerge: <ul style="list-style-type: none"> - Lower emission engines for plant as they are developed - Adoption of electric vehicles as technology improves and makes this equipment viable for operational uses - Electrical charging points will be installed for staff vehicles during construction - Euro 4 engines for all mobile plant on RO/RO and CMAT will be used as a minimum standard and will be upgraded as part of our ongoing programme of plant replacement • Section 7.5 of the OMP provides further information on proposed actions for minimising emissions. <p><u>Community engagement</u></p> <p>Concerns raised by the local community regarding air quality and health impacts, during the DCO consultation period, were recorded in the Consultation Report (Document Reference 5.1) and taken into consideration when undertaking the various assessments reported in the ES (Document Reference 6.1). PoTLL is committed to ensuring that once operational, Tilbury 2 will become part of the wider engagement the existing Port of Tilbury undertakes with the local community. The Operational Community Engagement Plan (Document Reference 5.4) outlines how this will be achieved and how PoTLL's ongoing relationship with the local community will continue following the construction period.</p> <p>Shore power</p> <p>At the current time there are few vessels able to receive shore power and existing technology on ships is not currently suitable for shore power to be utilised at Tilbury2. A further constraint, at present, is that the electrical capacity is extremely limited due to the National Grid infrastructure locally. This would require an upgrade at significant cost to provide more capacity in the local area.</p> <p>PoTLL understands from its RoRo customers that its vessels cannot presently connect to shore power. It is also understood that there is limited benefit for</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>vessels with a short stay in port. The vessels that will call on the aggregate berths are likely to be large "self discharge" vessels or smaller dredgers. The age profile of the majority of "self discharge" aggregate vessels means they do not currently have the ability to take shore power.</p> <p>POTLL will provide the infrastructure at the Tilbury 2 site for shore power provision and future proof the site in terms of cabling to supply shore power so that in future, as the technology on vessels improves to the level required, shore power can be accommodated should the vessel profile change.</p> <p>There is a commitment to this effect in the Operational Management Plan (Document Reference PoTLL/T2/EX/40), a document that will be certified through the DCO. Section 6.3 of the OMP states that future improvements including the ability to provide shore power to vessels will be considered as and when the vessel fleet and local infrastructure can support such improvements.</p>	

1.2 BIODIVERSITY, ECOLOGY AND NATURAL ENVIRONMENT

FWQ	Question to:	Question:	Response:	Highways England response
1.2.	Biodiversity, Ecology and Natural Environment			
1.2.1.	Applicant	<p>The Errata version of the NTS [AS-025] states, in paragraph 3.57 (in relation to terrestrial ecology), <i>"The closest designations to the site relate to the Thames Estuary and Marshes."</i> However there are various Local Wildlife Sites (LoWS) that would be directly impacted by the Proposed Development. This section of the NTS needs clarification and should be edited accordingly.</p>	<p>The following changes have been made to address this error in 'NTS v2 – Clean' (Document Reference PoTLL/T2/EX/50) and 'NTS v2 – Tracked Changes' (Document Reference PoTLL/T2/EX/51):</p> <p>"3.57 The closest <i>statutory</i> designations to the site relate to the Thames Estuary & Marshes. This Special Area of Conservation (SPA) and Ramsar site extends for about 15 <i>miles</i> (24 km) along the south side of the Thames estuary, where it is also designated as the South Thames Estuary and <i>Marshes</i> Site of Special Scientific Interest (SSSI). On the north side of the estuary, the SPA/Ramsar site includes a smaller area of intertidal <i>and other</i> habitat which forms the Mucking Flats and Marshes SSSI.</p> <p>3.58 There is likely to be a negative residual effect on the local and wider ecological resource during construction as there will not be suitably mature habitats to act in compensation for some of the key features that will be removed, in particular 'open mosaic' brownfield habitats with an equivalent suite of rare plants, lichens and invertebrates to those currently resident in the Lytag Brownfield <i>Local Wildlife Site</i> (LoWS) and the Tilbury Centre LoWS (and to a greater or lesser extent, also elsewhere within the Site). <i>There will also be losses of grazing marsh habitat from the Tilbury Marshes LoWS; some of these losses will be temporary with the habitat being restored after construction."</i></p>	No comment
1.2.2.	Natural England (NE), Environment Agency (EA), Buglife, Essex Field Club	<p>ES paragraph 6.38 considers that, <i>"...some areas of some ecological value, particularly those reliant on open mosaic habitat, are likely to deteriorate in value if left in an undeveloped condition in the future, as natural succession leads to the intrusion of more substantial vegetation; and that any loss in biodiversity will be compensated, it is considered that development of the northern part of the site is appropriate."</i></p> <p>Is the statement that some areas of ecological value, particularly those reliant on open mosaic habitat, are likely to deteriorate in value if left in an undeveloped condition in the future, correct?</p>	<p>Whilst this question is directed at Interested Parties, the following sets out further information to assist in answering the question.</p> <p>Paragraph 5.1.8 in the NPS for Ports states:</p> <p><i>"As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives."</i> <small>[Footnote 35 cross-refers to section 4.9 'Alternatives' in the NPS for Ports.]</small> <i>Where significant harm cannot be avoided, then appropriate compensation measures should be sought."</i></p> <p>The aim to avoid significant harm to biodiversity interests has been approached by the Applicant by reference to the mitigation hierarchy (also by reference to the CIEEM guidance¹) as follows:</p>	No comment

¹ CIEEM (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

FWQ	Question to:	Question:	Response:	Highways England response
			<ul style="list-style-type: none"> - Avoidance. Consideration was given to reasonable alternatives (including other off-site locations) which could avoid harm to identified ecological features of value, in particular the LoWS designations, protected species, and S41 habitats and species. It was concluded that there was no alternative to the construction footprint shown in the General Arrangement Plans (Document Reference 2.2/APP-008) that would also allow the operational, economic and commercial needs set out in the Outline Business Case (ES Document Reference 7.1) to be met. This is discussed further in Chapter 6 of the Environmental Statement. Further detail on the consideration of alternatives in this context is set out in the response to FWQ 1.4.4. - Mitigation. Adverse effects have been avoided or minimised where possible through embedded mitigation measures (see ES paragraphs 10.315 – 10.327; document reference 6.1/APP-031) including via the following documents, which will be secured by the DCO. <ul style="list-style-type: none"> - Construction Environmental Management Plan (CEMP; Document Reference PoTLL/T2/EX/38) - Landscape and Ecological Management Plan (LEMP; Document Reference PoTLL/T2/EX/42, 10.P) - Ecological Mitigation and Compensation Plan (EMCP). This is a forthcoming document which will be submitted to the Examination following settlement of the details of the off-site compensation area with the landowner. It will be secured within the dDCO as per the provisions of Schedule 2, Part 1, Section 5: 'Off-site mitigation'. - Compensation/Enhancement. Where it has not been possible to avoid harm to biodiversity interests even with the mitigation proposed, then appropriate compensation measures have been sought to offset these residual ecological effects. In addition, wherever practicable, the Applicant is seeking to deliver net benefits (enhancements) for biodiversity over and above requirements for avoidance, mitigation or compensation. These compensation and enhancement measures will be secured via the LEMP and EMCP documents, as above. 	
1.2.3.	NE, EA, Buglife, Essex Field Club	Do you consider that the Applicant has addressed the need (within the NPS for Ports, paragraph 5.1.8) to aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives?	<p>Whilst this question is directed at Interested Parties, the following sets out further information to assist in answering the question. Paragraph 5.1.8 in the NPS for Ports states:</p> <p><i>"As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives."</i> <small>[Footnote 35 cross-refers to section 4.9 'Alternatives' in the NPS for Ports.]</small> <i>Where significant harm cannot be avoided, then appropriate compensation measures should be sought."</i></p>	<p>The Applicant proposes to reinstate any ecological habitats within the SRN, which may be temporarily adversely affected during the construction of the scheme.</p> <p>Highways England's Biodiversity Plan (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/441300/N150146 - Highways England Biodiversity Plan3lo.pdf) states that the operation,</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>The aim to avoid significant harm to biodiversity interests has been approached by the Applicant by reference to the mitigation hierarchy (also by reference to the CIEEM guidance²) as follows:</p> <ul style="list-style-type: none"> • Avoidance. Consideration was given to reasonable alternatives (including other off-site locations) which could avoid harm to identified ecological features of value, in particular the LoWS designations, protected species, and S41 habitats and species. It was concluded that there was no alternative to the construction footprint shown in the General Arrangement Plans (Document Reference 2.2/APP-008) that would also allow the operational, economic and commercial needs set out in the Outline Business Case (Document Reference APP-166, 7.1) to be met. This is discussed further in Chapter 6 of the Environmental Statement. Further detail on the consideration of alternatives in this context is set out in the response to FWQ 1.4.4. • Mitigation. Adverse effects have been avoided or minimised where possible through embedded mitigation measures (see ES paragraphs 10.315 – 10.327; document reference 6.1/APP-031) including via the following documents, which will be secured by the DCO. <ul style="list-style-type: none"> - Construction Environmental Management Plan (CEMP; PoTLL/T2/EX/38) - Landscape and Ecological Management Plan (LEMP; PoTLL/T2/EX/42) - Ecological Mitigation and Compensation Plan (EMCP). This is a forthcoming document which will be submitted to the Examination following settlement of the details of the off-site compensation area with the landowner. It will be secured within the dDCO as per the provisions of Schedule 2, Part 1, Section 5: 'Off-site mitigation'. • Compensation/Enhancement. Where it has not been possible to avoid harm to biodiversity interests even with the mitigation proposed, then appropriate compensation measures have been sought to offset these residual ecological effects. In addition, wherever practicable, the Applicant is seeking to deliver net benefits (enhancements) for biodiversity over and above requirements for avoidance, mitigation or compensation. These compensation and enhancement measures will be secured via the LEMP and EMCP documents, as above. 	<p>maintenance, and enhancement of the SRN should move to a position that delivers no net loss of biodiversity. In the long term, it should deliver a net gain across its broader range of works.</p> <p>The Applicant is asked to confirm that there will be not net loss of biodiversity within the SRN, and outline any measures to secure a net gain within the SRN.</p>
1.2.4.	Applicant	Eels Please clarify if/when a survey of eels in and near the Application site will be carried out, and if/when the results would be	A requirement for specific eel surveys was not identified during scoping. However, the Environment Agency requested (in letters dated 21 September 2016, 25 April 2017 and 28 July 2017) that potential	No comment

² CIEEM (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

FWQ	Question to:	Question:	Response:	Highways England response
		submitted to the Examination? If any eels are found, how would a scheme for the protection of their habitat and mitigation be provided and agreed with with the EA?	<p>impacts on eel passage be considered in the ES. The suitability/accessibility of the site for eels was therefore addressed in ES paragraphs 10.120 and 10.286-10.290 (Document Reference 6.1/APP-031); and potential landward impacts on eel passage addressed in paragraph 10.358 of the ES (Document Reference 6.1/APP-031). Potential impacts were also assessed within the Water Framework Directive (WFD) Assessment (Document Reference 6.2, 16.C)/APP-088).</p> <p>Mitigation and compensation measures are proposed as follows:</p> <ul style="list-style-type: none"> • Fish and eel passage will be retained under any crossing installed as part of the works (WFD Assessment, paragraph 1.67 and Table 1.7), and secured through operation of the EA's protective provisions in the draft DCO (Document Reference 3.1/APP-016). • Eel-friendly control structures will be incorporated into the proposed Thames outfall (design being developed but will be signed off by the Environment Agency pursuant to their protective provisions); and • There are provisions within chapter 6 of the CEMP (Document Reference PoTLL/T2/EX/38) to ensure that eels will be protected during construction phase. In addition, compensatory coastal and floodplain grazing marsh habitat will be provided (for further details of which see the responses to FWQ 1.2.8, 1.2.9 and 1.2.10) and secured via the forthcoming Ecological Mitigation and Compensation Plan (EMCP). <p>The potential presence of eels has therefore already been addressed by suitable mitigation.</p> <p>As part of the process of agreeing a Statement of Common Ground (SoCG), it has been proposed to the Environment Agency that additional eel surveys are likely to be inconclusive for one or more watercourses, and therefore likely be of very limited value. In addition, a positive identification of eels would not change the mitigation measures already proposed in relation to fish and eels. This issue is still under discussion with the Environment Agency as set out at the Deadline 1 SoCG Update Report (Document Reference PoTLL/T2/EX/54).</p>	
1.2.5.	Applicant	INNS Please explain how long term monitoring and control of invasive non-native species (INNS) would be undertaken, and how will these matters be secured within the dDCO?	Invasive non-native species (INNS) were defined for the ES as those listed at Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended). The INNS identified within terrestrial habitats are listed at paragraph 10.225 of the ES (Document Reference 6.1/APP-031) and at paragraphs 1.29-1.31 of the WFD Assessment (Document Reference 6.2, 16.C), and comprise Japanese rose <i>Rosa rugosa</i> , Himalayan cotoneaster <i>Cotoneaster simonsii</i> , and wall cotoneaster <i>Cotoneaster horizontalis</i> , all of which were found as very small numbers of plants.	Highways England requests that it be consulted on INNS control procedures to be implemented as part of the LEMP, so that coordinated action can be taken within the SRN where it is adjacent to the application site.

FWQ	Question to:	Question:	Response:	Highways England response
			<p>No INNS were found within aquatic habitats, although there are past records for floating pennywort <i>Hydrocotyle ranunculoides</i> within the East Tilbury Dock Sewer.</p> <p>Monitoring and control of INNS would be secured within the dDCO by the following documents:</p> <p>Construction Environmental Management Plan (CEMP). The CEMP (Document Reference PoTLL/T2/EX/38) makes provision for a pre-construction INNS survey under 'Key Species Management' at paragraph 6.11. It states: <i>"All areas where in-channel works are proposed on existing and retained watercourses ... will be re-surveyed by a suitably qualified ecologist some months prior to works commencing. ... Matters that will be considered in the course of such surveys will include: ... Presence or absence of any Invasive Non-Native Species (INNS) – in particular Japanese knotweed, Himalayan balsam and floating pennywort"</i>.</p> <p>The CEMP goes on to say: <i>"If INNS are found to be present, appropriate isolation, removal and post-construction control measures will be drawn up and implemented in conjunction with prevailing best-practice protocols. The Environment Agency will be notified and agreement on methodological approach to such species will be sought in that scenario"</i>.</p> <p>Thus, the CEMP secures monitoring and control of INNS during the construction period.</p> <p>Landscape and Ecological Management Plan (LEMP). A commitment to post-construction monitoring for invasive non-native species is set out at paragraphs 4.15 and 5.4 of the LEMP (PoTLL/T2/EX/42), which states at paragraphs 4.15 and 5.4: <i>"In the post-construction phase, vigilance for INNS will form part of the annual walkover surveys ... and where identified, appropriate controls will be put in place to ensure control and eradication, in line with prevailing best practice standards and legal requirements... an annual monitoring report will be produced detailing any remedial actions or interventions determined to be necessary."</i></p> <p>Further to this, compartmental management prescriptions also give specific prescriptions relating to INNS where appropriate, e.g. for Compartment 5 where wetland habitat creation is proposed the LEMP states at paragraph 4.26: <i>"Particular attention to be paid to the potential presence of INNS, and if present then measures taken to remove/control them."</i></p> <p>Thus, the LEMP secures monitoring and control of INNS during the post-construction/operational period.</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>Ecological Mitigation and Compensation Plan (EMCP). This is a forthcoming document which will be submitted to the Examination following settlement of the details of the off-site compensation area. It will be secured within the DCO as per the provisions of Schedule 2, Part 1, Section 5: 'Off-site mitigation'. It is proposed that the EMCP would include the following provisions for long term monitoring and control of INNS:</p> <ul style="list-style-type: none"> • On-site. Provisions for post-construction monitoring and control of INNS on-site are already secured by the LEMP. The EMCP will therefore cross-refer to the LEMP, reproducing the commitments already made in the LEMP document, i.e. that: <i>"Vigilance for INNS will form part of the annual walkover surveys ... and where identified, appropriate controls will be put in place to ensure control and eradication, in line with prevailing best practice standards and legal requirements... an annual monitoring report will be produced detailing any remedial actions or interventions determined to be necessary."</i> • Off-site. No INNS have been identified to date within any of the candidate off-site ecological mitigation and compensation area(s). Provisions for monitoring and control of INNS within the off-site receptor area(s) are not dealt with in any submitted document and will therefore be secured by the forthcoming EMCP alone. The following provisions for long term monitoring and control of INNS are therefore proposed: <ul style="list-style-type: none"> - Pre-commencement. Prior to undertaking any habitat creation which is outside the scope of standard agricultural management (e.g. requiring movement of spoil or other groundworks, or works directly affecting wetland features), the compensation area(s) will be surveyed by a suitably qualified ecologist and the presence of any INNS will be recorded and mapped. If INNS are found to be present, then appropriate isolation, removal and post-habitat creation control measures will be drawn up and implemented in conjunction with prevailing best-practice protocols. - Short term (1-5 years). During the first five years after habitat creation (establishment phase), the off-site ecological mitigation and compensation area(s) will be subject to surveys, the frequency of which will be determined by the nature of the habitat creation works. These surveys will include checks for the presence of INNS and if found the same approach to control as discussed above to ensure full statutory compliance will be applied. - Medium/long term (5+ years). As the habitat establishes, the off-site ecological mitigation and compensation area(s) will continue to be subject to surveys, albeit the need for these checks will be less frequent checks as the habitat 	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>matures. If INNS are found the same approach to control as discussed above to ensure full statutory compliance will be applied.</p> <p>Thus, the EMCP provides a mechanism for ensuring that monitoring and control of INNS in the off-site compensation area/s will be undertaken during the operational period.</p>	
1.2.6.	Applicant (all parts), Natural England, EA, Buglife and Essex Field Club (parts a, b, d and e).	<p>Open Mosaic Habitat on Previously Developed Land</p> <p>a) Have there ever been any habitat translocation trials for Lytag habitat substrates (or similar)?</p> <p>b) If so, were they successful? Please provide summary details.</p> <p>c) Is the Applicant proposing to undertake habitat translocation trials, for the open mosaic habitat types that would be lost, prior to the commencement of the Proposed Development? if so please provide details?</p> <p>d) In your view, would a large scale habitat translocation project be likely to succeed for the Lytag habitat (and other artificial habitat substrate here), in terms of it being suited to the diverse assemblages of insects, plants, lichens and other biodiversity interests that would be directly impacted by the development?</p> <p>e) How would this large scale habitat translocation project be funded and managed?</p>	<p>a) Have there ever been any habitat translocation trials for Lytag habitat substrates (or similar)?</p> <p>b) If so, were they successful? Please provide summary details.</p> <p>While there has not to the Applicant's knowledge been any translocation project at this scale based on re-use of existing and established brownfield substrates, comparable projects exist and a number of matters are relevant in considering the practicality and prospects of success.</p> <p>Firstly, Lytag was (and still is) manufactured as a commercial secondary aggregate which is marketed for bulk sale and transported to end users around the country. Such end uses commonly include green (brown) roofs, where the Lytag is specifically used to provide a lightweight free-draining medium for growth of exactly the type of drought-tolerant plants typical of brownfield sites. With the establishment of such vegetation, the base habitats suitable for attracting and supporting invertebrate populations can be put in place.</p> <p>Secondly, the "Lytag substrates" in this instance (being the substrates at the Lytag Brownfield Local Wildlife Site within the Tilbury2 proposed Order Limits) include not just Lytag material itself, but a large measure of pulverised fuel ash (PFA) (from which Lytag is manufactured), as well as pre-existing soils, concrete and rubble.</p> <p>Even at a very local (Thurrock) level, there have been examples where PFA recovered from ash disposal sites has been used in habitat creation. The following two examples are local to the Tilbury2 site and one of these was carried out for PoTLL:</p> <p>The 'Area A1' ash disposal mound located immediately east of the former power station on land retained by RWE, but very close to Tilbury2, was subject to a restoration scheme designed by Bioscan UK Limited and implemented in 2010 to maximise its potential for invertebrates as part of planning approval for an extension to ash disposal operations (Planning Reference: 07/00972/TTGFUL and related consents). This involved re-modelling exposed PFA and using gravelly sub-soils (which had been stockpiled for the purposes of completely capping the PFA as part of a former approved 'restoration') in order to</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>create a series of artificial PFA 'dunes' and 'dune slack' features interspersed with areas of flattened compacted ground and intervening bands of higher gravelly substrate and subsoil able to more rapidly be colonised by flowering plants. Five monitoring surveys of this site since 2010 (most recent in 2016) have confirmed that it has been colonised by a high diversity of rare and scarce invertebrate species, including many common to the Tilbury2 site, sufficient to support a conclusion that by 2014 it was comparable to sites of national importance and by 2016 it was assessed unequivocally as of national importance.</p> <p>As part of compensatory habitat creation for the loss of a District-level importance invertebrate assemblage at the site of PoTLL's London Distribution Park, to the north of Tilbury and adjoining the 'ASDA Roundabout' component of the DCO application (Planning Reference: 10/50157/TTGOUT), PFA was recovered from the ash disposal area at Tilbury power station and transported to Mucking Landfill where it was placed as sculpted dunes on an area of landfill that had been capped with chalk slurry. The combination of these two nutrient poor substrates was chosen by the scheme designers, Bioscan UK Limited, to maximise future botanical and invertebrate diversity. In accordance with legal obligations pursuant to the s106, 2018 is the first year where monitoring of the success of this habitat creation will be carried out, and it is possible that initial results will be available to assist the Examination. The compensation site at Mucking Landfill remains currently in an operational part of the landfill site, but will in due course be passed over to the Essex Wildlife Trust as an extension to their established Thurrock Thames Nature Park.</p> <p>Elsewhere in South Essex, Buglife and the Essex Field Club have designed green roofs intended to attract invertebrates (e.g. at Wat Tyler Country Park), and in doing so have used Lytag in combination with demolition rubble and inert ceramic waste. The same principles used there apply to the mitigation and compensation for loss of such habitats intended to be applied in the Tilbury2 project, albeit the latter is at a much larger scale and seeks to re-use substrates to provide a 'head start' in terms of associated species interest.</p> <p>Indeed the only really novel elements of the Tilbury2 compensation scheme are the intention to translocate and re-use established brownfield substrates and the scale on which this is proposed. Given the close association of many of the specialist species with 'disturbed' ground, including actively eroding substrates, it can safely be assumed that a proportion of the existing associated plant, invertebrate and lichen interests will be resilient enough to survive the translocation process and re-establish new populations at the receptor site. As such, re-use of the existing resource is a simple matter of expedient and wise</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>use and doing it at a larger scale significantly increases the prospects of a successful result. This last point is also relevant to question c) below.</p> <p>c) Is the Applicant proposing to undertake habitat translocation trials, for the open mosaic habitat types that would be lost, prior to the commencement of the Proposed Development? if so please provide details?</p> <p>No, for the simple reason that there will not be sufficient time for these to deliver meaningful results by the time the translocation needs to take place as programmed in 2019. PoTLL have sufficient confidence in the principles and practicality of the method to render advance trials unnecessary.</p> <p>d) In your view, would a large scale habitat translocation project be likely to succeed for the Lytag habitat (and other artificial habitat substrate here), in terms of it being suited to the diverse assemblages of insects, plants, lichens and other biodiversity interests that would be directly impacted by the development?</p> <p>Yes. PoTLLs position is that provided due care is taken in the selection of appropriate receptor site, in the processes of stripping, transporting and re-using the "Lytag habitat and other artificial substrate" and in the aftercare of the receptor site (including habitat management), there is every chance of 'success'. As documented in the ES (Document Reference APP-031, 6.1/APP-031) the applicant recognises that 100% success (measured as immediate or short-term reinstatement of all components of interest) is unlikely and re-establishment of all of the populations of scarce or rare species cannot be assumed. On the other hand, 100% successful recreation of an equivalent area of brownfield habitat, including Open Mosaic Habitats on Previously Developed Land, is certainly possible and to be aimed for, and once such habitats are created they will provide an ongoing resource for colonisation by other brownfield-associated species.</p> <p>e) How would this large scale habitat translocation project be funded and managed?</p> <p>The habitat translocation project would be funded and managed by the Applicant, including in terms of post-translocation aftercare. A full strategy for the habitat creation and translocation works and aftercare will be set out in the forthcoming Ecological Mitigation and Compensation Plan (EMCP) document, which will be secured by the DCO.</p>	
1.2.7.	Applicant	Open Mosaic Habitat on Previously Developed Land	a) The baseline amount of the section 41 habitat 'Open Mosaic Habitat on Previously Developed Land' within the Order Limits was estimated	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>a) Please provide details of the amount of section 41 habitat – Open Mosaic on Previously Developed land, that would be lost to the development;</p> <p>b) How much of this is contained within the existing Local Wildlife Sites?</p> <p>c) Provide details (including locations (on a plan), size, details of what those areas are now) of the proposed mitigation/compensation areas for the areas of open-mosaic habitat on previously developed land that would be lost to the development.</p> <p>d) How much of this habitat would be provided within the Order limits?</p>	<p>at 9.3ha. ES Table 10.45 (Document Reference 6.1/APP-031) explains that a precise figure is difficult to determine as many examples are fragmented and discontinuous (for example small pockets of sparsely vegetated ground in large expanses of otherwise closed-sward grassland).</p> <p>The amount of 'Open Mosaic Habitat on Previously Developed Land', that would be lost to the development was estimated at 9.1ha, as set out at ES Table 10.49 (Document Reference 6.1/APP-031).</p> <p>b) Of the 9.1ha total, 3.6ha falls within the boundaries of the 'Lytag Brownfield' Local Wildlife Site (LoWS); and 0.8ha falls within the boundaries of the 'Tilbury Centre' LoWS. By reference to ES Figure 10.2d (Document Reference 6.2; 10.2d), there is no 'Open Mosaic Habitat on Previously Developed Land' within the Tilbury Marshes LoWS.</p> <p>c) The ES sets out at paragraphs 10.316-10.318 and 10.26 that it is intended for off-site receptor(s) to provide compensation for those habitats such as 'Open Mosaic Habitat on Previously Developed Land', for which mitigation/compensation cannot be adequately delivered on-site. The ES outlines the off-site compensation for Open Mosaic Habitat interest at paragraph 10.326 as follows: "compensation for loss ... associated with the Lytag Brownfield and Tilbury Centre LoWS will require an off-site solution. A shortlist of off-site locations to deliver such compensation has been identified in the process of discussions with Natural England, habitat banking brokers, the Essex Wildlife Trust, Buglife, the Essex Field Club, the RSPB and The Land Trust. Contractual negotiations are well advanced in terms of the favoured solution and full details of the off-site compensation provision for brownfield habitats ... together with proposals for their long-term management, will be provided in the EMCP."</p> <p>Since the ES was published, negotiations with third party landowners have continued to progress but a firm solution to compensation for loss of OMHPDL has yet to be settled. POTLL are now in discussion with more than one offsite landowner and with Natural England to arrive at a clear strategy for delivery of off-site OMHPDL and it is intended that this will be provided via the EMCP at Deadline 2.</p> <p>d) The quantum of 'Open Mosaic Habitat on Previously Developed Land', that can be provided within the Order Limits will be subject to design details, including decisions about the extent that is to be delivered off-site, but it is intended that there will be some provision within the infrastructure corridor (within the area currently part of the Fortlands Distribution Park) and east of the main site within the Green Belt land. Further information is provided in the Landscape and</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			Ecological Management Plan (PoTLL/T2/EX/42) and will be provided in the EMCP.	
1.2.8.	Applicant	<p>Ancient Grassland Please provide details of the location and area where compensatory habitat for the 2.5ha of ancient grassland supporting invertebrates (contained within Tilbury Marshes LoWS) that would be lost to the development would be provided.</p>	<p>Clarification of 'ancient grassland' status and quantum. The grassland within the Tilbury Marshes Local Wildlife Site (LoWS) all falls within the category of 'Coastal and Floodplain Grazing Marsh' and is defined as such in the ES. Within these areas of Coastal and Floodplain Grazing Marsh, a discrete area is considered by the Applicant to represent long-established grassland with an elevated ecological interest. This discrete area is located within the triangle of grassland to the east of Pincocks Trough and west of Fort Road and is known as the 'Fort Road triangle'. The portion of the 'Fort Road triangle' within the Order Limits covers an area of approximately 1.5ha. The Essex Field Club has described this area of interest as 'ancient grassland'. The highest quality patch is shaded green at ES Figure 10.2c (Document Reference 6.2; 10.2c/APP-124), and totals approximately 0.14ha in area.</p> <p>Table 10.49 of the ES (Document Reference 6.1/APP-031), and revisions set out in the Errata Explanation Table (Document Reference: PoTLL-T2-EX-4/AS-005) provided anticipated figures for permanent and temporary losses of 'Coastal and Floodplain Grazing Marsh'. Since submission, these figures have been updated by reference to permanent/temporary land acquisition boundaries (ES Document Reference 2.3/APP-009) as follows: for 'Coastal and Floodplain Grazing Marsh', up to 3.4ha will be subject to permanent DCO use, with a further 1.0ha to be used only temporarily during construction. Within the 'Fort Road triangle', 0.6ha will be subject to permanent DCO use, with a further 0.9ha to be used only temporarily during construction.</p> <p>Location and area of compensatory habitat provision. To off-set the <u>permanent</u> loss of up to 3.4ha of Coastal and Floodplain Grazing Marsh to the development from the wider Tilbury Marshes, which includes 0.6ha from the 'Fort Road triangle', compensatory habitat will be provided within an off-site location at Paglesham, Essex. The full strategy for compensatory Coastal and Floodplain Grazing Marsh habitat creation at that site will be set out in the forthcoming Ecological Mitigation and Compensation Plan (EMCP).</p> <p>Options will also be explored to deliver further mitigation on-site, i.e. via the restoration of 0.9ha of grassland within the 'Fort Road triangle' subject to <u>temporary</u> construction uses, as set out in the response to FWQ 1.2.9.</p> <p>To the extent that the area referred to as 'ancient grassland' can be considered separately in terms of its invertebrate, botanical and lichen interest, that interest is closely related to the Open Mosaic Habitat, with the more notable invertebrate and lichen species found there also occurring within the open mosaic habitats of the Lytag Brownfield</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			LoWS. As such, the compensatory Open Mosaic Habitat including translocated Lytag substrates, both on and off-site, will provide replicated habitat opportunities for the species recorded in association with this area.	
1.2.9.	Applicant	<p>Coastal and Floodplain Grazing Marsh Please can the Applicant provide details regarding how the 3.5-3.7ha of Tilbury Marshes LoWS that would be lost to the construction compounds would be restored to coastal and floodplain grazing marsh priority habitat, together with details for its long term management?</p>	<p>Habitat definitions. Coastal and Floodplain Grazing Marsh priority habitat is defined³ as "<i>periodically inundated pasture, or meadow with ditches which maintain the water levels, containing standing brackish or fresh water... Almost all areas are grazed and some are cut for hay or silage. Sites may contain seasonal water-filled hollows and permanent ponds with emergent swamp communities, but not extensive areas of tall fen species like reeds...</i>"</p> <p>A figure of 3.6ha of temporary losses of Coastal and Floodplain Grazing Marsh priority habitat was given in Table 10.49 of the ES (Document Reference 6.1/APP-031); this figure being revised to 3.5ha in the Errata Explanation Table (Document Reference: PoTLL-T2-EX-4/AS-005). Since submission, these figures have been updated by reference to permanent/temporary land acquisition boundaries (ES Document Reference 2.3/APP-009) as follows: for 'Coastal and Floodplain Grazing Marsh', up to 3.4ha will be subject to permanent DCO use, with a further 1.0ha (approx.) to be used only temporarily during construction. A further area of 1.8ha serves as replacement common land (land parcel 03/04a as shown in ES Document Reference 2.3) and will not be subject to any permanent or temporary construction use. Thus the quantum of restoration required following construction totals 1.0ha.</p> <p>The temporary uses that this 1.0ha area of grassland grazing-marsh habitat would be subject to include unavoidable tracking of machinery, and some limited storage of materials and siting of a small temporary gatehouse unit; which together would lead to surface/vegetation damage and potentially some localised ground compaction.</p> <p>Restoration. Provisions within the Construction Environmental Management Plan (Document Reference PoTLL/T2/EX/38) will ensure that the drainage channels within the Tilbury Marshes LoWS are protected during the works. The channels will not therefore require any further restoration except where they have been subject to realignment works. The detailed design of the channel realignments and proposed restoration works will be approved by the Environment Agency through the operation of their protective provisions in the DCO (Document Reference PoTLL/T2/EX/35).</p> <p>For the 0.9ha of grassland east of Pincocks Trough and west of Fort Road (the 'Fort Road triangle') subject to construction temporary uses, consideration will be given to the feasibility of turf (or turf-</p>	No comment


³ BRIG (ed. Ant Maddock) (2008). *UK Biodiversity Action Plan Priority Habitat Descriptions: Coastal and floodplain grazing marsh*.

FWQ	Question to:	Question:	Response:	Highways England response
			<p>litter/substrate) removal and re-laying (including the potential for off-site translocation of material). Turf material could potentially be cut and set-aside during construction and re-laid post-construction. However, the feasibility of this type of bespoke method may be constrained by seasonal conditions, friability of the soils and duration of the works. (Note that further consideration of the 'Fort Road triangle' area is given in the response to FWQ 1.2.8.)</p> <p>Following any turf/substrate removal, provisions will be put in place to minimise impacts on the land during the temporary construction phase. For example, if ground conditions are unsuitable for vehicle movements (such as during periods of high rainfall), then artificial surfaces may need to be laid. In this situation, an anchored 'no-dig' ground reinforcement paving tile (or similar) would be used (instead of aggregate, which could be difficult to remove afterwards). The tiles would be placed in over porous geotextile matting. The design suppresses resurgence of mud from below but allows effective drainage.</p> <p>Following completion of the works in this area, the construction compound and any ground protecting tiles/matting would be removed. After this, the ground can be prepared for restoration. In areas of light soil compaction, physical aeration may be required, e.g. using a hand-held spiker or mechanical lawn aerator. If heavier compaction has occurred then rotovation/disking may be necessary.</p> <p>Post-construction, if turves or turf litter have been taken, at this stage they could be re-laid over areas of bare earth, prior to seeding of any bare patches between turves. If turf or turf litter translocation has not been possible, then seeding would take place directly onto the areas of exposed soil. Seed will be appropriate to the Coastal and Floodplain Grazing Marsh habitat type, and of local provenance.</p> <p>Short-term management. Grazing animals will need to be excluded from the 'Fort Road triangle' 0.9ha restoration area (and likely also from the 0.1ha restoration area flanking the eastern side of Fort Road) temporarily during the grassland re-establishment and aftercare period (e.g. up to 12 months), and during this time the sward would be subject to simple management including weed control (e.g. by cutting or pulling). The above strategy for habitat restoration will be set out more fully in and secured by the forthcoming Ecological Mitigation and Compensation Plan (EMCP).</p> <p>Long-term management. The restored 1.0ha area of Coastal and Floodplain Grazing Marsh habitat falls outside the compulsory acquisition proposals for Tilbury2. As such, control over long term management is not possible. However, as this land parcel is designated</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>as 'Common Land', the intention is for this area to be returned to its current management (i.e. horse- and pony-grazing) once the restoration works (including the aftercare period) set out above have been completed.</p>	
1.2.10.	Applicant	<p>Overall Habitat Loss Please provide, in tabular form, a summary of areas of all habitat types that would be lost to the development (together with details of the amount of hedgerow and any other linear features (in metres) and the number of individual trees that would be lost). Please include habitat that would be lost on a temporary basis for the construction phase. Please provide, in the same table or on a similar table, locational details together with how much mitigational and compensatory habitat would be provided, and how would each type of mitigational or compensatory habitat provision and management be secured?</p>	<p>A summary of areas of priority/S41 habitat types that would be lost to the development was provided at Table 10.49 of the ES (Document Reference 6.1/APP-031), and this has been subject to minor updates as set out in the Errata Explanation Table (Document Reference: PoTLL-T2-EX-4/AS-005) and in the responses to FWQ 1.2.8 and 9 (Ancient Grassland / Coastal and Floodplain Grazing Marsh), and FWQ 1.11.7 (Loss of saltmarsh or intertidal mudflat habitat).</p> <p>A summary of areas of <u>all</u> habitat types that would be lost to the development (together with details of the amount of hedgerow and any other linear features (in metres) and the number of individual trees that would be lost) is provided at Table 1 below.</p> <p>Some margin of error is inherent in an exercise such as this, where natural features do not have clearly defined limits on the ground. The baseline figures have been calculated by using topographic mapping data, augmented by ground-truthed information. Note also that the total figures provided may be slightly greater or lesser than the total area of the site due to the method of calculation, particularly as some habitats overlap, e.g. tall ruderal vegetation is present over grazed grassland; counts of trees and areas of scrub or woodland are not mutually exclusive; 'Open Mosaic Habitat on Previously Developed Land' by its very nature comprises elements of various other habitat types; and 'Coastal and Floodplain Grazing Marsh' technically includes ditches, although for the purposes of these calculations the ditch habitat has been given separately.</p> <p>The calculated quantities of habitat losses are maximums based on assumptions of worst case scenarios, and may be reduced subject to detailed design specifications. For example on the main site adjacent to the London-Southend railway line, wholesale removal/replanting of vegetation has been calculated, although it is highly likely that a proportion of the dense scrub vegetation can actually be retained here. The true figures for temporary/permanent habitat loss may therefore be less than those presented below.</p> <p>Locational details are also set out at Table 1, together with the proposed quantum of the mitigational and compensatory habitat to be provided. Location is defined in the table as either on-site or off-site. For on-site provision, further locational details are set out within Figure 1 of the Landscape and Ecological Management Plan (LEMP; Document Reference PoTLL/T2/EX/42 and PoTLL/T2/EX/43); and within attached Figure 10.16 (Appendix A). For off-site provision, further locational</p>	<p>The Applicant is asked to confirm the amount of habitat loss within the SRN, on a temporary and permanent basis.</p> <p>The Applicant is asked to confirm that there will be not net loss of biodiversity within the SRN, and to outline any measures to secure a net gain within the SRN.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>details will be provided in the Ecological Mitigation and Compensation Plan to be provided at Deadline 2 (EMCP; Document Reference PoTLL/T2/EX/47). Once final decisions on the quantum of off-site delivery of certain habitats have been made (e.g. Open Mosaic Habitat on Previously Developed Land), quantitative figures for on-site provision of such habitats can be provided, (where not already done so in Table 10.49 of the ES (Document Reference 6.1) and Figure 1 of the LEMP).</p> <p>Each type of mitigational or compensatory habitat provision and management will be secured by the LEMP or EMCP. The latter will be secured within the dDCO (Document Reference PoTLL/T2/EX/35).</p>	
1.2.11.	Applicant	<p>Phasing of Mitigation/compensatory habitat How would the provision of mitigational/compensatory habitat be phased, so that habitat areas off-site are created and fit for purpose, before existing habitat would be destroyed?</p>	<p>Provision of mitigational/compensatory habitat will be carefully phased: a 'phasing plan' to clarify the details will be set out in the forthcoming Ecological Mitigation and Compensation Plan (EMCP).</p> <p>As far as possible the intention will be for new habitat areas on- and off-site to be created and 'fit for purpose', before the existing habitat is destroyed. For example, the on-site water vole receptor area will be created (within Green Belt area) and allowed to mature before any water voles are translocated to it (see ES paragraph 10.321; Document Reference 6.1/APP-031); and the on- and off-site reptile habitat will be secured/fenced and established well in advance of relocating any reptiles to it.</p> <p>However, for 'Open Mosaic Habitat' and associated brownfield habitat translocation, the intention is for the substrate itself to be translocated (see ES paragraph 10.326; Document Reference 6.1/APP-031). This necessarily results in a situation where new 'Open Mosaic Habitat' cannot be created without partial-destruction of the existing resource: the process cannot be phased to fully avoid this situation. However, given that translocation of substrates will not be comprehensive, (i.e. it will not be possible to extract all the brownfield substrate from the site), the process will involve temporary retention of some of the existing resource <i>in situ</i> whilst the off-site habitat begins to develop. Ultimately the temporarily retained brownfield areas would be lost to construction works. The slight lag in phasing will result in some additional net continuity of the resource.</p> <p>Off-site creation of Coastal Grazing Marsh priority habitats is likely to involve a greater or lesser lag-time depending on the mode of creation. For creation via 'arable reversion' for example, natural (unassisted) reversion may be employed which will naturally take longer to achieve target condition than interventions such as seeding. This issue and associated phasing will be addressed in the EMCP.</p>	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>

FWQ	Question to:	Question:	Response:	Highways England response
1.2.12.	Applicant	Local Wildlife Sites Please review and explain the following statement (in ES [APP-031], paragraph 10.342), the loss of the LoWSs in the Proposed Development are considered against "the wider County resource (which comprises some 1600 such sites)". Does this statement relate to LoWSs in Thurrock and Essex combined, not just in Thurrock Unitary Council area.	ES paragraph 10.342 states that: " <i>Cumulatively, these losses of designated non-statutory LoWS constitute negative impacts of moderate magnitude at Borough/District level and minor magnitude in terms of denudation of the wider County resource (which comprises 1600 such sites).</i> " This statement relates to the total number of Local Wildlife Sites (LoWS) in Thurrock and Essex combined, not just in the Thurrock Unitary Council area.	No comment
1.2.13.	Applicant, Thurrock Council	Local Wildlife Sites Please explain how many LoWS have been designated in the Thurrock Council area.	ES paragraph 10.342 states in relation to Local Wildlife Sites (LoWS) that: " <i>the wider County resource ... comprises 1600 such sites.</i> " This statement relates to the total number of Local Wildlife Sites (LoWS) in Thurrock and Essex combined, not just in the Thurrock Unitary Council area. Information provided by the Essex Wildlife Trust Biological Records Centre confirms that a total of 70 LoWS have been designated within the Thurrock Council area.	No comment
1.2.14.	Thurrock Council	Local Wildlife Sites Please advise whether the site plans and details of the LoWSs that would be directly impacted by the Proposed Development, provided by the Applicant [APP-047] remain extant, or whether any boundary changes or grounds for designation have changed. If there have been changes, please provide up to date versions of the relevant documents.	Whilst this question is directed to Thurrock Council, the following text represents current understanding as informed by discussions with Thurrock Council on 02 February 2018, and with the Essex Wildlife Trust Biological Records Centre on 07 March 2018. The site plans (ES Figure 10.1; Document Reference 6.2, 10.1/APP-121) and details of the LoWSs that would be directly impacted by the Proposed Development (e.g. ES Table 10.24 and paragraphs 10.159 – 10.164; Document Reference APP-031, 6.1), as provided by the Applicant [APP-047], remain extant. None of the proposed draft LoWS extensions (as shown at ES Figure 10.1; Document Reference 6.2, 10.1/APP-121) or citation revisions have been adopted.	No comment
1.2.15.	Applicant	Sea Wall Have the ecological features of the sea-wall been considered and assessed in the ES? If so, please provide details? Would any of this habitat be lost during the construction phase?	Have the ecological features of the sea-wall been considered and assessed in the ES? The ecological features of the sea-wall were considered and assessed in the ES. The current sea defences comprise a sheer vertical-sided concrete structure described as in the ES as the 'sea wall' (ES paragraph 11.37; Document Reference 6.1/APP-031). It is continuous and unbroken along its length within the Order Limits (shown in left of photograph below).	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			 <p>This concrete sea-wall is of negligible intrinsic ecological interest and was therefore not subject to further detailed assessment within the Terrestrial Ecology chapter of the ES. The marine ecology features of the sea wall were scoped out of the EIA since no such features are present on the wall. The lack of marine features on the sea wall is likely to be due to the fact that water does not maintain contact with this structure for a period of time long enough that would elicit the attachment of marine species (such as molluscs or sea sponges) to the wall.</p> <p>Beyond the toe of the concrete sea-wall is the collapsed remains of the former sea defences. These comprise a discontinuous rock armour of varying width and slope (ES paragraph 11.37; Document Reference 6.1/APP-031), which is referred to in the ES as the 'rock armour'. As this feature has structurally degraded, it has become colonised with coastal saltmarsh (ES paragraphs 10.169 and 10.220; Document Reference APP-031, 6.1) and intertidal mudflat (ES paragraphs 10.224, 11.38 and 11.41; Document Reference 6.1/APP-031).</p> <p>The 'rock armour' has therefore been assessed within the ES under the headings of 'coastal saltmarsh' and 'intertidal mudflat'. Specifically, coastal saltmarsh is considered in paragraphs 10.362 to 10.364 (Terrestrial Ecology); and intertidal mudflat is considered both at paragraphs 10.362 to 10.364 (Terrestrial Ecology) and at paragraphs 11.152 and 11.180 (Marine Ecology).</p> <p>(Note that the surveys which informed these habitat descriptions extended beyond the Order Limits, and therefore descriptors such as</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>'soft maritime cliff/slope' as presented at ES paragraph 11.37 refer to elements outside of the Order Limits).</p> <p>Would any of this habitat be lost during the construction phase?</p> <p>Losses of 'coastal saltmarsh' and 'intertidal mudflat' were quantified in the ES at Table 10.49. These figures have since been revised, and the revised figures are set out in the response to FWQ Q1.11.7. The figures calculated for loss of saltmarsh and intertidal mudflat habitat, as set out in the response to FWQ Q1.11.7, include a proportion of the 'rock armour' but no 'sea-wall'.</p>	
1.2.16.	Applicant	<p>Water Voles ES [APP-031] paragraph 10.320, states that "Use will be made of the existing mitigation/compensation habitat feature constructed by RWE at the north-eastern edge of the Tilbury2 site, for accommodation of displaced fauna, as far as carrying capacity considerations permit". Please provide details of the location of this habitat, please also explain why this habitat was provided, and whether it remains in any statutory aftercare or management regime.</p>	<p>Details of the location of this habitat are provided by reference to Figure 1 of the Landscape and Ecological Management Plan (LEMP; PoTLL/T2/EX/42, Document Reference 6.2, 10.P): this area is within and essentially equivalent to Compartment 6.</p> <p>The existing mitigation/compensation habitat feature comprises a large pond surrounded by grassland. The pond (the 'RWE compensation pond') was created in around 2011 by RWE, pursuant to planning consents granted in 2009 (Planning Reference 09/00008/TTGFUL) and amended in 2010 (Planning Reference 10/50214/TTGNMA), and was planted with a mixture of wetland macrophytes. Spoil excavated during pond creation was mounded into adjacent bunds, and new native hedgerows were planted adjacent to the post-and-rail fencing surrounding the pond.</p> <p>The 'RWE compensation pond' and surrounding land were designed to accommodate RWE's anticipated water vole and reptile translocations, from land that would have been affected by the (subsequently shelved) biomass proposals (Planning Reference 12/00890/OUT). These translocations never occurred.</p> <p>The exclusion fencing installed around the perimeter of this area by RWE to prevent water voles and reptiles colonising the new habitat in advance of it being needed subsequently failed, sometime between 2011 and 2016. After acquisition of the land by PoTLL the pond was confirmed to support water voles at a high population density during both the 2016 and 2017 surveys for the DCO application.</p> <p>Thus, no previous translocation work ever took place, and no water vole licence was granted by (or sought from) Natural England. Thus there are no outstanding legal obligations for management, e.g. as might have been enshrined in protected species licence documents.</p>	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			The proposed future management of this area under the terms of the DCO is set out in the LEMP (PoTLL/T2/EX/42) in relation to Compartment 6.	
1.2.17.	Applicant	<p>Water Voles ES [APP-031] paragraph 10.321 identifies that land within the Order limits was subject to a planning application in relation to the provision of compensatory habitat for water voles which was submitted in winter 2017/2018, with a view to implementation prior to Spring 2018. Please provide an update on this planning application (explaining why it was submitted, with a link to the application documents on Thurrock Council's website) and whether this has been granted consent and implemented to date?</p>	<p>The ES text [APP-031] at para. 10.321 states as follows :-</p> <p><i>The former arable field to the south of the RWE mitigation area, and also within the Order limits, will be modified by the construction of three concentric rings of open ditch towards the field edges to provide compensatory habitat for all the water voles requiring to be translocated. Advance creation of habitat able to accommodate at least 100 animals (a higher level estimate of numbers that could require capture and translocation) will be pursued via a planning application for these works to be submitted in winter 2017/18 with a view to implementation prior to Spring 2018. This will ensure a minimum twelve month lead-in time for macrophyte and aquatic planting to mature such that these features are ready to accommodate translocated water voles as early as possible in 2019.</i></p> <p>This application is currently being finalised and will be submitted to Thurrock Council shortly. It has been the subject of informal pre-application discussions with the Local Planning Authority. A link to the application documents will be provided to the Examining Authority once it becomes available.</p> <p>Part of the mitigation and compensation involves some ground remodelling and planting of ditch features within the Tilbury2 site (but outside of the main areas proposed for development) to create appropriate habitat for translocated species. These works are included within the Tilbury2 DCO application but PoTLL wish to undertake this work as soon as possible in order to maximise the duration of time over which these newly created on-site habitat/mitigation features can develop and mature before receipt of translocated species.</p> <p>Taken alone this habitat creation work in itself may be considered an engineering operation, and thus planning permission is sought for this element prior to grant of the DCO. The application therefore seeks only to provide the information needed in order for planning permission to be granted for the physical habitat creation works. However, in no way does it prejudice or pre-judge the outcome of the DCO application. Indeed, it should be noted that the DCO proposals are not reliant on grant of this planning application for advance habitat creation which could proceed under the DCO itself if required. The benefit of securing a stand-alone permission is purely to meet PoTLL's desire to deliver Tilbury2 as soon as possible assuming the DCO is granted.</p>	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>
1.2.18.	NE	<p>Water Voles Is NE satisfied that water voles from the Proposed Development areas could be</p>	This question is directed to Natural England, but further information has been set out below to assist in answering this question.	Highways England has considered the proposed translocation areas and

FWQ	Question to:	Question:	Response:	Highways England response
		translocated to the area referred to in FWQ 1.2.17? Would they be able to provide a Letter of No Impediment for this translocation work?	<p>The location of the area referred to in FWQ 1.2.17 for the provision of compensatory habitat for water voles is effectively equivalent to Compartment 5 by reference to Figure 1 of the Landscape and Ecological Management Plan (LEMP; ES Document Reference PoTLL/T2/EX/42).</p> <p>Natural England confirmed in a high-level Letter of No Impediment (LoNI) dated 14 December 2017 (and appended at Appendix G that it "sees no in principle impediment to a licence being issued, should the DCO be granted", subject to the following provision: "An appropriate lead-in time being allowed for in respect of compensatory habitat creation for water voles, to enable immediate soft release of captured voles. This avoids the need for water voles (which have a short life expectancy) to spend a significant part of their life in captivity."</p> <p>Natural England advised the Applicant that protected species method statements should be sent to Natural England for comment, prior to consultation from Thurrock Council on the planning application described in FWQ 1.2.17. The draft method statements have therefore been duly provided to Natural England for comment, and Natural England has responded by providing a letter dated 20 March 2018 (appended at Appendix G), which states: "Following our assessment of the resubmitted draft application documents, I can now confirm that, on the basis of the information and proposals provided, Natural England sees no impediment to a licence being issued, should the DCO be granted."</p>	<p>concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>
1.2.19.	Applicant	Water Voles If the ditches for water vole habitat are to be implemented through the DCO, how would this work be phased to ensure that the receptor habitat is established sufficiently well before it is needed for the translocations?	<p>The ES (paragraph 10.321; Document Reference 6.1/APP-031) proposes a minimum twelve month lead-in time to allow for ditch creation and maturation of aquatic planting, such that these features are sufficiently well established prior to being needed as a receptor for translocated water voles. This is also the recommendation given in standard best practice guidance⁴ which states that "This is likely to require an entire growing season."</p> <p>Capture and translocation of water voles is best undertaken, subject to grant of the relevant protected species licence, in spring (mid-February to mid-April) and in autumn (mid-September to end November). If the ditches for water vole habitat were to be implemented solely through the DCO, then other options could potentially be explored with Natural England to minimise the lead-in time required for trapping. This might include spatial phasing of the development works and temporarily retaining a limited proportion of the animals in captivity; although it is noted that Natural England's position as set out in its letter of 14 December 2018 is for: "An appropriate lead-in time being allowed for in</p>	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>

⁴ Dean, Strachan, Gow & Andrews (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. The Mammal Society. London.

FWQ	Question to:	Question:	Response:	Highways England response
			respect of compensatory habitat creation for water voles, to enable immediate soft release of captured voles. This avoids the need for water voles (which have a short life expectancy) to spend a significant part of their life in captivity.”	
1.2.20.	Applicant	<p>Water Voles The ES [APP-031] in paragraph 10.322 explains that in the longer term, additional ditches would be constructed along the infrastructure corridor for the provision of water vole habitat and it refers to these features being delivered and maintained through the Landscape and Ecology Management Plan. The errata version of the LEMP [AS-007] in paragraphs 3.3 and 4.11 refer briefly to the creation and management of ditches, but do not provide any detail.</p> <p>a) Please provide the locations and detailed design of this water vole habitat to the Examination.</p> <p>b) What is meant by ‘longer term’?</p>	<p>The ES (Document Reference 6.1) in paragraph 10.322 states that “In the longer term, additional ditches suitable for water voles will be constructed along the infrastructure corridor (see Figure 10.13), helping to improve connectivity between the known populations currently on and east of the former power-station site and those associated with the Chadwell Sewer/East Dock Sewer. As well as this improvement of connectivity, the proposals seek to ultimately deliver and (via the LEMP) maintain an increased quantity and quality of suitable habitat for this species within the DCO limits.”</p> <p>a) The general location and arrangement of the proposed water vole habitat is shown at Figure 1 of the LEMP (PoTLL/T2/EX/42). More detailed location information (relating to SuDS basins and channels, but not provision of dedicated wildlife habitat) is provided by the ES Drainage Strategy (Document Reference APP-090).</p> <p>The core ditch habitat proposed for water voles will be a series of concentric rings within the Green Belt land (at Compartment 5, by reference to LEMP Figure 1). Detailed plans showing the location of these ditches and indicative profile designs are in development and will be provided as part of the separate planning application for these ditches (an update on this planning application is provided in the response to FWQ 1.2.17).</p> <p>Additional ditches would be constructed along the infrastructure corridor for the provision of water vole habitat; the location of these additional ditches is provided at Figure 1 of the LEMP. The detailed design of this additional water vole habitat is not yet available, but will be developed during the detailed design phase, and will be presented to Natural England as part of a later tranche of water vole method statement submission documents, as will be discussed in the forthcoming Ecological Management and Compensation Plan (EMCP). Design profiles are anticipated to be broadly similar to the Green Belt ditch cross-sections already worked up for submission to Thurrock Council as described in FWQ 1.2.17, i.e. channel depth sufficient to hold water all year, and banks steep sided to deter terrestrial predators.</p> <p>b) The phrase ‘longer term’ refers to the DCO construction phase, but the latter end of that phase. Creation of the additional ditches for water voles would need to be phased so as to happen after construction of the road and rail chord is completed. (This would preclude situations arising where water voles might colonise the new habitat whilst construction works were ongoing, leading to possible delays and</p>	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>

FWQ	Question to:	Question:	Response:	Highways England response
1.2.21.	Applicant	<p>Reptiles ES [APP-031] paragraph 10.325 states that a proportion of the on-site reptile population would need to be translocated off-site. No details of the receptor sites for these reptiles are provided in the ES. The LEMP [AS-007] does not provide details of the translocation areas for reptiles and further details are stated to be provided in the Ecological Management and Compensation Plan (ECMP), which has not yet been provided. Please provide details for the translocation of reptiles, including proposed locations and phasing to the Examination.</p>	<p>conflicts arising as a result of the legislative obligation to protect water voles during construction activities.)</p> <p>ES paragraph 10.325 (Document Reference APP-031, 6.1) states that: <i>"The scale of the proposals and the low scope for on-site retention means that a proportion of the on-site reptile populations will need to be accommodated off-site, at one or more receptor sites selected to provide suitable habitat in a suitable ecological context (for example with links to existing populations of the four affected reptile species)."</i></p> <p>No details of the receptor sites for these reptiles were provided in the ES because the details of the off-site receptor(s) were still under negotiation with the preferred landholders. Since the ES was published, negotiations have continued to progress. In the last week, the Applicant has secured agreement with a wholly different landowner for use of c.48ha of land at Paglesham, South Essex, for creation of some 30-37ha of coastal grazing marsh habitats, up to 5-6ha of scrub habitat and 10 or more hectares of ungrazed or lightly grazed grassland habitat suitable for the receipt of translocated reptiles. These matters are subject to ongoing discussion with the relevant landowner and subject to further investigative studies.</p> <p>Further details will be provided within the forthcoming Ecological Mitigation and Compensation Plan (EMCP). The Applicant is acutely aware of the urgency of providing this information to the Examination and therefore undertake to provide as complete as possible a draft of the EMCP by Deadline 2. The EMCP will be secured within the dDCO as per the provisions of Schedule 2, Part 1, Section 5: 'Off-site mitigation'.</p> <p>Standard capture and translocation techniques are proposed; this has been discussed with Thurrock Council and has been set out under 'Matters Agreed' in the current submitted draft (revision 4.0) of the Statement of Common Ground (SoCG) with the authority, set out in the Deadline 1 SoCG Update Report (PoTLL/T2/EX/54). However, further details for the translocation of reptiles, including proposed locations and phasing, cannot be provided to the Examination until agreements relating to the off-site receptor(s) are settled.</p>	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>
1.2.22.	NE	<p>Bats Is NE able to provide a Letter of No Impediment for the loss of the bat roost in building B7?</p>	<p>This question is directed to Natural England, but further information has been set out below to assist in answering this question.</p> <p>The roost is characterised at ES Table 10.45 (Document Reference APP-031, 6.1) as a <i>"low-medium conservation status common pipistrelle roost within building B7 (internal night likely-mating roost, and external day roost for small numbers of bats)"</i>.</p> <p>As set out at ES paragraph 10.323 (Document Reference APP-031, 6.1), <i>"Compensation for the loss of the known low conservation status bat roost in building B7 will be provided by means of bat boxes to be erected</i></p>	<p>No comment</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p><i>on retained mature trees in a suitably unlit area at the western boundary of the Tilbury2 site (Figure 10.13). A licence will be required to remove the current roost prior to or in tandem with demolition of this structure, but as it supports only low numbers of common species, this level of compensation is proportionate by reference to incumbent standards</i>^[footnote reference to 2001 Bat Mitigation Guidelines published by Natural England] <i>and no problems with the requisite licensing tests are anticipated. Indeed, the level of impact falls within the scope of Natural England's 'Bat Low Impact Class Licensing' system. For these reasons, no problems with obtaining the requisite licence from Natural England to cover the loss of this roost are anticipated and a Letter of No Impediment is being sought from Natural England to that effect."</i></p> <p>Following discussions between the Applicant and the relevant Wildlife Management Adviser at Natural England, a letter was issued by Natural England on 16 March 2018, confirming that "on the basis of the information and proposals provided, Natural England sees no impediment to a licence being issued, should the DCO be granted".</p>	
1.2.23.	Applicant	Bats How would any further bat survey work referred to in the ES, prior to the removal of trees that may be suited as bat roosts, be secured in the dDCO?	<p>The tree surveys undertaken in respect of potential for roosting bats are documented at paragraphs 10.66 – 10.74 and 10.236 – 10.238 of the ES (Document Reference APP-031, 6.1). No tree roosts were identified, and in general the potential for tree roosts within the site was very low (and negligible over most of the site).</p> <p>Nonetheless, Table 10.19 in the ES (Document Reference APP-031, 6.1) confirms that further survey work would be undertaken prior to the removal of any trees with elevated suitability for bats in order to ensure that the position remains unchanged since the last tranche of survey work was completed, and to ensure compliance with the legal protections afforded to bats.</p> <p>In order to ensure that this further survey work is secured in the DCO, a specific provision has been added to paragraph 6.7 of the Construction Environmental Management Plan (CEMP; Document Reference PoTLL/T2/EX/38).</p>	No comment
1.2.24.	Applicant	Seasonal Restrictions ES [APP-031] paragraph 10.352 discusses seasonal restrictions on site clearance to avoid disturbance of nesting birds and other species during high risk times - water voles, reptiles, bats etc. Where and how are these seasonal restrictions on site clearance secured?	<p>The Construction Environmental Management Plan (CEMP; Document Reference PoTLL/T2/EX/38) describes and secures the measures that will be taken to avoid disturbance of nesting birds and other protected species during high risk times.</p> <p>Section 6.0 of the CEMP states at paragraph 6.5 that "all translocations of species and habitats required (as set out in ES Chapter 10) as a result of the proposals, must take place prior to the commencement of a construction activity that will affect that species or habitat, and in</p>	<p>Highways England requests that the CEMP be updated as follows:</p> <p><i>"all translocations of species and habitats required (as set out in ES Chapter 10) as a result of the proposals, must take place prior to the commencement of a construction activity that will affect that species or habitat, and in consultation with</i></p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>consultation with Natural England and/or Thurrock Council as appropriate (including in compliance with any licences that may be required). As such, all receptor areas for such species and habitats must be prepared to an extent that is suitable for the reception of translocated species or habitats prior to the commencement of that construction activity". Subsequent paragraphs 6.6 and 6.7 clarify that this covers water voles, reptiles, bats and badgers. Paragraph 6.10 discusses seasonal restrictions to avoid disturbance of nesting birds.</p>	<p>Natural England and/or Thurrock Council as appropriate (including in compliance with any licences that may be required), and Highways England, where the activity is within the SRN. As such, all receptor areas for such species and habitats must be prepared to an extent that is suitable for the reception of translocated species or habitats prior to the commencement of that construction activity".</p>
1.2.25.	Applicant	<p>Translocation of Protected Species Please confirm which protected species would need to be translocated to sites or locations outside the Order limits.</p>	<p>The four species of reptile (i.e. adder, grass snake, common lizard and slow worm) are the only protected species that would need to be translocated to sites or locations <u>outside</u> the Order limits.</p> <p>For the avoidance of doubt, protected species for which licenced mitigation is proposed <u>within</u> the Order Limits are as follows:</p> <ul style="list-style-type: none"> • Water Voles (for which see responses to FWQs 1.2.16 - 1.2.20, and the letter from Natural England at Appendix G); • Bats (for which see response to FWQ 1.2.22, and the letter from Natural England at Appendix G); and • Badgers, which are not specifically addressed in any of the FWQs, but for which Natural England has issued a letter dated 20 March 2018 (see Appendix G) confirming that "on the basis of the information and proposals provided, Natural England sees no impediment to a licence being issued, should the DCO be granted". 	<p>Highways England has considered the proposed translocation areas and concluded that they are unlikely to interact with the existing Strategic Road Network.</p> <p>However, Highways England submits that the relocation proposals should be reviewed in light of the LTC Scoping Report, to ensure that there is no conflict between the two projects and that no translocations will be undertaken into the LTC works area.</p> <p>Failure to do so may prevent Highways England being able to implement the LTC effectively.</p>
1.2.26.	Applicant	<p>Nearby Sites of Special Scientific Interest Can the Applicant confirm that the features of the South Thames Estuary and Marshes and Mucking Flats and Marshes Sites of Special Scientific Interest (SSSI) have been considered and assessed and that there would be no significant impact upon them arising from the Proposed Development? Where are these details in the ES or subsidiary documents?</p>	<p>The South Thames Estuary and Marshes SSSI and the Mucking Flats and Marshes SSSI are both identified as Key Receptors in the ES (Document APP-031, 6.1, Table 10.45). They are not listed as having been 'scoped out' of the assessment at Table 10.46, and therefore the potential for significant effects is duly recognised.</p> <p>A screening assessment of the potential for lighting or disturbance originating from the Proposed Development to impact on these sites is contained within Table 11.2 of the ES, which also confirms that consideration has been given in the assessment to the potential for significant effects on these SSSI from any changes to air quality, river traffic and sediment transport and deposition processes associated with the proposals. These SSSI are further considered in the ES in Chapters 9 (Landscape and Visual), 16 (Flood Risk) and 18 (Air Quality). In the Terrestrial Ecology chapter (Chapter 10), the SSSI are identified and described at 10.142, 10.152, 10.153 and included in the cumulative</p>	No comment.

FWQ	Question to:	Question:	Response:	Highways England response
			<p>impact assessment at table 10.50. In general however, the potential effects on these SSSI are considered alongside, and at the same time, as the potential for effects on the SPA and Ramsar Site designations of which they are a constituent part.</p> <p>The special interest features of the South Thames Estuary and Marshes SSSI and the Mucking Flats and Marshes SSSI are in most instances common to those of the Thames Estuary and Marshes SPA and Ramsar Site which are umbrella designations covering both of those sites. This includes in relation to the internationally and nationally important populations of wintering and passage wading birds such as redshank and ringed plover, and the numbers of non-breeding waterfowl generally. The potential for significant effects on the wintering and passage populations of these species within the SSSI is therefore considered as part of the assessment of likely significant effects on the same species in respect of the SPA and Ramsar Site (in both the ES and in the HRA report: ES Appendix 10.0/APP-060). The ES and HRA report conclude that there would be no significant effect on the SPA/Ramsar site populations. Agreement on this conclusion is being sought from Natural England as part of the Statement of Common Ground, and in response to the questions raised in their Relevant Representation.</p> <p>A few bird species cited as interest features in association with the component SSSI do not form qualifying features of the overarching SPA or Ramsar Site. These include breeding garganey, pintail, common tern and bearded tit, breeding/wintering short-eared owl, passage curlew sandpiper and a late summer flock of yellow-legged gull associated with Mucking Flats and Marshes. While certain of these species occur close to the Tilbury 2 site (in particular yellow legged gull and common tern which habitually track up and down the adjoining reach of the Thames) none have been recorded breeding within the proposed Order Limits or within the 300m zone of disturbance influence around it, nor do any occur in any significant non-breeding capacity. There is thus no vector for significant impacts to these cited species or by extension any related functional linkage to these SSSI via these species.</p> <p>In terms of habitats, again the assessment of likely significant effects on SSSI-designated or functionally linked saltmarsh, grazing marsh or intertidal mudflat habitats falls within the compass of the matters considered in the ES Chapter 10 and the HRA report (ES Appendix 10.0/APP-060). These habitats, their functionally linked representations outside the SSSIs and their associated scarce plant and invertebrate species (including those interest features shared with the Ramsar Site designation such golden samphire) are all assessed in the HRA report: ES Appendix 10.0 and in the ES Chapter 10. It is noted that Natural England have not raised any concern that the interest features of the South Thames Estuary and Marshes and Mucking Flats and Marshes</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			Sites of Special Scientific Interest (SSSI) have not been duly considered or assessed, or that there could be significant impacts upon them arising independently from impacts on the overarching SPA/Ramsar Site.	
1.2.27.	Applicant	Removal of Anglian Water Jetty What certainty is there that the Anglian Water jetty would be removed? What would be the significance of effect for the loss of intertidal mudflat priority habitat if the jetty was not removed?	<p>The Applicant has been in negotiation with Anglian Water for some months and has reached in principle agreement to take over responsibility for and ownership of the jetty and its demolition. This transaction is expected to be formalised later in the year.</p> <p>In any event, specific provision for its removal is included as Work No. 1 (g) of the dDCO. This is because the extension of the RoRo jetty would not be able to take place without the demolition of the Anglian Water jetty.</p> <p>As such, the potential significance of effect suggested here would not arise.</p>	No comment
1.2.28.	Applicant	Underwater Noise Impacts In light of the MMO's comments [RR-023, paragraph 5.4], please review the assessment of significance of potential impact of underwater noise construction effects on fish receptors and either confirm that it remains valid, or provide updated assessment details.	<p>The comment from the MMO is: "...Consequently, the significance of the potential impact of underwater noise construction effects on fish receptors is unlikely to be negligible. This should be addressed."</p> <p>The applicant has reviewed the assessment in relation to underwater noise construction effects on fish receptors. After this review, the applicant acknowledge that there is potential for the piling to cause temporal changes in the behaviour of fish. As such, effects on fish receptors could be considered to be minor rather than negligible.</p> <p>The modelling results show that piling of the larger piles (worst case) could result in recoverable injury within 250m of the noise source and temporary hearing loss of fish up to 3,600m from the noise source (temporary loss of hearing lasting between hours to a few days depending on hearing bandwidth). Behavioural effects are anticipated to occur at intermediate ranges (of the order of hundreds of metres from the piling) with a moderate risk of behavioural effects. Beyond these distances there is a low risk of effects, with a moderate risk for the most sensitive species of fish.</p> <p>The width of the Thames at Tilbury2 is approximately 900m, which means that it is sufficiently wide for fish to passage up and down the river while piling is operational, and avoid the area where recoverable injury could occur, though they would still be subject to potential temporary hearing loss and behavioural effects. The predicted noise range for up to 3,600m means that fish could suffer a temporary auditory injury if they continued past the works while piling was occurring, or they could halt and delay their passage until the noise has stopped.</p> <p>It is anticipated that piles would take approximately 6-8 hours to install and one pile would be installed per day. Working hours during construction for piling will be restricted to 08.00 to 18.00 Monday to</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>Friday, and 08.00 to 16.00 on Saturdays and Sundays (secured through the CEMP) therefore providing a non-piling window of at least 14 hours per day when fish would be able to migrate past Tilbury2 without being subject to any noise effects. This will provide more than a full tidal cycle every day for fish to utilise uninterrupted. Any delay to movement/migration caused by piling noise would therefore last only a few hours and would only occur during the marine piling phase of the works which is anticipated to take approximately 3 months to complete. Embedded mitigation includes adherence to the JNCC piling protocol which is recommended by the MMO, and includes the mitigation of soft start procedures; and a daily non-piling window, which is considered more appropriate than seasonal piling restrictions as key internationally designated species including Atlantic salmon and river lamprey utilise the Thames Estuary year-round.</p> <p>After applying the proposed mitigation measures, the residual impacts to fish receptors are expected to be limited to a relatively short temporal disturbance, and the effects are expected to be minor and therefore not significant.</p>	
1.2.29.	Applicant	<p>Benthic Surveys Further to Annex 1, paragraph 1.3 of the MMO's RR [RR-023], please provide evidence to support the assumption that the habitats observed in the relevant benthic surveys extended over the entire spatial area of the impact resulting from the dredge?</p>	<p>Figure <i>FWQ Q-1.2.29-A</i> (Fig. A) and <i>Figure FWQ Q-1.2.29-B</i> (Fig. B) (in the attached Appendix A) show the habitats over the spatial extent affected by the dredge. Figure A shows data from the Priority Habitat Inventory published by Natural England⁵, and Figure B shows the broad-scale habitat of the Thames used to determine Higher and Lower sensitivity habitats for WFD compliance assessments, also published by Natural England⁶.</p> <p>The focus of the figures are principally on the area east of Tilbury2, which more effectively illustrates the habitats that could be affected by water injection dredging undertaken during ebb tide.</p> <p>The figures show that the habitats present at Tilbury2 are very similar to the habitats observed in the rest of the area affected by the dredge. In addition, no particularly sensitive habitats are present, including mussel beds or subtidal kelp.</p> <p>No significant sedimentation is predicted outside the dredging area (i.e. net accumulation on the seabed is generally less than 1mm outside the dredging area), and averaged suspended sediment concentration never exceeds 20mg/l. Compared to the ambient concentrations of up to thousands of mg/l this sediment concentration is negligible (Hydrodynamic Modelling Report APP-088), and no impacts are expected.</p>	No comment

⁵ Natural England: Priority Habitat Inventory. Accessed 01/03/2018 at: <https://data.gov.uk/dataset/priority-habitat-inventory-england2>

⁶ Natural England: WFD Habitats – Higher and Lower Sensitivity. Accessed 01/03/2018 at: <http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx>

FWQ	Question to:	Question:	Response:	Highways England response
1.2.30.	Applicant	<p>Smelt Migration Please explain why no water injection dredging is proposed between June and August when smelt migrate upstream to spawning grounds in early spring (February to April). What species is this mitigation measure aimed at and will any further mitigation be proposed to avoid the smelt migrating months? If so, how and where would it be secured?</p>	<p>The restriction of undertaking water injection dredging (WID) between June and August inclusive (i.e. not to be carried out), is a measure designed to mitigate potential impacts from this dredging method against <u>all</u> fish receptors found near Tilbury2 and listed in Table 11.9 of the ES (<i>Document Reference APP-031</i>).</p> <p>Restricting dispersive dredge techniques during these months specifically aims to protect the water column and fish at a time when temperatures are higher, dissolved oxygen may be low, and subject to further crashes, if storm sewage enters upriver.</p> <p>The spawning grounds for smelt are located at Wandsworth (approx. 50km upriver from Tilbury2) and will not be affected by the scheme. Some negative impacts could arise for smelt transiting past the scheme, but given the scale of the works, the width of the estuary at this point (approx. 1km), and the relatively small increase of suspended sediments arising from WID relative to background conditions, it is considered that the works will have a minimal impact on smelt migration. Potential impacts to smelt are assessed in the MCZ assessment which concludes that it is highly unlikely that the operation of Tilbury2 will have any impact upon the current maintain favourable condition conservation objective for this species (<i>Document Reference APP-063</i>).</p> <p>The Applicant believes that the aforementioned mitigation measure will reduce the likelihood and significance of potential impacts to water quality (and fish including smelt) sufficiently that no further mitigation will be necessary in other months.</p>	No comment
1.2.31.	Applicant	<p>Impacts from Marine Piling on Marine Invertebrates Have impacts from noise and vibration that would arise during the marine piling activities been considered in respect of marine invertebrates? If not, please provide this information, which the MMO considers could be drawn from peer-reviewed literature.</p>	<p>Impacts from noise and vibration in the ES focused on marine mammals and fish, the marine receptors believed to have more developed hearing abilities and be more acoustically active species, and an assessment of effects on marine invertebrates was not undertaken. Potential impacts to marine invertebrates are being discussed with the MMO in the SoCG.</p> <p>Most peer-reviewed literature examines the impacts to marine mammals and fish rather than on invertebrates (Williams et al, 2015; Peng, Zhao & Liu, 2015), and a few cases focus on individual marine invertebrate species (Hawkins & Popper, 2017). The marine invertebrate community found at Tilbury2 is dominated by mud worms and small amphipod crustacean [<i>Document Reference APP-031 paragraphs 11.45, 11.47, and 11.48</i>].</p> <p>Some invertebrates such as crustacean can lack air-filled organs necessary to detect sound pressure, but appear to be sensitive to low frequency acoustic stimuli arising from particle motion, this is, the variation in pressure and oscillation of water molecules (Roberts, Cheesman & Elliott, 2016).</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>Experiments have shown that noise can affect behaviour and physiology of some invertebrates such as crustacean, which could be distracted from foraging, and tend to increase their oxygen consumption, increasing risk of starvation or predation (Wale et al, 2013).</p> <p>Tube worms would withdraw instantaneously back into their tube at the presence of vibrations and extend their tentacles out again to resume feeding once the vibration is over or they have identified this not to be a threat. Although retrieving into the tube can provide safety from predators, it has a cost-opportunity effect reflected in less feeding time (Dill & Fraser, 1997).</p> <p>Vibration from marine piling could generate small changes in bed morphology perceptible by epibenthic fauna, however, the biotopes identified near Tilbury2 are known to have a low sensitivity to potential smothering (<i>Document Reference APP-031, Table 11.7</i>).</p> <p>The species composition within the site boundary is typical of the habitat and the location. The communities identified near Tilbury2 (as discussed above) are considered typical for the estuarine conditions they are exposed to, and are generally representative of the natural environmental conditions inherent in the vicinity of Tilbury2. During the marine survey and desk-study, no marine invertebrates were recorded which had special conservation status, such as the tentacled lagoon worm, blue mussel, or lagoon sea slug. As such, the effects from noise and vibrations to marine invertebrates as whole is therefore expected to be negligible.</p> <p>References in the text:</p> <p>Dill, L. M., & Fraser A. H.G. 1997. The worm re-turns: hiding behaviour of a tube-dwelling marine polychaete, <i>Serpula vermicularis</i>. <i>Behavioural Ecology</i>, Vol. 8, 2, 186-193. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.451.8294&rep=rep1&type=pdf</p> <p>Hawkins, A., & Popper, A. 2017. A sound approach to assessing the impact of underwater noise on marine fishes and invertebrates. <i>ICES Journal of Marine Science</i>. Vol. 74, 3, 635-651. https://academic.oup.com/icesjms/article/74/3/635/2739034</p> <p>Peng, C., Zhao, X., & Liu, G. 2015. Noise in the sea and its impacts on marine organisms. <i>Journal of Experimental Marine Biology and Ecology</i>, 12(10) 12304-12323. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4626970/</p>	

FWQ	Question to:	Question:	Response:	Highways England response
			<p>Roberts, L., Cheesman, S., & Elliott, M.T. 2016. Sensitivity of <i>Pagurus bernhardus</i> (L.) to substrate-borne vibration and anthropogenic noise. <i>Journal of Experimental Marine Biology and Ecology</i>, 474, 185-194. https://www.sciencedirect.com/science/article/pii/S0022098115300277</p> <p>Wale et al. 2013. Noise negatively affects foraging and antipredator behaviour in shore crabs. <i>Animal Behaviour</i>. Vol. 86, 1, 111-118. https://www.sciencedirect.com/science/article/pii/S0003347213001991</p> <p>Williams et al 2015. Impacts of anthropogenic noise on marine life: Publication patterns, new discoveries, and future decisions in research and management. <i>Ocean & Coastal Management</i>, Vol .115, 17-24. https://www.sciencedirect.com/science/article/pii/S096456911500160X#bib36</p>	
1.2.32.	Applicant	<p>Mitigation for Fish and Shellfish Please explain how the proposed mitigation measures for fish and shellfish from marine piling would be secured in the dDCO?</p>	<p>The proposed mitigation measures for fish and shellfish from marine piling are set out in chapter 7 of the CEMP (Document Reference; PoTLL/T2/EX/38), which is secured by a requirement of the dDCO, or will be able to be imposed through the operation of the conditions of the DML.</p>	No comment
1.2.33.	Applicant	<p>Zooplankton Is the Applicant proposing to undertake an up to date survey of zooplankton, given the age of the surveys that were relied upon for the ES?</p>	<p>The Applicant is not proposing to undertake any new surveys for zooplankton. This because the zooplankton species composition present within the Thames is unlikely to have changed since the surveys were undertaken, and is considered to be representative of the present-day community. The species found during the surveys are common of estuarine environments, where Calanoid copepods were the dominant zooplankton group in all seasons with <i>Eurytemora affinis</i>, <i>Temora longicornis</i>, <i>Acartia spp.</i> and <i>Centropages hamatus</i> being most abundant.</p> <p>Even in the event that changes have occurred, these are unlikely to be significant as to change the conclusions of the assessment, given the committed mitigation measures stated here again for clarity:</p> <ul style="list-style-type: none"> • Not carrying out WID during the months of June and August inclusive will mitigate against negative effects from dredging to zooplankton, as species will not be affected by suspended sediments in this more difficult period, when temperatures are higher, and the river flow and dissolved oxygen levels available for marine species are lower. • - Removing sediments with higher levels of contaminants through backhoe dredging will mitigate against potential negative effects to zooplankton by preventing these sediments being dispersed on site (as is the case with WID), where they could enter the water column and affect zooplankton species. 	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.2.34.	Applicant	<p>Plankton Why does the ES consider that plankton in the Thames are resilient to change?</p>	<p>The scheme could cause the following changes to the environment of plankton:</p> <ul style="list-style-type: none"> Increased suspended sediments from piling and dredging can cause changes in a range of water quality parameters including light penetration, turbidity and dissolved oxygen. A reduction in light penetration and nutrient availability can affect plankton productivity. Release of contaminants into the water column affecting water quality, as an effect from run-off and disturbance of contaminants buried in the river bed sediments during dredging. <p>The plankton species present within the Thames Estuary are well adapted to living in areas with variable and typically high suspended sediment load, and where dredging takes place regularly, as they continued being recorded across the surveyed locations throughout the year 2007 - 2015.</p> <p>The most abundant phytoplankton group (<i>Bacillariophyta</i> (Diatoms) approx. 98% of total phytoplankton) is found near Tilbury2 throughout the year. Zooplankton species which are found at Tilbury2 are also common species of the Thames.</p> <p>It is the abundance of plankton, its well known adaptability and the lack of receptors of ecological/conservation importance at the Tilbury2 location, that leads to 'plankton' being classed as a receptor of 'low' sensitivity.</p> <p>The exception to this is the larvae of smelt and European eel (zooplankton or more specifically: ichthyoplankton), which has a sensitivity value of 'medium' due to the conservation importance of these species.</p> <p>After implementation of the mitigation measures set out in Table 11.56 of the ES, and secured through the CEMP (PoTLL/T2/EX/38) and the operation of the DML, the potential impacts on plankton are predicted to be not significant.</p>	No comment
1.2.35.	Applicant	<p>Lack of Further Mitigation The ES does not consider whether any further mitigation is possible to mitigate against significant residual effects on terrestrial ecology interests. Why not?</p>	<p>The Applicant considers that it has followed a process whereby the scope for mitigation against significant residual effects has been assessed and tested and all appropriate and practically achievable mitigation options adopted, within the context of the Tilbury2 proposals.</p> <p>The Masterplanning Statement (APP-034), Chapter 6 of the ES (APP-031) and PoTLL's responses to the FWQs found within the CMAT Position Statement (PoTLL/T2/EX/49, Appendix B) justify the need, nature and scale of the proposals.</p>	No comment

1.3 COMPULSORY ACQUISITION

FWQ	Question to:	Question:	Response:	Highways England comments
1.3.	Compulsory Acquisition			
1.3.1.	Applicant	<p>The Statement of Reasons (SoR)[APP-018], paragraph 6.10 states, <i>"Port of Tilbury London Limited has included within the Order limits no more land than is reasonably required for the purposes described in the table in Appendix A..."</i>. However, SoR paragraph 5.5 states, <i>"It may transpire in due course that some part of the Order land is not required, for instance as a result of the detailed design process; in which case it would not and could not be acquired by the use of compulsory purchase powers. Further, it may transpire that a parcel of land for which compulsory acquisition powers have been sought has been acquired by agreement as a result of successful negotiations and in these circumstances compulsory purchase powers would not be exercised."</i></p> <p>a) What is the mechanism for omitting land from compulsory acquisition powers or temporary possession in such situations as described in the second quote?</p> <p>b) How does the second quote accord with the need, under PA2008 s122(3), for there to be a <i>"compelling case in the public interest"</i> for such land to be included within the land which would be subject to compulsory acquisition powers?</p> <p>c) Does the Applicant consider that the land take within both the compulsory acquisition powers and temporary possession measures that are being sought is no more than is reasonably required?</p>	<p>Taking each point in turn, the Applicant responds as follows:</p> <p>a) In the scenario described where there have been successful negotiations for the land, the Applicant would most likely seek to exercise compulsory purchase powers by agreement to ensure that the Applicant would take the title to the land in question 'clean' of any defect. Even once compulsory acquisition powers are granted, if detailed design is undertaken or a specified location is defined once the Applicant has used the wider temporary possession to settle the final needs of compulsory acquisition then less land take may be justified. Only the land which is required will be taken, and it is noted that the power to compulsorily acquire under the DCO is termed as something that PoTLL 'may' undertake - as such PoTLL is not required to acquire all of the land proposed.</p> <p>The Applicant can confirm that all of the land to be compulsorily acquired is required to enable the project to be delivered and realised and Appendix A to the Statement of Reasons (Document Reference: APP-018, 4.1) sets out the specific purpose in relation to each plot.</p> <p>b) In relation to the first sentence of SoR paragraph 5.5, as set out in Appendix A to the Statement of Reasons, justification has been given for all land that is proposed to be compulsorily acquired. These purposes derive from the engineering design that has been submitted for approval, and the limits of deviation for that, as expressed in the DCO. However, it may be the case, for example, that the full extent of the limits of deviation do not end up being utilised, and therefore that not all land is required. However, without the ability to compulsorily acquire the land, the Applicant would not be able to utilise those powers. Compulsory acquisition powers are applied for on the basis of the scheme that is presented, which is an indicative scheme with the ability to change; and as noted in the Statement of Reasons, there is a compelling case in the public interest for that scheme as a whole.</p> <p>In relation to the second sentence of SoR paragraph 5.5, the approach noted in the question is reflective of the requirement (which is noted in the 2013 DCLG Guidance: 'Guidance related to procedures for the compulsory acquisition of land', at paragraph 25) for promoters to seek to acquire land by negotiation wherever practicable and has therefore entered in to such negotiations with all the relevant land interest parties. As such, whilst as set out in section 6 of the Statement of Reasons, there is a compelling case in the public interest for all compulsory acquisition, the extent of the land that is acquired may be reduced as a result of negotiations.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
		<p>d) Does the Applicant consider that all reasonable alternatives to compulsory acquisition and temporary possession have been explored? If so, please give reasons.</p>	<p>Without the power to acquire compulsorily the necessary interests in and rights over land, the Applicant would be unable to guarantee the delivery of the proposals. If land is acquired by agreement then the case in the public interest still stands and the test is still met.</p> <p>c) Yes - the Applicant considers that the land take within both the compulsory acquisition powers and temporary possession measures that are being sought is no more than is reasonably required and are proportionate in the context of the proposals. The specific purposes for which the Applicant requires plot of land within the Order limits is set out in Appendix A to the Statement of Reasons. The Statement sets out in detail why the Applicant considers that there is a compelling case in the public interest which would justify the use of powers of compulsory acquisition, such that the relevant statutory tests in section 122 of PA2008 are met.</p> <p>In particular, as is explained in detail in Chapter 5 of the Statement of Reasons where the Applicant sets out the purpose for which the compulsory acquisition and temporary possession powers are sought, and how the exercise of the powers to acquire land compulsorily, acquire new permanent rights over land, and take temporary possession of land would be given effect.</p> <p>In Chapter 9, the Applicant has given consideration to the purposes for which the land is required, namely the delivery of the proposals, in the context of the provisions of Article 1 of the First Protocol to the European Convention on Human Rights and Article 8 of the Convention. The particular reasons why the proposed acquisition of land and interference with private property rights are considered to be legitimate and proportionate, and therefore justified,</p> <p>d) Yes - the Applicant does consider that all reasonable alternatives to compulsory acquisition have been explored. The compulsory acquisition and temporary possession proposals constituted within the proposals relate to two key aspects - the infrastructure corridor that links the Tilbury2 site to the existing road and rail networks, and the river bed within which the proposed marine infrastructure is proposed to be sited.</p> <p>The Statement of Reasons from paragraph 6.18 sets out that in relation to options appraisals Tilbury2 is the optimum location for the expansion of the Port of Tilbury and that the consideration of alternative options considered three points:</p> <ul style="list-style-type: none"> • the choice to build Tilbury2 in the suggested location (and thus requiring the infrastructure corridor to exist and the river bed at this location required to support the marine infrastructure); • the options that have been considered in respect of the design and routing of the infrastructure corridor and associated mitigation; and • the factors that determine the extent of marine infrastructure (and thus river bed) that are required. 	

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>Chapter 6 of the Environmental Statement (Document Reference; APP-031, 6.1) explains in more detail that the Tilbury2 site is the optimum location for the expansion of the Port of Tilbury and that there are sound operational and synergistic reasons why the Tilbury2 proposals need to take place in close proximity to the existing Port. In Tilbury2 a location has been identified which is of a scale which can deliver the adequate land with the requisite deep water access. The CMAT Clarification Statement submitted with the response the FWQs sets out in more detail that there are no other areas of industrial land suitable that have access to a jetty with deep water. Tilbury2 is therefore the optimum location for the expansion of the Port of Tilbury.</p> <p>Appendix B to the Statement of Reasons sets out communications and negotiations with owners of interests in land. This demonstrates that the Applicant has actively engaged in discussions with third parties over interests in land and has where possible aimed to acquire land by agreement. This Applicant considers compulsory acquisition to be a last resort and alternative routes have therefore been sought.</p>	
1.3.2.	Applicant	<p>a) Please can the Applicant provide an updated list of discussions and negotiations (as provided in Appendix B of the SoR) and an updated land negotiations tracker (as provided in the SoR at Appendix F) at deadline 1 and throughout the Examination, including a final version at the last deadline in August 2018?</p> <p>b) Pleasd can the Applicant also provide a chart providing details of the Affected Persons who are objecting to the CA of land or rights, or temporary possession, providing details of their land plots and update that chart during the Examination and provide a final version for the last deadline in August 2018?</p>	<p>1.3.2.a) Please see the updated Appendices B & F to the Statement of Reasons (APP – 018) attached.</p> <p>1.3.2.b) To date there have been no objections to Compulsory Acquisition however the Applicant has noted in the table in Appendix F to the statement of Reasons (APP – 018), that an objection letter was received from National Grid gas on 3 November 2017 citing failure to engage with National Grid as reason for objection. Clarification was subsequently made and a “no objection” letter was received from National Grid on 13 December 2017. The Applicant confirms that objections will be monitored and updated at successive deadlines during the Examination as requested with a final version to be produced for the last deadline in August 2018. The Land Negotiations Tracker has been updated and is contained as Appendix F of this document.</p>	No comment
1.3.3.	Applicant	Please can the Applicant explain whether any affected land plots had owners or persons with rights who could not be identified, or who could	The following 4 plots had an entry of ‘Unknown’ added into the Book of Reference (Document reference 4.3) ; 03/05, 03/07, 03/08 and 03/11. The land referencing process is outlined in section 4 of the Statement of Reasons (Document reference 4.1). Where there was unregistered land within the	No comment

FWQ	Question to:	Question:	Response:	Highways England comments				
		<p>not be contacted? If so, please provide details of the measures that were taken to establish the Affected Persons concerned and which plots are affected in this manner?</p>	<p>Order boundary, discussions were held with neighbouring landowners and through meetings held between the Applicant and the neighbouring landowners. Site notices were also affixed on or adjacent to the land in order to notify any unregistered interested parties of the proposals. Site notices were put up on site on the 11th of May 2017 and 13th of November 2017. No further beneficiaries were identified under this process and no responses were received in response to the correspondence sent to the registered land owners of the benefitting land parcels.</p> <p>Land registry information was initially ordered on the 23rd of March 2017, however land registry refreshes were conducted on the 12th of September and the 17th of November 2017 and the land registry database reviewed periodically to confirm whether the previously unregistered land had become registered.</p> <p>In relation to parcels 03/05, 03/07, 03/08, and 03/11 which are identified in the Book of Reference (Document reference 4.3) as common land, the land was claimed to be owned by the Executors of Charles Cole through discussions with their solicitors however until the title is proven, an unknown entry was added and site notices erected on site to ensure any absent owners or potential claimants were notified of the application and acquisition sought.</p>					
1.3.4.	Applicant	<p>Please can the Applicant confirm, whether it considers that the proposal would comply with DCLG guidance³ on compulsory acquisition?</p>	<p>Yes - the applicant can confirm as was set out in more detail in the Statement of Reasons (Document Reference: APP-018, 4.1) that the proposal would comply with the Department of Communities and Local Government's 2013 Guidance on procedures for the compulsory acquisition of land ("2013 DCLG Guidance").</p> <p>To aid the ExA, the Applicant has provided the table below which sets out the key considerations for the "Justification for seeking authorisation for compulsory acquisition" (paragraphs 5 -19) in the 2013 DCLG Guidance alongside the Applicant's compliance with such consideration:</p> <table border="1"> <thead> <tr> <th>2013 DCLG Guidance Consideration and reference</th> <th>Tilbury2 compliance</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	2013 DCLG Guidance Consideration and reference	Tilbury2 compliance			No comment
2013 DCLG Guidance Consideration and reference	Tilbury2 compliance							

			<p>General considerations (paragraphs 8-10)</p> <ul style="list-style-type: none"> Reasonable alternatives to compulsory acquisition (including modifications to the scheme) must have been explored The applicant must have a clear idea of how they intend to use the land which it is proposed to acquire The Secretary of State must ultimately be persuaded that the purposes for which an order authorises the compulsory acquisition of land are legitimate and are sufficient to justify interfering with the human rights of those with an interest in the land affected. 	<ul style="list-style-type: none"> As set out above in response to FWQ 1.3.1(d) reasonable alternatives to compulsory acquisition have been explored. Appendix A to the Statement of Reasons sets out the particular purposes for which each plot of land is proposed to be used and therefore compulsorily acquired. Section 9 of the Statement of Reasons sets out the compliance with the European Convention on Human Rights and the Human Rights Act 1998 explaining that the land which is proposed to be acquired for the proposals is the minimum necessary to ensure delivery of the proposals and any necessary mitigation, and the Order limits have been drawn to minimise interference with the peaceful enjoyment of a person's possessions under Article 1 of the First Protocol of the Human Rights Act. 	
			<p>The purpose for which compulsory acquisition is sought (paragraph 11)</p> <p>Section 122 of the Planning Act sets out two conditions which must be met to the satisfaction of the Secretary of State before compulsory acquisition can be authorised. The first of these is related to the purpose for which compulsory acquisition is sought as set out in section 122(2).</p>	<p>The Applicant has set out at paragraphs 6.10 -6.17 of the Statement of Reasons the requirement for the land and in Chapter 5, the Applicant sets out the purpose for which the compulsory acquisition and temporary possession powers are sought, and how the exercise of the powers to acquire land compulsorily, acquire new permanent rights over land, and take temporary possession of land would be given effect.</p> <p>Appendix A to the Statement of Reasons sets out the particular</p>	

				<p>purposes for which each plot of land is proposed to be compulsorily acquired or used temporarily and paragraph 6.10 sets out that <i>"PoTLL has included within the Order limits no more land than is reasonably required for the purposes described in the table in Appendix A, such that its proposed use of land, for the purpose of delivering the proposals, is proportionate and justifiable"</i>.</p>	
			<p>Compelling case in the public interest (paragraphs 12-13)</p> <p>In addition to establishing the purpose for which compulsory acquisition is sought, section 122 requires the Secretary of State to be satisfied that there is a compelling case in the public interest for the land to be acquired compulsorily.</p>	<p>Paragraphs 6.53 -6.63 of the Statement of Reasons set out that the Applicant considers that there is a compelling case in the public interest for the construction and operation of the proposals which would justify the compulsory acquisition of land identified in the draft DCO. This is covered in more detail in the paragraph numbers set out above but in summary the Applicant cites amongst other factors: national, regional and local need, policy compliance, economic benefits and employment benefits.</p> <p>At paragraph 9.6 the Applicant sets out that PoTLL considers that <i>"there would be significant public benefit arising from the delivery of the proposals, pursuant to the necessary grant of development consent. That benefit could only be realised if the grant of development consent included the grant of powers of compulsory acquisition. The grant of the powers would accordingly be in the public interest, which would override the private interests of the relevant landowners; further, and in the circumstances, the compulsory acquisition of land and rights would not place a disproportionate burden on the</i></p>	

				<p><i>affected land owners, who would be entitled to compensation under the Compensation Code".</i></p>	
			<p>Balancing public interest against private loss (paragraphs 14 -16)</p> <p>In determining where the balance of public interest lies, the Secretary of State will weigh up the public benefits that a scheme will bring against any private loss to those affected by compulsory acquisition</p>	<p>The need for Tilbury2 has been established in the need case (set out in the Outline Business Case (Document Reference: APP-166, 7.1). As set out in that document, the benefits in the public interest, which are anticipated to arise from Tilbury2, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land were interfered with in order to enable the delivery of the proposals. The Applicant has put considerable effort into minimising the extent of third party land that might be affected by compulsory purchase powers with the Tilbury2 site already being in the Applicant's ownership.</p>	
			<p>Resource implications of the proposed scheme (paragraphs 17-18)</p> <p>Any application for a consent order authorising compulsory acquisition must be accompanied by a statement explaining how it will be funded. This statement should provide as much information as possible about the resource implications of both acquiring the land and implementing the project for which the land is required.</p>	<p>The Funding Statement was submitted with the Application (Document Reference: APP-019, 4.2).</p> <p>This Funding Statement was prepared in compliance with the requirements of Regulation 5(2)(h) of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the "APFP Regulations") and in accordance with the 2013 DCLG Guidance. It details the funding position of PoTLL in the event that compulsory acquisition powers are required to be put in to effect.</p> <p>The Applicant's response to FWQ 1.3.6 sets out in more detail the basis of the Applicant's current estimate of the total amount of</p>	

FWQ	Question to:	Question:	Response:		Highways England comments	
				<p>funds that would be required to cover all costs and fees in relation to the compulsory acquisition</p> <p>Other matters (paragraph 19)</p> <p>The high profile and potentially controversial nature of major infrastructure projects means that they can potentially generate significant opposition and may be subject to legal challenge. It would be helpful for applicants to be able to demonstrate that their application is firmly rooted in any relevant national policy statement. In addition, applicants will need to be able to demonstrate that:</p> <ul style="list-style-type: none"> any potential risks or impediments to implementation of the scheme have been properly managed; they have taken account of any other physical and legal matters pertaining to the application, including the programming of any necessary infrastructure accommodation works and the need to obtain any operational and other consents which may apply to the type of development for which they seek development consent. 	<p>The Applicant has set out in detail its planning policy case within the Statement of Reasons but also in Appendix 1.A of the Environmental Statement Document Reference; APP-031, 6.1) regarding Planning Policy Compliance. The Application is firmly rooted in the National Policy Statement for Ports (2012).</p> <p>Section 12 of the Statement of Reasons sets out the other consents required in relation to Tilbury2 and explains how such consents are being handled by the Applicant. This is set out in more detail in the Consents and Agreements Position Statement (Document Reference: APP-167, 7.2) which identifies at a high level what consents are expected to be needed for Tilbury2, together with how those consents will be obtained.</p> <p>The accommodation works required are part of the Scheme and none of these works are required for third parties.</p>	

			2013 DCLG Guidance Consideration and reference	Tilbury2 compliance	
			<p>General considerations (paragraphs 8-10)</p> <ul style="list-style-type: none"> Reasonable alternatives to compulsory acquisition (including modifications to the scheme) must have been explored The applicant must have a clear idea of how they intend to use the land which it is proposed to acquire The Secretary of State must ultimately be persuaded that the purposes for which an order authorises the compulsory acquisition of land are legitimate and are sufficient to justify interfering with the human rights of those with an interest in the land affected. 	<ul style="list-style-type: none"> As set out above in response to FWQ 1.3.1(d) reasonable alternatives to compulsory acquisition have been explored. Appendix A to the Statement of Reasons sets out the particular purposes for which each plot of land is proposed to be used and therefore compulsorily acquired. Section 9 of the Statement of Reasons sets out the compliance with the European Convention on Human Rights and the Human Rights Act 1998 explaining that the land which is proposed to be acquired for the proposals is the minimum necessary to ensure delivery of the proposals and any necessary mitigation, and the Order limits have been drawn to minimise interference with the peaceful enjoyment of a person's possessions under Article 1 of the First Protocol of the Human Rights Act. 	
			<p>The purpose for which compulsory acquisition is sought (paragraph 11)</p> <p>Section 122 of the Planning Act sets out two conditions which must be met to the satisfaction of the Secretary of State before compulsory acquisition can be authorised. The first of these is related to the purpose for which compulsory acquisition is sought as set out in section 122(2).</p>	<p>The Applicant has set out at paragraphs 6.10 -6.17 of the Statement of Reasons the requirement for the land and in Chapter 5, the Applicant sets out the purpose for which the compulsory acquisition and temporary possession powers are sought, and how the exercise of the powers to acquire land compulsorily, acquire new permanent rights over land, and take temporary possession of land would be given effect.</p>	

				<p>Appendix A to the Statement of Reasons sets out the particular purposes for which each plot of land is proposed to be compulsorily acquired or used temporarily and paragraph 6.10 sets out that <i>"PoTLL has included within the Order limits no more land than is reasonably required for the purposes described in the table in Appendix A, such that its proposed use of land, for the purpose of delivering the proposals, is proportionate and justifiable"</i>.</p>	
			<p>Compelling case in the public interest (paragraphs 12-13)</p> <p>In addition to establishing the purpose for which compulsory acquisition is sought, section 122 requires the Secretary of State to be satisfied that there is a compelling case in the public interest for the land to be acquired compulsorily.</p>	<p>Paragraphs 6.53 -6.63 of the Statement of Reasons set out that the Applicant considers that there is a compelling case in the public interest for the construction and operation of the proposals which would justify the compulsory acquisition of land identified in the draft DCO. This is covered in more detail in the paragraph numbers set out above but in summary the Applicant cites amongst other factors: national, regional and local need, policy compliance, economic benefits and employment benefits.</p> <p>At paragraph 9.6 the Applicant sets out that PoTLL considers that <i>"there would be significant public benefit arising from the delivery of the proposals, pursuant to the necessary grant of development consent. That benefit could only be realised if the grant of development consent included the grant of powers of compulsory acquisition. The grant of the powers would accordingly be in the public interest, which would override the private interests of the relevant landowners; further, and in the circumstances, the compulsory acquisition of land and rights would not place a disproportionate burden on the affected land owners, who</i></p>	

				<p>would be entitled to compensation under the Compensation Code".</p>	
			<p>Balancing public interest against private loss (paragraphs 14 -16)</p> <p>In determining where the balance of public interest lies, the Secretary of State will weigh up the public benefits that a scheme will bring against any private loss to those affected by compulsory acquisition</p>	<p>The need for Tilbury2 has been established in the need case (set out in the Outline Business Case (Document Reference: APP-166, 7.1). As set out in that document, the benefits in the public interest, which are anticipated to arise from Tilbury2, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land were interfered with in order to enable the delivery of the proposals.</p>	
			<p>Resource implications of the proposed scheme (paragraphs 17-18)</p> <p>Any application for a consent order authorising compulsory acquisition must be accompanied by a statement explaining how it will be funded. This statement should provide as much information as possible about the resource implications of both acquiring the land and implementing the project for which the land is required.</p>	<p>The Funding Statement was submitted with the Application (Document Reference: APP-019, 4.2).</p> <p>This Funding Statement was prepared in compliance with the requirements of Regulation 5(2)(h) of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the "APFP Regulations") and in accordance with the 2013 DCLG Guidance. It details the funding position of PoTLL in the event that compulsory acquisition powers are required to be put in to effect.</p> <p>The Applicant's response to FWQ 1.3.6 sets out in more detail the basis of the Applicant's current estimate of the total amount of funds that would be required to cover all costs and fees in relation to the compulsory acquisition</p>	
			<p>Other matters (paragraph 19)</p> <p>The high profile and potentially controversial nature of major infrastructure projects means that</p>	<p>The Applicant has set out in detail its planning policy case within the Statement of Reasons but also in Appendix 1.A of the Environmental Statement Document Reference;</p>	

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>they can potentially generate significant opposition and may be subject to legal challenge. It would be helpful for applicants to be able to demonstrate that their application is firmly rooted in any relevant national policy statement. In addition, applicants will need to be able to demonstrate that:</p> <ul style="list-style-type: none"> • any potential risks or impediments to implementation of the scheme have been properly managed; • they have taken account of any other physical and legal matters pertaining to the application, including the programming of any necessary infrastructure accommodation works and the need to obtain any operational and other consents which may apply to the type of development for which they seek development consent. 	<p>APP-031, 6.1) regarding Planning Policy Compliance. The Application is firmly rooted in the National Policy Statement for Ports (2012).</p> <p>Section 12 of the Statement of Reasons sets out the other consents required in relation to Tilbury2 and explains how such consents are being handled by the Applicant. This is set out in more detail in the Consents and Agreements Position Statement (Document Reference: APP-167, 7.2) which identifies at a high level what consents are expected to be needed for Tilbury2, together with how those consents will be obtained.</p> <p>The accommodation works required are part of the Scheme and none of these works are required for third parties.</p> <ul style="list-style-type: none"> •
1.3.5.	Applicant	<p>Why does the Applicant consider, having regard to section 122(3) of PA2008, that there is a compelling case in the public interest for the compulsory acquisition in relation to:</p> <p>a) the need in the public interest for the project to be carried out; and</p> <p>b) the private loss to those affected by compulsory acquisition.</p>	<p>(a) and (b) As set out in response to FWQ 1.3.4, paragraphs 6.53 -6.63 of the Statement of Reasons Document Reference: APP-018, 4.1) set out that the Applicant considers that there is a compelling case in the public interest for the construction and operation of the proposals which would justify the compulsory acquisition of land identified in the draft DCO. This is covered in more detail in the paragraphs set out above but in summary the Applicant cites amongst other factors: national, regional and local need, policy compliance, economic benefits and employment benefits.</p> <p>At paragraph 9.6 the Applicant sets out that PoTLL considers that "there would be significant public benefit arising from the delivery of the proposals, pursuant to the necessary grant of development consent. That benefit could only be realised if the grant of development consent included the grant of powers of compulsory acquisition. The grant of the powers would accordingly be in the public interest, which would override the private interests of the relevant landowners; further, and in the circumstances, the compulsory acquisition of land and rights would not place a disproportionate burden on the affected land owners, who would be entitled to compensation under the Compensation Code".</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>The need for Tilbury2 has been established in the need case (set out in the Outline Business Case (Document Reference: APP-166, 7.1) and is underpinned by its NSIP status. As such, the benefits in the public interest, which are anticipated to arise from the proposals, are of national significance and would, accordingly, be on a scale outweighing the individual private loss suffered by parties whose interests in land were interfered with in order to enable the delivery of the proposals. The proposed acquisition of and interference with land is therefore legitimate, necessary and proportionate in principle.</p>	
1.3.6.	Applicant	<p>On what basis were the Applicant's current estimate of the total amount of funds that would be required to cover all costs and fees in relation to the compulsory acquisition of land and rights (including temporary possession), should the DCO be made and the CA and temporary possession powers are granted, in terms of the costs of land and rights in this part of Thurrock?</p>	<p>The estimate submitted with the DCO application was undertaken by Ardent Management Limited. Ardent is an experienced and independent firm of chartered surveyors, including RICS (Royal Institution of Chartered Surveyors) Registered Valuers and members of the Compulsory Purchase Association. Ardent is experienced in Development Consent Orders, Transport Works Act Orders and other legal procedures authorising compulsory purchase. The estimate was reached by appraising the compensation anticipated to be payable as a result of the scheme impacts (both permanent and temporary) including land value, loss and damage, disturbance, injurious affection (including under Part 1 of the Land Compensation Act 1973), statutory blight costs and landowner fees and costs in line with the national compensation code applied to DCOs by the Planning Act 2008.</p>	No comment
1.3.7.	Applicant	<p>Since submission of the Application documents, have there been any claims for statutory blight, arising from the Proposed Development?</p>	<p>The Applicant can confirm that since the submission of the Application documents, there have been no claims for statutory blight arising from the Proposed Development.</p>	No comment
1.3.8.	Applicant	<p>Please provide a statement from an independent, but suitably qualified and competent person, who understands land and rights costs in the local area, to confirm that the estimate for funds necessary to cover all of the costs to acquire land and rights associated with the Proposed Development, as stated in the funding statement [APP-018] remains at £12.4 million?</p>	<p>Ardent Management Limited is an experienced and independent firm of chartered surveyors, including RICS (Royal Institution of Chartered Surveyors) Registered Valuers and Members of the Compulsory Purchase Association. Ardent is experienced in Development Consent Orders, Transport Works Act Orders and other legal procedures authorising compulsory purchase. Ardent is familiar many UK locations including London and the Home Counties. Ardent is also familiar with the land interests and rights required for Projects like Tilbury2. In March 2018, Ardent reviewed the estimate of compensation payable for the scheme impacts (both permanent and temporary) including land value, loss and damage, disturbance, injurious affection (including under Part 1 of the Land Compensation Act 1973), statutory blight costs and landowner fees and costs in line with the national compensation code applied to DCOs by the Planning Act 2008. We can confirm that the estimate remains at £12.4m.</p>	No comment
1.3.9.	Applicant	<p>Please explain how the required funding for CA and temporary possession powers would be secured in the event of a transfer of the benefit of the Order, should the Order be made?</p>	<p>Article 50 of the dDCO (Consent to transfer benefit of the Order) sets out that written consent of the Secretary of State is required in order to transfer any or all of the benefit of the Order to another person. The Applicant therefore considers that such consent can and would be withheld subject to the provision of the required funding for CA and temporary possession powers if on</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>authorised transfer any unimplemented acquisition powers were the subject of transfer and any compensation or liabilities were outstanding.</p>	
1.3.10.	Applicant	<p>Please explain the resource implications in relation to potential Category 3 persons, how the Category 3 persons listed in the Book of Reference were identified and whether other Category 3 persons should be identified in any updated BoR?</p>	<p>The Applicant has identified the resource implications of the Category 3 parties through the Property Cost Estimate as identified in the funding statement (Doc ref: APP-019, 4.2) and listed in the table at point 6.1. The allocated estimate for the purpose of claims potentially arising under Part 1 of the Land Compensation Act 1973 have been estimated at £11.2 Million. As explained through the funding statement the funds are available to cover the required compensation estimate.</p> <p>The order limits for all residential properties and community buildings that were identified as having a potential "relevant claim" as a Category 3 interest, were based on the noise 'contours' that were developed for the proposals, which created a 'zone' in which properties and affected interests were identified (which were sufficiently wide to also incorporate those who could potentially make a claim in relation to effects from vibration, smell, fumes, smoke, artificial lighting and discharge; and those who could make a claim under section 10 of the Compulsory Purchase Act 1965). This 'zone' extended 600 metres from the Order limits for the infrastructure corridor, 1 kilometre north of the Tilbury2 site boundary, and 1.5 kilometres south of the Tilbury2 site boundary. This zone did not change as the design developed.</p> <p>The identification of potentially affected Category 3 parties has been an ongoing process since February 2017. Land Registry data was received in the form of a digital shape file (a GIS layer) and digital copies of the Official Copy Registers and Title Plans. All relevant freehold, leasehold, mortgagee, beneficiary, other charges and restrictive covenant information was extracted and stored in a land referencing database. Periodic updates were provided by Land Registry and this ensured that any changes that occurred to title were captured.</p> <p>In April 2017 formal land referencing questionnaires were issued to all identified potentially affected Category 3 parties. Telephone numbers and email addresses were provided on the letter which accompanied the land referencing questionnaires, allowing parties to make contact if they sought further information on the proposals. This was followed by a further round of formal land referencing questionnaires for parties who were yet to respond in April 2017 and in May 2017.</p> <p>Where there were unregistered properties outside of the Order boundary in Tilbury and Gravesend, site visits were conducted which involved visiting residences and door knocking to attempt to identify landowners. Where no persons were present on site a further hand delivered form was posted through the letter box.</p> <p>In September 2017 a Land Registry refresh of titles was carried out to verify the current registered proprietors and identify any changes in ownership that had occurred since titles were first downloaded. Any parties newly identified</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>through this process were sent Requests for Information in which they could confirm the extent of their interest and identify any other interests that had not yet been obtained through the land referencing process. A further refresh was carried out in November, prior to S56 acceptance correspondence to ensure the most up to date information was identified. Where parties were unable to be identified through the land referencing process, notices were addressed to The Occupier at the affected properties allow all those potentially affected to take part in the examination.</p> <p>The Applicant does not consider that a further updated version of Part 2B of the Book of Reference is required as all those potentially affected were served with notices under S56 and able to submit representations should they wish to.</p>	
1.3.11.	Applicant	What degree of importance was attributed to the existing uses of the land and river that is proposed to be acquired or over which rights would be imposed?	<p>The answer is given in two parts; (1) concerning existing uses which relate to the land; and (2) existing uses which relate to the river. Generally, Existing Uses are set out in paragraphs 4.6 - 4.19 of the Statement of Reasons (Document Reference: APP-018, 4.1).</p> <p>(1) Land.</p> <p>The existing uses which are affected and are not within the existing ownership of the Applicant are mainly located within the infrastructure corridor. They comprise open land owned by: Thurrock Borough Council; property owned by Mr A K Gothard; Mrs Diana Finis (and others); property owned by Network Rail; uses by utilities companies; and common land.</p> <p>In all cases early notification of the impact was identified with the affected parties and discussions to ameliorate the impact undertaken.</p> <p>Negotiations with Network Rail, utilities and other holdings are covered elsewhere in the response to First Written Questions (particular reference given to answers at 1.3.13; 1.3.12; 1.3.2; and 1.1.18).</p> <p>With regard to the Common Land discussions and agreement with common right holders regarding the location of suitable alternative land has progressed and, in principle, is agreed.</p> <p>(2) River.</p> <p>The land to be acquired by the Applicant included a deep-water operational cargo jetty, and (subject to modifications in the river surrounding the jetty in terms of dredging and construction of dolphins in the river) the use will remain as an operational facility. It should be noted that the Applicant has already purchased the jetty itself as part of its purchase of the overall Tilbury2 site.</p>	No comment
1.3.12.	Applicant	<p>Special Category Land (West Tilbury Common Land) –Art 37</p> <p>a) Please provide a table indicating, for each plot relevant to this Article, which of the exceptions in</p>	<p>a) As set out in section 11 of the Statement of Reasons, sections 131 and 132 of PA08 make provision for special parliamentary procedure to apply where a DCO authorised the compulsory acquisition of land, or rights over land, forming part of a common. Specifically:</p>	

FWQ	Question to:	Question:	Response:	Highways England comments				
		<p>s131 and s132 PA2008 apply, and why, in order to enable the SoS to be satisfied that it applies.</p> <p>b) Please confirm that no plots in the BoR are 'open space'.</p>	<ul style="list-style-type: none"> • Section 131 applies where an application is made for a DCO authorising the compulsory acquisition of land forming part of a common; and • Section 132 applies where an application is made for a DCO authorising the compulsory acquisition of a right over land forming part of a common or open space by the creation of a new right over land. <p>PoTLL's draft DCO will engage only section 131 because powers of outright acquisition are being sought over the special category land in question. Section 132 is not engaged. There are 2 plots of special category land in relation to which PoTLL requires temporary possession but such temporary use (as opposed to compulsory acquisition) does not engage the provisions of sections 131 and 132.</p> <p>Special parliamentary procedure will apply where section 131 is engaged in respect of common land unless the Secretary of State is satisfied that one of the following circumstances applies:</p> <ul style="list-style-type: none"> • replacement land has been, or will be, given in exchange for land being compulsorily acquired and that replacement land has been, or will be, vested in the prospective seller of the existing special category land and subject to the same rights, trusts and incidents (section 131(4) of PA08; or • the land being compulsorily acquired does not exceed 200 square metres in extent or is required for specified highway works, and the provision of land in exchange is unnecessary in the interests of people entitled to certain rights or the public (section 131(5) of PA08) <p>Sections 131(3) and 131(2) of PA08 provide that an order granting development consent shall be subject to special parliamentary procedure, to the extent that the order authorises the compulsory acquisition of land, unless the Secretary of State is satisfied that one of subsections 131(4) to 131(5) (detailed above) applies; and that fact, and the subsection concerned, are recorded in the order or otherwise in the instrument or other document containing the order.</p> <p>In accordance with Article 37 of the dDCO "the special category land" means the land identified as forming part of registered common land and numbered 03/08 and 03/11 in the Book of Reference (Document Reference: APP-020, 4.2) and shown on the Land, Special Category Land and Crown Land Plans (Document Reference: APP- 009,2.3). As requested, the Applicant has provided a table indicating, for each plot which of the exceptions apply:</p> <table border="1"> <thead> <tr> <th>Plot</th> <th>PA08 Exception</th> </tr> </thead> <tbody> <tr> <td>03/08 All interests and rights in approximately 12432 square metres of grassland, greenery, shrubbery</td> <td>131(5) does not apply because the plot is over 200 square meters.</td> </tr> </tbody> </table>	Plot	PA08 Exception	03/08 All interests and rights in approximately 12432 square metres of grassland, greenery, shrubbery	131(5) does not apply because the plot is over 200 square meters.	
Plot	PA08 Exception							
03/08 All interests and rights in approximately 12432 square metres of grassland, greenery, shrubbery	131(5) does not apply because the plot is over 200 square meters.							

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>and private access track south of London to Southend railway line and north west of Fort Road, Tilbury, Essex</p> <p>As set out at 12.22 of the Statement of Reasons the Applicant considers that the exemption (to the application of special parliamentary procedure) which is provided by section 131(4) of PA08 would apply to the area of common land which is proposed to be acquired under the DCO. This is because the Applicant proposes to provide replacement land in exchange for the existing common land to be acquired under the DCO which will be vested in the owner of the common land and will be subject to the same rights, trusts and incidents in the common land as at present. The proposed replacement land is set out in more detail from paragraphs 11.25 -11.32</p> <p>03/10 All interests and rights in approximately 1073 square metres of grassland and shrubbery east of Fort Road, Tilbury, Essex</p> <p>As above.</p> <p>b) The PA08 definition of 'open space' is "any land laid out as a public garden, or used for the purposes of public recreation, or land being a disused burial ground."</p> <p>An analysis of the extent to which any of the land within the Order Limits is 'open space' is contained within the Planning Policy Compliance Statement - Appendix 1.A of the Environmental Statement (Document Reference; APP-031, 6.1) at paras. 4.147 – 4.153. This confirms that none of the open land within the Order Limits is designated as 'public open space' in the development plan.</p> <p>Clearly, and as set out above in response to part (a) of this FWQ above, provision for replacement common land is proposed. This would offer the opportunity for allowing informal access in a similar manner and extent, and for the same purposes, as that presently enjoyed over the existing common land. No land that is outside of those areas of common land is used for public recreational purposes.</p>	
1.3.13.	Applicant/ National Grid Electricity	NGET states [RR-024] that its rights to retain its apparatus in situ and rights of access to inspect, maintain, renew and repair such apparatus located within or	Responding to each point in turn:	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
	Transmission PLC (NGET)	<p>in close proximity to the Order limits should be maintained at all times and access to inspect and maintain such apparatus must not be restricted. NGET further states that it may require protective provisions to be included within the DCO to ensure that its interests are adequately protected and to ensure compliance with relevant safety standards:</p> <ul style="list-style-type: none"> a) Would the Applicant and NGET state the current position on dialogue between them with regard to the inclusion of dDCO protective provisions or other mechanisms for ensuring NGET's rights? b) Do the two parties intend to produce a SoCG? 	<p>(a) The Applicant confirms that it is in discussions to establish and finalise details regarding NGET assets affected with a view to providing comfort for NGET.</p> <p>(b) On the information received so far the Applicant considers it unlikely that a SoCG will be required. Protective provisions related to the assets affected may be agreed between the parties if required by NGET.</p>	

1.4 CONSIDERATION OF ALTERNATIVES

FWQ	Question to:	Question:	Response:	Highways England response
1.4.	Consideration of Alternatives			
1.4.1.	Applicant (parts a to d); Thurrock Council, Kent County Council and Essex County Council (parts d, e only).	<p>In ES paragraph 6.36, the Applicant explains that the CMAT facility is <i>"more easily located away from the jetty itself as the process of moving aggregate from self-discharging vessels by conveyor is not distance sensitive."</i></p> <p>a) In view of this, why is there not any consideration of alternative locations for the CMAT within other areas of the port or on nearby industrial land?</p> <p>b) Would all of the aggregates arriving at the Tilbury2 facility be within self-discharging ships?</p> <p>c) What is the maximum distance that self-discharged aggregate (from dredgers or ships) could be moved by conveyor to reach an aggregate processing plant, or stockpile locations?</p> <p>d) Is it essential to co-locate asphalt plants, concrete plants and concrete block making facility close to the source of aggregates?</p> <p>e) Please could the host and neighbouring LPAs provide examples of aggregate wharves (and/or railheads) which are co-located within their area, which host the types of secondary aggregate processing facilities that are proposed in the CMAT, as well as any examples of the types of aggregate processing facilities that are proposed in the CMAT which are not co-located with any wharf and/or railhead (or any other direct source of primary or recycled aggregate), such as on industrial estates?</p>	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.4.2.	Applicant	Paragraph 6.38 of the ES states, <i>"However, as set out in the Outline</i>	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment

		<p><i>Business Case, the development of this land in the form shown is crucial to the future success of the project and PoTLL's investment objectives.</i>" (This refers to the land at the north of the Order limits which has "known ecological value").</p> <p>In view of the statement that the "CMAT is more easily located away from the jetty itself as the process of moving aggregate from self-discharging vessels by conveyor is not distance sensitive", why couldn't the CMAT facility be located away from the ecologically important areas, somewhere else within the Port or outside the Port boundary?</p>		
1.4.3.	Applicant, Thurrock Council	Does the part of ES paragraph 6.38 (quoted in FWQ 1.4.2) that states that it is PoTLL's investment objectives that are one of two key drivers for the location of the CMAT on the ecologically important areas, confirm that it is questionable whether these aspects of the Proposed Development should be considered to be 'Associated Development'?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.4.4.	Applicant	As the NPS for Ports, in paragraph 5.1.8, requires development to aim to avoid significant harm to biodiversity interests, including through mitigation and consideration of reasonable alternatives, why has there not been any further consideration of alternative or off-site locations for the CMAT facilities within the Port or nearby, in order to aim to avoid significant harm to the known biodiversity interests?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.4.5.	Applicant	The Masterplanning Statement paragraph 5.7 [APP-034] states that, "By contrast, aggregates are simply and efficiently transported by conveyor with minimal land utilisation. Thus the CMAT severance from the river is not critical provided a suitable conveyor route could be established, provided a silo for powdered product (which cannot be moved by conveyor) could be provided." In view of this, why is there not any consideration of alternative locations for the CMAT within other areas of the port or on nearby industrial land?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.4.6.	Applicant	Referring to the Masterplanning Statement [APP-034] paragraph 5.25, please provide	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment

		<p>clarification and explanations for the following extracts of text:-</p> <p>a) <i>“Satisfying a known demand for a large aggregate import and processing facility”;</i></p> <p>b) <i>“to support regional construction projects”;</i></p> <p>In particular please justify why the <i>“known demand”</i> cannot be supplied from existing or planned sites and why the proposed CMAT is seen to be important to support regional construction projects. Please define what is meant by <i>“regional”</i>.</p>		
1.4.7.	Applicant	<p>In its consideration of alternative solutions for the proposed expansion of the port, did the Applicant consider any possibilities for the rationalisation of existing port usages and lay-out, for example by installing multi-story car parks for the car storage facility areas, or moving car storage off site, thus potentially releasing land from car storage uses?</p>	<p>The Applicant’s response to this FWQ is outlined in the attached appendix; ‘Appendix B: CMAT Position Statement’.</p>	No comment

1.5 CONSTRUCTION

FWQ	Question to:	Question:	Response:	Highways England response
1.5.	Construction			
1.5.1.	Applicant	Has the Applicant submitted a copy of the Construction Method Statement to the Examination? If not, why not?	<p>A stand-alone Construction Method Statement has not been included as part of the application.</p> <p>Assumptions regarding the construction methodology are included in sections 5.79 to 5.116 of the Environmental Statement and these were used to undertake assessments and develop the mitigation measures relating to construction, such as the Construction Environmental Management Plan (CEMP). These paragraphs set out the various construction methods and options that exist for the Tilbury2 proposals, and the worst case of these methods has then been assessed (e.g. the type of piling to be used).</p> <p>As such, neither these paragraphs nor a 'fleshed out' Construction Method Statement would set out the definitive and detailed construction processes and practices that will be used, and they could not do at this stage of the development of the Tilbury2 proposals.</p> <p>The detailed construction methodology will be developed by the appointed Contractor. Whilst the envisaged construction methods set out in Chapter 5 of the ES have informed the environmental and other parameters within which the Tilbury2 proposals must be developed, the appointed Contractor will have a degree of flexibility to employ other construction methods which remain within those parameters.</p> <p>This flexibility provides the opportunity to deliver benefits, such as a reduction in land take and environmental effects.</p> <p>However, the key point is that once a Contractor has been appointed their methodology will need to take account of the CEMP and other controls set out within the DCO. This will ensure that the final construction methodology cannot cause any impacts environmentally worse than those assessed in the Environmental Statement.</p>	<p>Highways England is content that the Construction Method Statement (CMS) will be developed at a later date, in accordance with the CEMP. The CMS, when produced, should also take account of current best practice guidance.</p> <p>Highways England requests that it be consulted on the aspects of the Construction Method Statement that relate to the SRN.</p>
1.5.2.	Applicant	Where in the ES (or supporting documents) are there details of the months of the year that piling in the marine environment would take place and are there any months when piling in the marine environment would not be undertaken?	The time of year that piling in the marine environment of the year will take place will depend on appointment of an appropriate contractor and the final construction programme. The River Thames is used year-round by fish and marine mammals, and so there are environmental implications of piling throughout the year. Rather than restricting piling to a particular season, a more effective mitigation approach for underwater noise caused by piling (which is the main concern with marine piling), is considered to be the establishment of a daily non-piling window of at least 14 hours; an approach which has been supported by the MMO.	No comment

FWQ	Question to:	Question:	Response:	Highways England response									
			<p>Additionally, the scheme will adhere to the JNCC protocol for piling in the marine environment, by including – and securing - the following measures in the CEMP (Document Reference PoTLL/T2/EX/35):</p> <ul style="list-style-type: none"> • Soft start will be used for percussive piling; • pre-piling search for marine mammals; • there will be no night time piling; • the commencement of percussive piling will be delayed if marine mammals are detected; and • there will be breaks in piling activity. <p>The MMO will be able to impose further controls on piling through the operation of the conditions of the DML within the dDCO (Document Reference PoTLL/T2/EX/38).</p>										
1.5.3.	Applicant	Please provide details of the locations, size of areas that would be subject to the various types of piling, together with the duration of piling in each location.	<p>The following tables below lists the indicative types of piling, plan areas and duration for the piling works which have formed the basis of the environmental impact assessment, with the suitable 'worst case' methodology for the piling indicated in each chapter (as explained in chapter 5 of the Environmental Statement (Document Reference APP-031, 6.1).</p> <p>Table 1 summaries the piling for the Marine Works and Table 2 the Terrestrial Works and references the appropriate drawings submitted with the DCO Application.</p> <p>The details of piling will be dependent on ground conditions and detailed construction methodology and may vary from that assumed below. The terrestrial piling methodology will be approved by the Environment Agency as part of seeking approval of the piling risk assessments required by the CEMP (paragraph 8.11). Marine piling is controlled through the CEMP (PoTLL/T2/EX/38) and the DML within the dDCO (PoTLL/T2/EX/35).</p> <p>Table 1: Marine Works</p> <table border="1"> <thead> <tr> <th>Structure</th> <th>No. Structures</th> <th>No. piles per structure and Dia (m)</th> </tr> </thead> <tbody> <tr> <td colspan="3">Doc Ref: APP-008– General Arrangement Plans, RoRo and CMAT</td> </tr> <tr> <td colspan="3">Doc Ref: A–010 - Engineering Drawings and Plans, Illustrative C</td> </tr> </tbody> </table>	Structure	No. Structures	No. piles per structure and Dia (m)	Doc Ref: APP-008– General Arrangement Plans, RoRo and CMAT			Doc Ref: A–010 - Engineering Drawings and Plans, Illustrative C			No comment
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FWQ	Question to:	Question:	Response:				Highways England response			
			RoRo Berthing Dolphins	7	12x1.22m	14.03	Steel tubular piles	6		
			RoRo Dolphin Access Walkways Intermediate Supports	4	2x0.914m	1.31	Steel tubular piles	1		
			Pontoon restraints	2	2x1.22m	2.34	Steel tubular piles	1		
			CMAT Berthing Dolphins	8	12x1.22m	14.03	Steel tubular piles	6		
			CMAT Dolphin Access walkway Intermediate Supports	2	2x0.914m	1.31	Steel tubular piles	1		
			Linkbridge pile supports	1	14x1.22m	16.37	Steel tubular piles	7		
			Approach Bridge pile supports	6	4x1.22m	7.01	Steel tubular piles	12		
			Conveyor Bridge Support structure	3	3x1.22m	3.507	Steel tubular piles	2		
			Conveyor Feed Hopper Support structure	1	12x1.22m	14.03	Steel tubular piles	6		
			Sheet Pile Retaining Wall (CMAT Berth Dredge pocket)	1	-	9.9	Steel Sheet piles	5		

1.6 CONTAMINATED LAND AND WASTE

FWQ	Question to:	Question:	Response:	Highways England response
1.6.	Contaminated Land and Waste			
1.6.1.	Applicant	The Operational Management Plan [APP-165] contains sections on contaminated land and ground conditions and asbestos. Would these report sections be better placed in the Construction Environmental Management Plan, or both documents, if there is a risk to employees or the public from contaminated land or asbestos during the operational phase as well as the construction phase?	Information in relation to contaminated land, ground conditions and asbestos at the construction stage is also included in the Construction Environmental Management Plan within Section 8.0 Hydrogeology and Ground Conditions. The measures in the operational management plan are those suited to the operational stage.	Highways England is content with the management measures in the CEMP, with regards to the potential for effects of contaminated land, ground conditions and asbestos on the SRN during construction.
1.6.2.	Applicant	The Site Waste Management Plan provided as an appendix to the draft Construction Environmental Management Plan [APP-164] only provides tabulated construction phase waste forecasts and types of waste management facilities that will be needed for the receipt of the various waste streams that would arise during construction. Is the Applicant proposing to update this document during the Examination to provide more details on the way that the waste arisings during the construction phase would be managed?	The Site Waste Management Plan (SWMP) is a live document which will be regularly updated during the construction phase of the project. The level of information provided, prior to contractor involvement, is typical for this early stage, as management of waste arisings will be, in part, dependent on the construction programme and management approaches may vary between contractors. The next update of the SWMP will be undertaken immediately prior to the start of the construction phase, in order to meet the requirements of the CEMP at paragraph 12.3. The Construction Environmental Management Plan also provides information in relation to best practice waste management methods that must be adopted by the contractor.	No comment
1.6.3.	Thurrock Council (TC), Essex County Council (ECC), Kent County Council (KCC)	Are the host and neighbouring waste planning authorities satisfied with the level of detail contained within the Site Waste Management Plan? If not, why not?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.6.4.	Applicant	The ES [APP-031] in paragraph 19.10 states that the Tilbury2 site sits within a development area in the borough of Thurrock (local) and Essex (regional) and then goes on to identify the Essex and Southend Waste Plan as being the regional policy. Paragraph 19.18 also states that the proposals lie within the Borough of Thurrock and the County of Essex. Please review/re-issue this chapter as Thurrock is not a 'local' 'borough' authority, it	The ES considers the impact of the CDE waste generated by the Scheme in the context of regional waste arisings and waste infrastructure. Thurrock is a waste planning authority which sits within the geographical region of Essex. Waste data was not available for Thurrock at the time of writing the ES, so Essex was used as a proxy. Both Essex and Thurrock have been consulted regarding the ES. During consultation, it was agreed with both authorities that the baselines used in the impact assessment would be reviewed. However, Thurrock are currently undertaking work to identify CDE waste arisings	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		is the host unitary authority and the Essex and Southend Waste Plan is that of the neighbouring waste authority.	and CDE waste infrastructure capacity within the authority. The Applicant is working with Thurrock to include this in an update of the methodology used to assess the waste capacity in Thurrock (rather than in Essex). This will be dealt with through the Statement of Common Ground with Thurrock.	
1.6.5.	Applicant	Please define 'the study area' used in ES Chapter 19 and review/update the text and conclusions in this chapter because of the assumptions used, that the application site is in Essex.	The study area for waste is defined in ES Chapter 19 as 'waste infrastructure within Essex for non-hazardous and inert CDE waste and national waste infrastructure for hazardous waste'. Unlike other EIA topics, there is no accepted method for defining the study areas for waste and materials and professional judgement has therefore been used. Essex was used as a proxy, as waste data was not available for Thurrock at the time of writing the ES. However, Thurrock are currently undertaking work to identify waste infrastructure capacity within the authority. We are working with Thurrock to include this in an update of the methodology used to assess the waste capacity in Thurrock (rather than in Essex), which will include consideration of the study area. This will be dealt with through the Statement of Common Ground with Thurrock.	No comment
1.6.6.	Applicant	ES paragraph 19.12 states that the proposals, once operational would support local mineral plans such as the adopted Essex Mineral Local Plan (2014), the Greater Essex Local Aggregate Assessment (2016) and the Kent County Council's Minerals and Waste Local Plan 2013-2030 (2016). Please explain why you consider that the CMAT would support these plans and how this would accord with the NPPF minerals policies?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.6.7.	Thurrock Council, ECC, and KCC	Do you agree with the Applicant's statement given in ES paragraph 19.12? If not, why not?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.6.8.	Applicant	In ES [APP-031], table 19.4, what do you consider to be the 'region'?	Within table 19.4 the 'region' refers to the study area as identified in paragraph 19.19, i.e. Essex.	No comment
1.6.9.	Thurrock Council, ECC	ES, paragraphs 19.26-19.30 consider waste arisings and waste infrastructure baselines using the ECC Replacement Waste Local Plan and the ECC Replacement Waste Local Plan capacity report. Do you consider that this results in a suitable baseline assessment for waste arisings and waste infrastructure? Please give your reasons.	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.6.10.	Applicant	ES [APP-031] paragraph 19.43 explains that no definitive decisions had been made at the time of the preparation of the ES, regarding the re-use on-site and/or off-site disposal of	a) In respect of the material that will become the terrestrial excavation waste, such testing will form part of wider geo-environmental investigations of the Site that will take place	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>the excavation waste arisings. This would be reviewed when the results of appropriate geotechnical and chemical testing of the dredge and terrestrial excavation waste are available.</p> <ul style="list-style-type: none"> a) When will these tests be carried out? b) How will they be secured in the dDCO, if they are not undertaken during the Examination? c) How will the results be made available to the host local authority? 	<p>throughout 2018, and will not be completed prior to the end of the Examination.</p> <p>In respect of dredged material, it should be noted that the WID method would not produce any material that would need to be re-used, as the materials remain in the river.</p> <p>However, in respect of this material, a marine sediment investigation was undertaken in 2017 to identify suitable dredging areas and to establish the suitability of material for disposal at sea. Following the results, the MMO established an exclusion zone [RR-023], where material should be dredged using backhoe dredging rather than dispersive WID, and which will be reflected in the revised DML and Sheet 3 of the Works Plans to be submitted at Deadline 1. The testing results show that the material with the exception of the exclusion zone, is acceptable for re-use or disposal on-site [RR-023]; and that the material from the exclusion zone, is to be disposed of off-site, either on land or at a designated offshore disposal site such as South Falls, but not in the river. No further tests are required except for future maintenance dredging, which would be done pursuant to the conditions of the DMI.</p> <p>b) and c) As is set out in paragraph 8.1 of the CEMP (PoTLL/T2/EX/38), Thurrock Council and the Environment Agency will be fully involved in scoping and dealing with the results of the geo-environmental investigations. The CEMP is secured through a requirement in Schedule 2 to the DCO.</p> <p>The requirement to undertake further sampling of marine sediments and the frequency of this sampling is being agreed with the MMO and will be secured through the DML. The sediment sampling results will be submitted to the MMO following their prior-approval of the sampling plan.</p>	
1.6.11.	Applicant	<ul style="list-style-type: none"> a) Out of the 183,900 tonnes of Construction, Demolition and Excavation (CDE) waste arisings during the construction phase, how much would be moved off-site by river? b) Has the Applicant reviewed the available river connected recovery projects or CDE permitted sites? If so, which sites are being considered, which waste streams do they accept and how much void capacity do they have remaining? c) Which other suitably permitted waste facilities would be used for the 	<p>The 183,900 tonnes of Construction, Demolition and Excavation (CDE) waste arisings assumes a worst case scenario. The quantity of waste to be produced during the works is expected to be less than this once mitigation measures have been implemented on site. The assessment of the impact of these arisings has considered the overall waste capacity in the area in order to conclude that the effect on this capacity will be negligible.</p> <p>For the purposes of environmental assessment, the transport assessment assumes a worst case scenario that all of the waste arisings will be moved by road. The mode of transportation of the waste from the site and the choice of suitably permitted site(s) employed during the works will be a matter for the contractor.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response																											
		disposal/off-site management for the various waste streams?	<p>Whilst it is possible that arisings would leave the site by barge, and PoTLL would be keen to encourage this, there are practical limitations to this. The existing jetty has limited turning space and therefore health and safety issues may arise with using large vehicles on the jetty.</p> <p>Moreover, if, as expected, terrestrial works are being undertaken in tandem with works to the marine infrastructure, these works may conflict with mooring vessels at the jetty.</p> <p>It is possible that a contractor may set up temporary conveyor infrastructure to transfer waste to the jetty and onto barges but that would rely on a positive cost/benefit analysis; this will be up to the contractor to determine. In addition, there are limitations to the types of waste that can be transferred in this manner (e.g. some excavated/dredged materials, which comprise the majority of the anticipated waste arisings, cannot easily be moved via conveyor).</p> <p>In light of the above, a full assessment of river accessible waste facilities has not been undertaken in respect of all waste arisings. However, as explained in paragraph 11.430 and table 11.54 of the ES, consideration has been given to potential receptor sites for dredge arisings, with the 'South Falls' site determined as the most appropriate site. Table 11.54 is extracted below.</p> <p>Table 11.54 Summary of data provided for South Falls and North Edinburgh Channel disposal</p> <table border="1"> <thead> <tr> <th>Disposal Site Reference</th> <th>Site Name</th> <th>Status</th> <th>Size</th> <th>Water Depth</th> <th>Distance from the Site</th> <th>Max Annual Licenced quantity</th> <th>Max Quantity Disposed per annum</th> <th>Total Quantity disposed at the site</th> </tr> </thead> <tbody> <tr> <td>TH070</td> <td>South Falls</td> <td>Open</td> <td>27km²</td> <td>40m</td> <td>60nm</td> <td>9,035,000 tonnes (2013)</td> <td>2,642,062 tonnes (2013)</td> <td>4,597,583 tonnes (1984-2013)</td> </tr> <tr> <td>TH080</td> <td>North Edinburgh Channel</td> <td>Open</td> <td>2km²</td> <td>10m</td> <td>35nm</td> <td>1,340,454 tonnes (2007)</td> <td>1,044,213 tonnes</td> <td>1,358,420 tonnes (2004-2007)</td> </tr> </tbody> </table>	Disposal Site Reference	Site Name	Status	Size	Water Depth	Distance from the Site	Max Annual Licenced quantity	Max Quantity Disposed per annum	Total Quantity disposed at the site	TH070	South Falls	Open	27km ²	40m	60nm	9,035,000 tonnes (2013)	2,642,062 tonnes (2013)	4,597,583 tonnes (1984-2013)	TH080	North Edinburgh Channel	Open	2km ²	10m	35nm	1,340,454 tonnes (2007)	1,044,213 tonnes	1,358,420 tonnes (2004-2007)	
Disposal Site Reference	Site Name	Status	Size	Water Depth	Distance from the Site	Max Annual Licenced quantity	Max Quantity Disposed per annum	Total Quantity disposed at the site																							
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1.6.12.	Applicant	In ES table 19.14, please explain how the "waste arisings baseline" and "waste infrastructure baseline" were derived?	The Baseline Conditions section of Chapter 19 (paragraph 19.26 – 19.34) of the ES describes how the waste arisings baseline and waste infrastructure baseline were derived. The waste arisings baselines for Essex (non hazardous and inert CDE waste) and nationally (hazardous waste) are presented in Table 19.5 in the ES. The waste infrastructure baselines for Essex (non hazardous and inert waste) and nationally (hazardous waste) are presented in Table 19.6 in the ES.	No comment																											

1.7 CUMULATIVE AND COMBINED IMPACTS

FWQ	Question to:	Question:	Response:	Highways England response
1.7.	Cumulative and Combined Impacts			
1.7.1.	Applicant	<p>There are legal requirements within legislation to undertake a cumulative assessment for EIA and an in-combination assessment for HRA. There is also a requirement within the NPS for Ports to consider cumulative impacts. The PINS post-acceptance s51 advice noted that a scoping report for Lower Thames Crossing (LTC) had been produced at that time and so, in accordance with PINS Advice Note 17, a cumulative effects assessment should be provided for the Proposed Development with the LTC. The assessment should be proportionate to the information available to the Applicant and could be at a high level using assumptions about the traffic levels on opening of the LTC and using traffic growth projections used in other projects, if applicable.</p> <p>Please provide an updated Chapter 20 of the ES [APP-031], together with any relevant appendices and plans which screens in the Lower Thames Crossing, using the worst case scenarios. This should consider as a minimum, combined and cumulative impacts from traffic and transport, impacts upon air quality and noise.</p>	<p>PoTLL's position on this issue is set out in detail in the "Response to Relevant Representations" (PoTLL Document Reference PoTLL/Tilbury2/EX/32) at paras. 2.35 – 2.42 and the Panel is referred to that commentary.</p> <p>PoTLL remain of the view that it is not possible for a CEA to be undertaken of Tilbury2 with LTC at this stage, for the reasons set out in that document. Nor is it considered possible to undertake an in-combination assessment for the purpose of HRA for the same reasons.</p> <p>Whilst appreciating the legal and policy context highlighted by the Panel, there is no reasonable basis on which to estimate the impact on the highway network from the implementation of the LTC as no data on this exists. This data is key to understanding the related environmental impacts on topics such as air quality, noise and health. Absent this data, PoTLL would respectfully suggest that any assessment would be so speculative as to be of no value to the decision on Tilbury2 itself.</p> <p>Moreover, even if such a CEA were undertaken and conclusions were drawn as to the need for additional mitigation as a result of the cumulative impact of Tilbury2 with LTC, that mitigation would clearly fall to the promoters of the LTC and would not be for PoTLL to implement. It would not and could not have practical implications for the Tilbury2 DCO.</p> <p>It is inescapable that the promoters of LTC will have to undertake a CEA of Tilbury2 with LTC and this is confirmed by the identification of Tilbury2 as a cumulative project in the LTC Scoping Report. There is no danger that the cumulative effects will fail to be properly assessed, with this assessment rightly falling to LTC, to be undertaken at a time when sufficient information is available to allow the assessment to robustly undertaken.</p>	<p>Highways England supports the request for a Cumulative Effects Assessment to be carried out and considers that there is sufficient evidence within the LTC Scoping Report for this.</p> <p>A cumulative effects assessment should therefore be provided for the Proposed Development with the LTC, in accordance with PINS Advice Note 17, as the LTC scoping proposal was available at the time of acceptance.</p> <p>Highways England has reviewed the "Response to Relevant Representations" (PoTLL Document Reference PoTLL/Tilbury2/EX/32) and while it is noted that there is limited information available regarding the LTC, Highways England supports the production of a proportionate assessment of the potential cumulative effects of the two projects, and the consideration of mitigation measures.</p>
1.7.2.	Applicant	<p>Please provide an in-combination assessment of the maintenance dredging needed for the operational phase of the Proposed Development with the operation of the Tilbury Energy Centre, in respects of risks to water quality arising from the cooling water effluents from the power station being in close proximity to the port's proposed maintenance dredging operations, in order to define the level of risk to Water Framework Directive compliance.</p>	<p>A separate statement (Appendix C of this document) has been prepared to consider the cumulative effect of Tilbury2 with TEC, such as this is possible at this stage.</p> <p>With regard to this specific issue, PoTLL comments as follows.</p> <p>Water discharged back into the Thames from the TEC may be warmer than the background conditions in the estuary. The discharge of heated water could potentially reduce or alter water quality and cause effects on fish receptors within the zone of influence of the outfall (and other receptors not part of the WFD, such as marine mammals). However,</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>currently there is no information available on the volume, dispersion method, frequency, or temperature of the water being discharged into the river. Hence, the magnitude and significance of these potential effects from TEC are currently unknown.</p> <p>Water discharged at high temperatures could cause changes in the chemistry of contaminants found in the river sediments. This process could be made worst if buried contaminants are exposed during dredging. Contaminants, which would under normal temperatures remain bound to the sediment during dredging, could become soluble, detach from the sediments and enter the water column or react in other way. Likewise, a negligible increase in water temperature from the TEC effluent, made possible through the implementation of available cooling technology, could mean that there is no increased risk to WFD compliance. Chemical compounds tend to react differently at different temperatures under different conditions, and it is currently not possible to define the level of risk of jeopardising WFD compliance. It will therefore for RWE to consider this as part of their EIA and WFD assessments once the details of their water discharges are known.</p> <p>Nevertheless, the Applicant has committed not to undertake dredging during June to August inclusive, which is the more sensitive period for water quality (and aquatic receptors), which will minimise potential in-combination effect with TEC and reduce potential risk to WFD compliance.</p>	

1.8 DRAFT DEVELOPMENT CONSENT ORDER (DDCO) MATTERS

FWQ	Question to:	Question:	Response:
1.8.	Draft Development Consent Order (dDCO) Matters		
1.8.1.	No further questions at present		

1.9 DREDGING AND NAVIGATION

FWQ	Question to:	Question:	Response:	Highways England response
1.9.	Dredging and Navigation			
1.9.1.	Applicant and Marine Management Organisation (MMO)	Please provide an update regarding whether the proposals for a Harbour Revisions Order within the dDCO have been agreed (referring to the MMO's Relevant Representation ([RR-023], paragraph 3)?	<p>The Applicant is still in discussions with the MMO. There will not be a Harbour Revision Order within the DCO.</p> <p>Because of the throughput capacity of Tilbury2, the proposals meet the thresholds for being a 'harbour facilities' nationally significant infrastructure project ("NSIP") under s.24 of the PA2008. As a result of this, s.31 of the PA2008 <i>requires</i> that Tilbury2 be authorised by a DCO.</p> <p>Of particular relevance is s.33(2) of the PA2008. This provides that "<i>to the extent [a DCO] is required for the development, the development may not be authorised by...an order under section 14 or 16 of the Harbours Act 1964</i>"</p> <p>It is clear therefore, that where a project meets the relevant NSIP thresholds (which Tilbury2 does) and a DCO is required to authorise that project, orders under the 1964 Act cannot be obtained and, indeed, therefore are not required. This tallies with the intention of the consenting regime under the PA2008 which is that a DCO is a 'one stop shop' for consents for large infrastructure projects.</p> <p>The DCO will therefore contain all the relevant harbours provisions that would ordinarily be included in an order made under the 1964 Act. Indeed, s.145 of the PA2008 confirms this. This provision specifically mentions the provisions that a DCO can include in relation to harbours and, for example, in s.145(5) it is stated that:</p> <p><i>"...the provision which may be included [in a DCO] in relation to a harbour authority includes in particular...any provision...which could be included in a harbour revision order under section 14 of the Harbours Act 1964 by virtue of any provision of Schedule 2 to that Act..."</i></p> <p>It is clear therefore that the PA2008 Act envisages the DCO as including all harbour-related provisions and therefore there is no need (and indeed no ability) to obtain orders under the 1964 Act for schemes for which a DCO is required (such as Tilbury2). Indeed, this is demonstrated by The Able Marine Energy Park Development Consent Order 2014 and The York Potash Harbour Facilities Order 2016 which both contained harbour-related provisions due to the nature of the harbour facilities development consented by those DCOs (i.e. harbour facilities NSIPs). This can be contrasted with The Hinkley Point Harbour Empowerment Order 2012 which authorised harbour facilities related to a DCO development. In that case, no DCO was <i>required</i> for those harbour facilities as they did not constitute a harbour facilities NSIP due to their size. Instead, they were 'associated'</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			with the power station which did require a DCO. Therefore, the promoter in that instance opted to pursue an order made under the 1964 Act.	
1.9.2.	Applicant	Please explain how the Port of Tilbury Transfer Scheme 1991 would assist in transferring the required powers to PoTLL?	<p>PoTLL is the statutory harbour authority for the existing Port of Tilbury by virtue of the Port of Tilbury Transfer Scheme 1991 Confirmation Order 1992 ("the 1992 Order"). The 1992 Order was made under the authority of the Ports Act 1991. The effect of the 1992 Order is to create PoTLL as a stand-alone independent harbour authority and give to it certain powers under the Port of London Act 1968 ("the 1968 Act"). It does this by virtue of paragraph 6 of Schedule 1 and Schedule 4 to the 1992 Order.</p> <p>The scheme under the 1992 Order is that as regards the river Thames, the exercise by PoTLL of any functions is subject to any PLA powers, byelaws or functions (see s.5AA read in to the 1968 Act by virtue of paragraph 6 of Schedule 4 to the 1992 Order). However, in general terms as can be seen under the 1992 Order, PoTLL enjoys the full suite of harbour authority powers and functions that one would expect to see with any harbour authority for an operational port.</p> <p>The base position of the draft DCO is simply to provide that the powers that PoTLL currently exercises as statutory harbour authority over the existing Port of Tilbury will extend to the additional area of Tilbury2 (Article 4 of the draft DCO).</p>	No comment
1.9.3.	EA, MMO, Applicant	<p>The EA's RR [RR-017] explains that the construction of the development and the dredging would need to demonstrate compliance with the Water Framework Directive (WFD). There exists uncertainty over the risks to water quality whilst undertaking dispersive dredge techniques and the EA requests additional water sampling for WFD pollutants, to provide confidence of 'no deterioration'. The methodology for the capital dredge programme also needs to be specified, as this may affect the level of risk to compliance with WFD.</p> <p>The MMO [RR-023] also suggest alternative wording for a condition for pre-construction plans and a need for a maintenance dredging method statement. The EA also suggest that in the event of potential cumulative impacts with Tilbury Energy Centre, more pro-active maintenance dredging methods such as WID should be considered. The EA also state that a WFD</p>	<p>The Applicant is in on-going discussions with the EA and the MMO. The Applicant has been informed that the MMO are in discussions with the EA on this matter to determine how best to address this point.</p> <p>The DML included with the draft DCO (Document Reference PoTLL/T2/EX/35) includes a provision requiring the Applicant to consult with the EA before applying to the MMO for approval of method statements for dredging.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		assessment for the maintenance dredging will be a separate requirement. Please can the EA and the MMO and Applicant work together to provide suitable draft wording for further requirement(s) and/or for additional/modified conditions in the Deemed Marine Licence (DML) to address these matters?		
1.9.4.	MMO	Your RR [RR-023] has reserved the right to comment further on a number of ES chapters, which you did not have sufficient time to comment upon before submitting your RR to PINS. Please can you provide an update on whether there are other matters that you wish to comment upon, and whether any of the matters provided within your RR have yet been resolved through discussion with the Applicant?	The Applicant is in on-going discussions with the MMO regarding the DML. The DML contains provision for a construction method statement to be agreed following consultation with the EA.	No comment
1.9.5.	Applicant	Please explain how the duration of maintenance dredging would be controlled in the dDCO? The MMO's RR [RR-023], paragraph 6 explains their concerns regarding this matter.	As stated above, the Applicant is in on-going discussions with the MMO regarding their concerns. As the MMO have noted maintenance dredging by harbour authorities is not ordinarily subject to marine licensing requirements by virtue of s.75 of the Marine and Coastal Access Act 2009.	No comment
1.9.6.	Applicant	Please provide an update on if/when further samples in the vicinity of Sample Station 8 (where elevated levels of metals (including mercury), polycyclic aromatic hydrocarbons (PAHs) and total hydrocarbon were found), will be taken and results will be submitted to the Examination?	There is currently no intention to take nor submit further samples from the vicinity of Sample Station 8 to the Examination. An exclusion zone for WID around Station 8 was agreed with the MMO and will be included in the DML. The MMO agreed in its relevant representation (Document Reference RR-023) that this exclusion area could be reviewed (e.g. reduced in size) if suggested by positive results from further sampling. However, the Applicant currently has no intention to do this as the exclusion zone removes any need to do further sampling.	No comment
1.9.7.	Applicant, MMO	Please explain how dredging in the exclusion zone around Sample Station 8 would be limited to backhoe dredging, not WID, within the Deemed Marine Licence (DML)?	The DML is still being discussed with the MMO. The DML at 3(3) has coordinates of: "the area of the river Thames within which the licence holder may carry out licensed activities" These are shown on the revised sheet 3 of the Works Plans submitted at Deadline 1 (PoTLL/T2/EX/44).	No comment
1.9.8.	Applicant	Please confirm (or otherwise) that you are in agreement with the wording of the MMO's proposed DML conditions (paragraphs 2.5 and 2.6 of Annex 1, [RR-023]) regarding the need for re-sampling of the area around Sample Station 8 and for the separation of any man-made material from the dredged material with its disposal to land? Please confirm that this will be	The Applicant does not believe that such re-sampling is required. Please see the Applicant's response to FWQ1.9.6.	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		included in the next update of the dDCO at D1?		
1.9.9.	MMO	Paragraph 7 of the MMO's RR [RR-023] notes concerns about certifying the construction method statement and operational management plan, as if it requires an amendment this would require a non-material/material change agreed by the Secretary of State (SoS). Did the MMO mean to refer to the Construction Environmental Management Plan (CEMP) as the construction method statement is not currently a certified document?	<p>As set out in the Applicant's Response to Relevant Representations document (Document Reference: PoTLL/T2/EX/32):</p> <p>PoTLL considers that the MMO will be able to approve marine construction methods through the DML that forms part of the draft DCO (Document Reference: APP-016, 3.1).</p> <p>The Construction Environmental Management Plan and the Operational Management Plan are separate documents listing out mitigation measures rather than methodology; and are not documents that the MMO needs to approve (as they will be finalised and certified through the DCO).</p>	No comment
1.9.10.	Applicant	Is the Applicant content that no alterations would be required to the CEMP/CMS or OMS, once they are certified documents?	Yes, the Applicant is content that no alterations will be required once the CEMP /CMS or OM are certified. The Applicant does, however point out that such documents can be altered by agreement. The certified documents will apply to the full extent of their intended consequences.	No comment
1.9.11.	Applicant	ES Table 11.1 shows the total dredging area as 0.063km ² , but the dDCO does not appear to restrict the area in which dredging could be undertaken within the Order limits. How are the areas proposed for dredging, that were assessed in the ES, to be secured in the dDCO/DML? Would the co-ordinates that are proposed to be inserted in paragraph 3 of the DML cover areas outside the dredge area?	<p>The draft DCO provides for capital dredging to take place anywhere in the Order limits. The ES has assessed the likely areas of dredging and resultant likely volumes in order to provide access for vessels of the requisite draft. However, the river bed is a highly dynamic environment and the exact locations that will need to be dredged cannot be entirely fixed more specifically than the Order limits (in the river) and the coordinates to be entered in paragraph 3 of the DML.</p> <p>The coordinates to be entered in paragraph 3 of the DML are not intended to cover any area outside the Order limits. Those coordinates are the area within which licensed activities may be carried out; not just dredging.</p>	No comment
1.9.12.	Applicant	Please ensure that all plans and drawings related to the marine parts of the Proposed Development are identified and listed in the DML.	The Applicant can confirm that it will list all plans and drawings related to the marine parts of the Proposed Development in the DML. The Applicant will ensure that it works with the MMO to agree the finalised version of the DML including such plans and drawings.	No comment
1.9.13.	Applicant and Purfleet Real Estate Limited	Please provide updates in respect of discussions regarding the need to ensure that the Proposed Development during both the construction and operational phases, would not hinder PRE and its related group companies' need for continued access to and use of the River Thames by its vessels.	<p>Purfleet Real Estate ("PRE") is the owner of Purfleet Thames Terminal ("PTT"), which is located upstream of the Development on the north side of the Thames, just to the west of the Dartford Crossing. PRE does not have any 'special status' on the river Thames regarding its need for access.</p> <p>The Applicant refers to its Response to Relevant Representations document (Document Reference: PoTLL/T2/EX/32) – an additional pre examination submission accepted at the discretion of the Examining Authority, the Applicant states at page 57 that: <i>"In respect of the wider river, as might be expected for a large, diverse, and high-profile port like London, the Port of London Authority (PLA) has extremely high standards of navigation and a pro-active approach to management of risk, which would be applied to Tilbury2 and its interaction with existing ports such as Purfleet"</i>.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.9.14.	Applicant and Port of London Authority (PLA)	Please provide updates in respect of discussions and agreements in respect of the overlapping jurisdiction that would occur due to the Applicant's proposal to extend the port limits, so that PoTLL's area of jurisdiction would overlap that of the PLA's.	The Applicant is still in discussions with the PLA and the overlapping jurisdiction will be covered in the SoCG between the Applicant and the PLA.	
1.9.15.	Applicant and PLA	Please provide updates in respect of discussions regarding PLA's concerns regarding the level of impact on existing river users; financial concerns regarding the treatment of arisings from dredging the PLA's river bed; and environmental impacts identified in the PLA's RR [RR-026] including potential impacts on the river regime and existing river works, the impacts of proposed dredging, cumulative impacts and mitigation. This could be addressed through your SoCG.	The Applicant is still in discussions with the PLA and all of the matters listed above will be covered in the SoCG between the Applicant and the PLA.	No comment
1.9.16.	Applicant	<p>a) Paragraph 14.23 of the ES [APP-031] states that the "aggregate berth (import) is expected to receive 20 vessels per annum which equates to 40 movements per year. These movements are expected to be downstream of Tilbury2." Please explain whether this means that the importation of aggregates will only take place in ships which have an average carrying capacity of 80,000 tonnes? Please cross refer to answers provided for FWQ 1.0.9 and 1.0.10.</p> <p>b) The terminology used here "expected to receive" needs clarification. Please explain whether this is a long term aspiration, or whether aggregate ships of this size would be available from the time that the CMAT facility becomes operational?</p> <p>c) If the former, please give an indication of the size (and number) of ships/dredgers that would be importing aggregates from the time that the facility becomes operational.</p> <p>d) Did the ES consider the impacts of the imported aggregate ships on the</p>	<p>a) As the Port does not presently have a specific tenant for the CMAT (but is talking to a number of major operators in the sector), the design specification for the aggregate berth is based on the specification of the vessel called "Yeoman Bridge".</p> <p>This is a self-discharging vessel with a gross deadweight capacity of 96,772 tonnes with an assumed aggregate capacity of 80,000 tonnes. The reason for using this vessel as the basis for the design specification for the berth (including the necessary dredging) was to ensure a worst-case scenario in terms of size and to future proof the facility in terms of fleet profile in the future. It is the largest vessel reasonably likely to operate at the CMAT.</p> <p>Examples of the types of vessels most likely to call at Tilbury2 are set out in the answer to FWQ 1.0.10.</p> <p>b) Based on the ability to receive vessels of the size of Yeoman Bridge, the throughput capacity has been assumed to be 1.6 million tonnes from the opening of the CMAT for the purposes of environmental assessment (particularly in relation to highways-related impacts). Again, this defines the worst-case scenario. However, depending on the operator, there is likely to be a period from commencement of operations where throughput will grow to this ceiling. This will depend on commercial discussions but is anticipated to take 2 years from the commencement of operations.</p> <p>c) It is not possible at this stage to be definitive as to the size and number of vessels importing aggregate on opening of the CMAT as this will depend upon the immediate operating plans of the operator.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>basis of only 20 inward movements per year?</p> <p>e) If so, how can this number of ship movements be secured as a maximum in the dDCO?</p>	<p>d) The ES has assumed 20 movements each way of vessels the size of Yeoman Bridge. From an EIA perspective, this is considered the worst-case scenario in terms of vessel and the fact that these vessels take 24 hours to discharge therefore having the largest impact from a noise and air quality perspective. In reality there could be more vessels than this depending upon the final operator of the CMAT who for example could bring marine dredgers in with smaller payloads. Four of these type vessels would be in port for the equivalent time as they take around 6 hours to discharge.</p> <p>e) PoTLL would not be able to commercially operate with a restriction on vessel numbers as this is determined by the customer operations. This would also be anti competitive as we would not be able to compete with other port facilities who have no restrictions on vessel numbers. The existing port has no restriction on vessel movements across its whole customer base. Any restriction on the number of vessels would be very arbitrary, given that at any port, the size of vessels can and must vary, not least bearing in mind PoTLL's open access duty under s.6 of the Port of London Act 1968 which will extend to Tilbury2.</p>	
1.9.17.	Applicant	Please explain how and when you propose to notify the UK Hydrographic Office regarding changes to existing jetties, for their consideration in respect of updates to nautical charts and publications?	As a statutory harbour authority, PoTLL will notify the UK Hydrographic Office regarding changes to existing jetties in accordance with its responsibilities. PoTLL presently envisages that it will give such notification sufficiently in advance of the date on which public rights of navigation are restored under article 20 dDCO to allow the UK Hydrographic Office to carry out any necessary updates beforehand.	No comment
1.9.18.	Marine and Coastguard Agency	Please explain when and how the Applicant should inform you and HM Coastguard of the proposed marine works? Should this notification be secured in the dDCO or the DML?	The Applicant is still in discussions with the MMO regarding the DML and understands that the MMO wishes for such notification to be secured in the DML. The Applicant will work with the MMO in order to provide wording to this effect.	No comment
1.9.19.	Applicant	Please explain how you propose to comply with the Port Marine Safety Code (PMSC) and how will you develop a robust Safety Management System for the Proposed Development under this Code? How would this be secured?	<p>The Applicant refers to the Environmental Statement Appendix 14.A: 'the Navigational Risk Assessment' (NRA) (Document Reference: APP-075, 6.2).</p> <p>The NRA explains at section 2 that: all UK Statutory Harbour Authorities (SHAs) have a responsibility to comply with, inter alia, the letter and spirit of the Port Marine Safety Code (PMSC). A core requirement of the PMSC is that the Duty Holder of the SHA must:</p> <ul style="list-style-type: none"> • Assess, and keep under review, the marine risks within the waters for which the SHA is responsible; • Develop policies and procedures to manage those risks and to employ, resource, and empower suitably competent personnel to manage marine operations and reduce risk; • Undertake the above by means of a structured Safety Management System (SMS), which has clear objectives, clear outcomes, and has the concept of continuous improvement embedded within it. 	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			As might be expected for a large, diverse, and high-profile port like London, the Port of London Authority (PLA) has extremely high standards of navigation and a pro-active approach to management of risk. This applies to existing "proven" marine operations and also to proposed new developments such as Tilbury2	
1.9.20.	Marine and Coastguard Agency (MCA)	a) Please can you supply a copy of the Port Marine Safety Code (PMSC) to the Examination as a web-link or as a PDF? b) Please can the MCA provide a copy of the BSI publication on Road Lighting, BS5489, part 8, discussed in their RR, which relates to a code of practice for lighting which may affect the safe use of places including harbours?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.9.21.	Applicant	Please provide an enlarged version of Figure 1.1 (Berth General Arrangement) from the ES Appendix 14.A (Navigational Risk Assessment) as the annotations and markings on this figure are not clear at the scale provided.	A full version of this drawing is provided in General Arrangement Plans Document Reference 2.2/APP-008 Drawing Number: 5153187-ATK-Z4-XX-SK-RW-1003 Drawing Title: General Arrangement Plans RoRo and CMAT berth Sheet 4 of 5 Regulation 5(2)(o)	No comment
1.9.22.	Port of London Authority (PLA)	a) Please can you submit to the Examination a copy (or a web-link) of your document 'Port of London Authority Maintenance Dredge Baseline Document' as referred to by NE in their RR? b) Will the regular maintenance dredging that would be required at Tilbury2 be included in an updated version of this document, so that the cumulative effects from maintenance dredging activities are assessed, for example with those at London Gateway?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.9.23.	Applicant	The ES [APP-031], paragraph 11.147 provides mitigation for the tentacle lagoon worm and fish receptors by restricting dredging to the ebb tide only. Would this be secured through the method statements for	Yes, such mitigation would be secured through the CEMP (Document Reference: APP-164, 6.9) and the DML. As highlighted by the ExA, such mitigation will be secured through the Construction Method Statement in accordance with condition 6 of the DML. In addition, section 7 of the CEMP pertains to Marine Ecology. This sets out at 7.3 that in constructing the	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		construction works (DML condition 6) and maintenance dredging (DML condition 14)? If not, how would this be secured?	marine elements of the proposals a Contractor must also follow the JNCC protocol for piling.	
1.9.24.	Applicant	The ES [APP-031], paragraph 11.246 explains that dispersive dredging would be restricted upstream from Tilbury during June-August inclusive, to reduce the potential for increases in suspended sediment to reduce water quality (when temperatures are higher and dissolved oxygen levels are lower) to provide mitigation for the international fish species receptor group. How would this be secured in the dDCO or DML?	The Applicant refers the ExA to its response to FWQ 1.9.23 as this will be secured by the same means.	No comment
1.9.25.	Applicant	Further to Annex 1, paragraph 1.4 of the MMOs RR [RR-023], please justify the statement, " <i>levels of suspended sediments are within background concentrations, apart from within a localised area of water injection dredgings (WID), changes in dissolved oxygen levels are mostly predicted to be within baseline conditions.</i> " Whilst the increases resulting from WID may be within background levels, the effects would be cumulative to background conditions.	<p>Levels of predicted suspended sediments due to dredging can be considered to be within background concentrations when they would be within the natural range of variability. Predicted average suspended sediment concentrations from Tilbury2 do not exceed 20mg/l. This can be compared to the existing concentrations in this area of up to thousands of mg/l. The Tilbury2 sediment concentration is therefore negligible in this context.</p> <p>The results of the modelling show that in the worst case, if WID were to be undertaken continuously throughout all states of the tide (which it will not), suspended sediment would increase to greater than 20mg/l episodically over an area of up to 15km either side of the dredge area, and maximum increases of up to 200mg/l are limited to within 2km of the dredge area. Relative to background concentrations of 1,600mg/l (near bed) and 1,300mg/l mid depth for fines and 80mg/l (near bed) and 30mg/l (mid depth) for sand, elevated suspended sediment concentrations even in this case would be limited to the immediate area of the dredge.</p> <p>As such, these effects are not considered to be significant in relation to cumulative effects to marine receptors.</p>	No comment

1.10 ENGINEERING AND DESIGN

FWQ	Question to:	Question:	Response:
1.10.	Engineering and Design		
1.10.1.	No questions at present		

1.11 HABITATS REGULATION ASSESSMENT

FWQ	Question to:	Response:	Highways England Response								
1.11.	Habitat Regulations Assessment										
1.11.1	Applicant Please confirm that you will be updating the Habitat Regulations Assessment screening and report generally to reflect the concerns of Natural England in their RR, concerning in-combination effects? All mitigation and monitoring measures which would be required to reach the conclusions of the assessment should be identified, with clear cross-referencing to where these are secured in the dDCO/DML. Separate Word versions of the matrices should also be supplied.	<p>Natural England's Relevant Response concerns regarding Habitat Regulations Assessment (HRA) in-combination effects have been responded to in direct correspondence between the Applicant and Natural England and at a subsequent meeting at Natural England's Cambridge office on 05 February 2018 where HRA matters were discussed along with further discussion to progress the draft Statement of Common Ground (SoCG) issued to Natural England.</p> <p>The Habitat Regulations Assessment (HRA) screening and report will not be updated to reflect Natural England's Relevant Response comments concerning in-combination effects. The rationale for not having included the Tilbury Energy Centre (TEC) or the Lower Thames Crossing (LTC) within the cumulative assessment for EIA and in-combination assessment for HRA is set out in detail within the Applicant's response to Relevant Representations document (PoTLL/T2/EX/32) and its response to FWQs 1.7.1 and 1.7.2. Further high level information has been provided in relation to cumulative effects assessment for the TEC in the Applicant's response to FWQ 1.13.18.</p> <p>All mitigation and monitoring measures which would be required to reach the conclusions of the assessment are identified at Table 1 below, with cross-referencing to where these are secured in the dDCO/DML. The key enforceable documents secured by the dDCO are the Operational Management Plan (OMP; Document Reference PoTLL/T2/EX40), Construction Environmental Management Plan (CEMP; Document Reference PoTLL/T2/EX38), and Landscape and Ecological Management Plan (LEMP; Document Reference Document Reference PoTLL/T2/EX40).</p> <p>Table 1: Mitigation and monitoring measures which would be required to reach the conclusions of the Habitats Regulations Assessment</p> <table border="1"> <thead> <tr> <th>Mitigation/monitoring measure</th> <th>Where these measures are secured in the dDCO/DML</th> </tr> </thead> <tbody> <tr> <td>Cowling/shields on site and jetty lighting to ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>DCO Requirement for final lighting to be approved by Thurrock Council to be in accordance with Preliminary Lighting Strategy (Document Reference APP-044), , CEMP (Chapters 17 and 18).</td> </tr> <tr> <td>Embedded mitigation to reduce the spatial influence of effects from noise and vibration (ES Chapter 17, Document Reference APP-031, 6.1) and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>OMP (section 6), CEMP (chapter 17) noise barriers (secured through the dDCO requirement).</td> </tr> <tr> <td>Embedded mitigation to reduce the spatial influence of effects from dust and emissions (ES Chapter 18 Document Reference APP-031, 6.1) and ensure the envelope of potentially significant</td> <td>OMP (section 7), CEMP (chapter 18)</td> </tr> </tbody> </table>	Mitigation/monitoring measure	Where these measures are secured in the dDCO/DML	Cowling/shields on site and jetty lighting to ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).	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Embedded mitigation to reduce the spatial influence of effects from dust and emissions (ES Chapter 18 Document Reference APP-031, 6.1) and ensure the envelope of potentially significant	OMP (section 7), CEMP (chapter 18)	<p>Highways England supports the request for a Cumulative Effects Assessment to be carried out and considers that there is sufficient evidence within the LTC Scoping Report for this.</p> <p>Highways England has reviewed the "Response to Relevant Representations" (PoTLL Document Reference PoTLL/Tilbury2/EX/32) and while it is noted that there is limited information available regarding the LTC, Highways England supports the production of a proportionate assessment of the potential cumulative effects of the two projects and consideration of mitigation measures.</p>
Mitigation/monitoring measure	Where these measures are secured in the dDCO/DML										
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FWQ Question Question: to:			Response:	Highways England Response
			<p>effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</p> <p>Embedded mitigation to reduce the spatial influence of effects from surface water pollution (ES Chapters 15 and 16, Document Reference APP-031, 6.1) and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</p> <p>Embedded mitigation to reduce the spatial influence of benthic sediment mobilisation and re-deposition and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</p> <p>Sampling of sediments to reduce the spatial influence of potential contaminants during maintenance dredging.</p>	<p>Drainage Strategy (Document Reference 6.2, 16.E / APP-090) and CEMP (chapter 9).</p> <p>CEMP (chapter 7), Operation of the DML conditions on construction and maintenance dredging</p> <p>Operation of the DML conditions on maintenance dredging.</p>
			Word versions of the matrices are supplied (as attached in Appendix H).	
1.11.2	Applicant	Please confirm whether you will be undertaking on-going annual bird surveys between 01 Sept and 31 March during the construction and operation phases? How would these surveys be secured in the dDCO?	<p>Natural England set out in its Relevant Representation that: <i>"Whilst overwintering bird surveys show only relatively low levels of use of intertidal areas within and adjacent to the development, only one year's worth of data has currently been provided.... Applying the precautionary principle we recommend that the Habitats Regulations Assessment screening is updated to reflect our concern and that the applicant makes a commitment to maintain annual bird surveys between 01 September to 31 March during the construction and operational phases."</i></p> <p>Further to discussions of HRA matters with Natural England, it was agreed that a note on winter bird use of the intertidal area would be provided. The "Bird Note" was duly issued to Natural England on 09 February 2018 in order to provide additional context to the information presented in the ES, and is appended to PoTLL's Response to Relevant Representations (PoTLL/T2/EX/32). The note includes details of wintering bird survey work which has been undertaken monthly since November 2017 (i.e. following on from the Environmental Statement submission, and which will continue monthly to March 2018). This was presented in the context of Bioscan's previous intertidal wintering bird survey data (2016/17 and 2017), with further third-party and historic data being provided as part of this package of evidence in order to demonstrate that the level of bird use of this area is representatively portrayed and robustly assessed within the DCO application supporting documents. This historic data comprises supporting explanatory and reference material, which provides context over a longer time-series in order to back up the findings of the ES and HRA.</p> <p>Natural England has confirmed that it will review the note and provide further comment. It is expected that this response will include confirmation as to whether its recommendation for on-going annual bird surveys between 01 September and 31 March during the construction and operation phases is still necessary.</p>	No comment
1.11.3	Applicant	The screening matrices of the HRA report [APP-060],	The screening matrices of the HRA report states that <i>"300m is taken as a rational outer extent of impact envelope for significant construction-phase disturbance taking into account literature on</i>	No comment

FWQ	Question to:	Response:	Highways England Response												
	<p>Appendix 5, in footnote 'C', explain that a 300m distance was used as a "rational outer extent of impact envelope for significant construction-phase disturbance.." The maximum extent used for other likely impacts was not specified in the HRA report. Please can the Applicant specify the maximum extent of each of these likely impacts, or provide cross references to ES documents/paragraphs where this information can be found?</p>	<p><i>response distances amongst the bird species concerned (e.g. Cutts, Phelps and Burdon 2009) and application of the TIDE toolkit (http://www.tide-toolbox.eu/tidetools/waterbird_disturbance_mitigation_toolkit/) and outputs from the impact studies reported in the ES (in particular noise – Chapter 17). Due to the relatively low levels of use of intertidal habitats within this envelope by SPA/Ramsar Site species in the baseline state, even if significant temporary construction phase disturbance effects could occur on receptors within it, the result (up to and including temporary displacement) is assessed as not likely to translate to a significant effect on the SPA/Ramsar Site."</i></p> <p>Impacts with the potential to be significant beyond 300m are restricted to air quality from shipping, noise/lighting/movement disturbance associated with increased shipping traffic along the Thames navigable channel and sediment mobilisation and redeposition from the proposed marine works and dredging. The maximum extent used for these other potential impacts was not specified in the HRA, but was derived from the technical studies submitted with the application. For clarity, further information is provided at Table 1 below:</p> <p>Table 1: Maximum extent of potential significant impact envelope for effects where distance not already specified in HRA</p> <table border="1"> <thead> <tr> <th>Impact source</th> <th>Outer extent of potential significant impact envelope</th> <th>Application document reference</th> </tr> </thead> <tbody> <tr> <td>Air quality changes</td> <td>250m from navigable channel</td> <td>ES Chapter 18 paras 18.63, 18.149, 18.150 and Appendix 6 of HRA report (APP-060, ES Appendix 10.O). See further below.</td> </tr> <tr> <td>Noise/lighting/movement disturbance associated with increased shipping traffic along the Thames navigable channel</td> <td>300m from navigable channel</td> <td>TIDE toolkit (as referenced in HRA report - APP-060, ES Appendix 10.O para 4.1.2) (conservative application of 300m as generic response threshold radius for wading birds)</td> </tr> <tr> <td>Sediment mobilisation and redeposition from the proposed marine works and dredging.</td> <td>40km</td> <td>APP-089, ES Appendix 16.D Figures 4.10 and 4.15</td> </tr> </tbody> </table> <p>In relation to air quality, the following should be noted:</p> <p>The study area for the air quality assessment is defined from paragraph 18.51 of the ES.</p> <p>Study areas are illustrated in the following figures accompanying the ES</p> <ul style="list-style-type: none"> • Figure 18.1 (APP-155) – Potential construction dust impacts • Figure 18.2 (APP-156) – Potential traffic impacts • Figure 18.4 (APP-158) – Potential operational dust and odour impacts. 	Impact source	Outer extent of potential significant impact envelope	Application document reference	Air quality changes	250m from navigable channel	ES Chapter 18 paras 18.63, 18.149, 18.150 and Appendix 6 of HRA report (APP-060, ES Appendix 10.O). See further below.	Noise/lighting/movement disturbance associated with increased shipping traffic along the Thames navigable channel	300m from navigable channel	TIDE toolkit (as referenced in HRA report - APP-060, ES Appendix 10.O para 4.1.2) (conservative application of 300m as generic response threshold radius for wading birds)	Sediment mobilisation and redeposition from the proposed marine works and dredging.	40km	APP-089, ES Appendix 16.D Figures 4.10 and 4.15	
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FWQ Question Question:			Response:	Highways England Response												
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1.11.4	Applicant	<p>The Thames Estuary and Marshes Special Protection Area (SPA) and the Thames Estuary and Marshes Ramsar site cover largely the same area. However, the boundaries differ on parts of the south-west and southern boundaries of these designated areas. Please can the Applicant confirm that this variation in boundaries does not affect the conclusions of the HRA report [APP-060], and justify why this is the case?</p>	<p>Figure 1 of the HRA report (APP-060, Document Reference 6.2, 10.0) demonstrates that the nearest part of any European Site (i.e. both the Thames Estuary and Marshes SPA and Ramsar Site) is approximately 1.5km distant from the Order Limits.</p> <p>The Thames Estuary and Marshes SPA and Ramsar Site have overlapping boundaries which are coterminous for the section to the east of the Order Limits, i.e. the northern coast of the Thames Estuary, north of Coalhouse Fort. For this area (also recognised as the Mucking Flats and Marshes SSSI), the boundaries for both the SPA and Ramsar are the same.</p> <p>For the section to the south-east of the Order Limits, (i.e. the southern part of the Thames Estuary, east of Denton, also recognised as the South Thames Estuary and Marshes SSSI), the boundaries of the Thames Estuary and Marshes Ramsar Site encompass a greater extent of land than the SPA boundaries do. This is because the Ramsar Site incorporates several landward elements that the SPA does not, within the area of the Shorne Marshes. However, given the potential impacts identified would be greatest along the foreshore (i.e. where the SPA and Ramsar site are coterminous), no additional potential impacts are identified for the landward elements of the Shorne Marshes area.</p>	No comment												

FWQ	Question to:	Question:	Response:	Highways England Response
			The Applicant therefore duly confirms that this variation in boundaries does not affect the conclusions of the HRA report for the reasons set out above.	
1.11.5	NE	<p>For the avoidance of doubt, please can NE confirm agreement that</p> <ul style="list-style-type: none"> a) The correct European sites and qualifying features have been identified in the Applicant's HRA report [APP-060]; and b) Section 5 of the HRA report has identified all relevant potential impacts from the Proposed Development upon these sites? 	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.11.6	Applicant	<p>Appendix 6 to the HRA report [APP-060] (the assessment of air quality impacts on designated sites) does not refer to the Thames Estuary and Marshes Ramsar site.</p> <ul style="list-style-type: none"> a) Can the Applicant confirm and justify whether the conclusions in this assessment also apply to the Ramsar site? b) This report does not provide any details on how the impact assessments were carried out, or what assumptions were made about the increased levels of shipping that would take place. Please can this information be provided? 	<p>Appendix 6 to the HRA report states at paragraph 1.3 that "<i>the South Thames Estuary and Marshes Site of Special Scientific Interest (SSSI) and Mucking Flats and Marshes SSSI... are components of the larger Thames Estuary and Marshes Special Protection Area (SPA). Impacts on those areas of the SPA within the constituent SSSIs have been assessed.</i>" The boundaries of the SSSI designations are shown at Figure A1.1 of Appendix 6 to the HRA report.</p> <p>As set out in the response to FWQ 1.11.4, the Ramsar Site encompasses a greater landward area than the SPA does. However, as the assessment of air quality impacts specifically considers the component SSSIs (the boundaries of which are coterminous with the Ramsar and thereby cover the same habitat features), the Ramsar site has been demonstrably covered by the assessment set out at Appendix 6 to the HRA report. The SPA and Ramsar Site are therefore effectively treated as the same receptor for the purposes of assessment of air quality impacts on designated sites.</p> <ul style="list-style-type: none"> a) The Applicant therefore duly confirms that the conclusions in this assessment also apply to the Ramsar site, for the reason set out above; and b) the details of how the impact assessments were carried out, and the assumptions made about the increased levels of shipping that would take place, are set out in Appendix 6 to the HRA report. In summary, the emissions from the additional ship movements along the Thames were determined and used as input to a dispersion model to calculate contributions to concentrations and deposition rates across the SPA and SSSIs (hence also covering the Ramsar site). The increased shipping, is set out in Table A1.1 in Appendix A1 Modelling Methodology of Appendix 6 to the HRA report. There would be 40 annual movements for CMAT aggregate vessels represented by the JS Amazon vessel, and 1,452 movements a year for RoRo vessels represented by the M/V Bore Sea. 	No comment

FWQ	Question to:	Question:	Response:	Highways England Response
1.11.7	Applicant	<p>Loss of Saltmarsh or intertidal mudflat habitat</p> <p>a) Please can the Applicant quantify the amount of functionally linked habitat that would be lost as a result of the Proposed Development.</p> <p>b) Please provide a plan showing the location of this functionally linked habitat.</p>	<p>a) Defining the extent of functionally linked habitat.</p> <p>The HRA report sets out that intertidal habitats (such as coastal saltmarsh or intertidal mudflats) within the Order Limits are a continuation of habitats present within the boundaries of the Thames Estuary and Marshes SPA and Ramsar site.</p> <p>Intertidal habitats within the Order Limits used by cited/qualifying bird species for feeding are therefore considered 'functionally linked' to the SPA and Ramsar site. Furthermore, in respect of populations of Ramsar-cited plant and invertebrate species, it is considered likely that populations within the Order Limits would have at least some degree of functional linkage (for example in performing a role in genetic flow and exchange).</p> <p>By reference to Figure 10.2d 'Section 41 Priority Habitats' (Document Reference 6.3; 10.2d), all the coastal saltmarsh and intertidal mudflat habitat within the Order Limits is considered to be potentially 'functionally linked' to the Thames Estuary and Marshes SPA and Ramsar site, albeit the results of the wintering bird surveys demonstrate that the area is subject only to very low levels of use by cited/qualifying bird species.</p> <p>The <u>baseline extent</u> of intertidal habitat within the Order Limits was calculated as follows (as set out at ES Table 10.49, Document Reference 6.1):</p> <ul style="list-style-type: none"> • Coastal saltmarsh: 0.7ha • Intertidal mudflat: 3.7ha <p>Quantifying the amount of functionally linked habitat that would be lost as a result of the Proposed Development.</p> <p>Functionally linked intertidal habitats will be lost as a consequence of:</p> <ol style="list-style-type: none"> 1. Piling. The link/approach bridge, which will connect the RoRo pontoon to the land will be supported by a series of multiple piles, the number and size of which are yet to be determined. A worst case scenario has been used to inform the assessment, (which could arise from the installation of smaller multipiles, as set out at ES Table 11.1 and paragraph 11.179, Document Reference 6.1). Further piling is also required to support the proposed jetty extension, and the proposed c.330m length sheet pile wall around the dredge pocket (ES paragraph 11.179). 2. Drainage outfall installation, detail for which was not provided in the ES, but will need to be agreed with the Environment Agency, pursuant to their protective provisions in the draft DCO (Part 4, Schedule 10; Document Reference 3.1)). 3. <p>The habitat losses have been quantified for each habitat type, as set out below:</p> <p><u>Intertidal mudflat</u>. The installation of all piles into the River Thames below MHWS would result in a loss of approximately 44.5m² within the intertidal area (Document Reference 6.1; paragraph 11.179). This is anticipated to comprise approximately 35.1m² within the intertidal mudflat and 9.4m² within the coastal saltmarsh habitat.</p>	No comment

FWQ	Question	Question to:	Response:	Highways England Response
			<p>Installation of the proposed drainage outfall to the Thames is anticipated to result in a permanent direct loss of approximately 28m² (maximum) intertidal mudflat to installation of a concrete headwall. In addition, a band of scour protection is proposed, which would be installed over the intertidal mudflat habitat, covering an estimated 192m².</p> <p>By reference to paragraph 11.199 of the ES (Document Reference 6.1) it was concluded that there would be no indirect loss of coastal saltmarsh via shading, as a result of the height of the link bridge.</p> <p><i>Coastal saltmarsh.</i> It is estimated that a maximum of approximately 50m² of coastal saltmarsh would be directly lost to installation of the drainage outfall; and a further 40m² could be damaged/lost to construction phase trampling and disturbance. Associated mitigation would be signed off by the Environment Agency pursuant to their protective provisions in the draft DCO (Part 4, Schedule 10; Document Reference 3.1) as relate to the outfall.</p> <p>The installation of multipiles could result in further permanent direct losses of 9.4m² of coastal saltmarsh, as set out above.</p> <p>By reference to paragraph 11.199 of the ES (Document Reference 6.1) it was concluded that there would be no indirect loss of coastal saltmarsh via shading, as a result of the height of the link bridge.</p> <p>Therefore total maximum predicted losses of functionally linked coastal saltmarsh are 99.4m² in the short-term.</p> <p>Summary. In summary, the works described above will therefore result in the following quantum of functionally linked habitat being lost as a result of the Proposed Development:</p> <ul style="list-style-type: none"> • Intertidal mudflat: 255.1m² (i.e. 35.1m²(approx) + 28m² + 192m²) • Coastal saltmarsh: 99.4m² (i.e. 50m²(max) + 40m²(max) + 9.4m²(approx.)) <p>These figures represent maximum worst case values. The ES assessed losses of priority mudflat habitat from piling and concluded that there would be no <u>net</u> loss (ES paragraph 11.180, Document Reference 6.1), on the basis that removal of the Anglian Water Jetty would create a habitat gain greater than the loss from piling. Further mitigation measures are being considered, and developed in discussion with the Environment Agency, which may enable losses of intertidal habitats to be reduced further in the medium-long term.</p> <p>b) An indicative plan showing the location of the existing functionally linked habitat is provided by reference to the coastal saltmarsh and intertidal mudflat habitat shown at Figure 10.2d 'Section 41 Priority Habitats' (Document Reference 6.3; 10.2d).</p> <p>A plan showing the location of the functionally linked habitat that would be lost as a result of the Proposed Development is provided at Figure FWQ Q1.11.7 (Appendix A).</p>	
1.11.8	NE	Please can NE confirm whether they are in agreement with the Applicant's conclusion that the Proposed Development (alone) would not result in	The applicant offers no response to this question as it is directed at an Interested Party.	No comment

FWQ Question to:			Response:	Highways England Response														
		any Likely Significant Effects (LSE) on the Thames Estuary and Marshes SPA and Ramsar site?																
1.11.9	Applicant	<p>a) Please provide details of the specific embedded mitigation measures which have been taken into account in the HRA report and cross-reference to where each measure is secured (for example, with reference to a specific dDCO requirement or paragraph within the DML.</p> <p>b) Please confirm whether the embedded mitigation measures are required to ensure there are no LSE on the two European sites screened into the assessment.</p>	<p>a) Details of the specific embedded mitigation measures which have been taken into account in the HRA report are set out in the response to FWQ 1.11.1. at Table 1, which is reproduced below for ease of reference.</p> <p>Table 1: Embedded mitigation and monitoring measures which have been taken into account in the Habitat Regulations Assessment report</p> <table border="1"> <thead> <tr> <th>Mitigation/monitoring measure</th> <th>Where these measures are secured dDCO/DML</th> </tr> </thead> <tbody> <tr> <td>Cowling/shields on site and jetty lighting to ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>DCO Requirement for final lighting strategy to be approved by Thurrock Council, and be in accordance with Preliminary Light Strategy (Document Reference PoTLL/T2/EX/38, 6.2, 9.J, APP-044), C (Document Reference Chapters 5, 6, and 7),</td> </tr> <tr> <td>Embedded mitigation to reduce the spatial influence of effects from noise and vibration (ES Chapter 17, Document Reference APP-031, 6.1) and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>OMP (section 6), CEMP (Chapter 10), noise barriers (secured through DCO requirement).</td> </tr> <tr> <td>Embedded mitigation to reduce the spatial influence of effects from dust and emissions (ES Chapter 18, Document Reference APP-031, 6.1) and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>OMP (section 7), CEMP (Chapter 11)</td> </tr> <tr> <td>Embedded mitigation to reduce the spatial influence of effects from surface water pollution (ES Chapters 15 and 16, Document Reference APP-031, 6.1) and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>Drainage Strategy (Document Reference APP-031, 6.1) and CEMP (Chapter 9).</td> </tr> <tr> <td>Embedded mitigation to reduce the spatial influence of benthic sediment mobilisation and re-deposition and ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).</td> <td>CEMP (Chapter 7), Operation of the DML conditions on construction and maintenance dredging</td> </tr> <tr> <td>Sampling of sediments to reduce the spatial influence of potential contaminants during maintenance dredging.</td> <td>Operation of the DML conditions on maintenance dredging.</td> </tr> </tbody> </table>	Mitigation/monitoring measure	Where these measures are secured dDCO/DML	Cowling/shields on site and jetty lighting to ensure the envelope of potentially significant effects accords with the maximum zone of influence assumed in the HRA (see also response to FWQ 1.11.3).	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Mitigation/monitoring measure	Where these measures are secured dDCO/DML																	
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FWQ Question Question: to:			Response:	Highways England Response
			b) The embedded mitigation adopted represents the best possible methods to avoid scope for impact. For avoidance of doubt, the embedded mitigation measures are required to ensure there are no LSE on the two European sites screened into the assessment and by extension the related SSSI designations.	
1.11.1	NE	Please can NE indicate whether additional mitigation measures (above and beyond those proposed in the HRA report) are likely to be required?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment

1.12 HEALTH

FWQ	Question to:	Question:	Response:	Highways England response
1.12.	Health			
1.12.1.	The Applicant	Please provide details of assessments which consider dust released from the proposed processing facilities, and the impacts on public health?	Section 8.96 of the ES details the health assessment of dust and particulate matter from the aggregates processing facilities. The health effects of this facilities during operation were assessed as Direct, Negative, Permanent, and Negligible. The assessment was based on air quality assessment information, in Chapter 18 of the ES.	No comment
1.12.2.	The Applicant	Please provide details of assessments considering effects on health from increased vehicle activity associated with the Proposed Development?	<p>The effects on health from increased vehicle activity associated with the Proposed Development are considered in three sections of the health assessment (Section 8): 'Air Quality' (pages 8-25 to 8-28); 'Transport, Traffic and Connectivity' (pages 8-28 to 8-30); and 'Open Space, and Active Travel incorporating Physical Activity' (pages 8-32 8-34). The health assessment considered the impact of increased road vehicle activity on air quality and also on driver delay, pedestrian delay, pedestrian amenity and road safety, as well as on access to open space and active travel (physical activity). These health assessments are based on information from Section 18 (Air Quality of the ES), Section 13 (Land-side transport) and the Active Travel Survey.</p> <p>The health assessments for vehicle activity are reproduced from the ES below:</p> <p>Air Quality</p> <p>8.95 There are unlikely to be health effects of increased emissions from operational traffic on the new public highway linking Ferry Road to Fort Road or within the wider area. This evaluation is based on the air quality modelling which indicates that there are no exceedances of any AQS objectives with the proposals in place and that the majority of increases in emissions have negligible to minor impact. Thus, the scheme is unlikely to influence respiratory health. The health effect has been rated as Direct, Negative, Permanent and Negligible/Minor.</p> <p>Transport, Traffic and Connectivity</p> <p>8.115 The Land Side Transport assessment suggests that there would be little impact on driver delay associated with the operation of the site and the link road. It is expected that traffic flows on Fort Road (south of the site) and A1089 Ferry Road (south of the link road) would decrease significantly, which could positively influence health by increasing opportunities for active travel in the local population. The health effect is rated as Direct, Positive, Permanent, Minor.</p>	<p>The DMRB does not currently contain a methodology for the assessment of health effects, so it is not possible to comment whether the applicant's assessment approach within the ES meets the requirements of the DMRB.</p> <p>Highways England is content that the individual topic assessments to which the applicant's response refers, namely Air Quality, and Transport, Traffic and Connectivity, and Open Space, and Active Travel incorporating Physical Activity, do meet the requirements of the DMRB assessment of 'People and Communities', with the exception of Road Drainage and the Water Environment. The requirements of the DMRB assessment of 'People and Communities' are elaborated in MPI-57-052017 (attached), which was issued by Highways England in May 2017 to set out how the changes brought about by the 2017 EIA Regulations are to be implemented for Highways England projects,</p> <p>It would be helpful to have clarification as to why the Road Drainage and the Water Environment topic has not been included.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>8.116 The Land Side Transport assessment suggests that there would be little impact on pedestrian delay associated with the operation of the site and the link road. It is expected that traffic flows on Fort Road (south of the site) and A1089 Ferry Road (south of the link road) would decrease significantly, which could positively influence health by increasing opportunities for active travel in the local population. The health effect is rated as Direct, Positive, Permanent, Minor.</p> <p>8.117 The Land Side Transport assessment suggests that there would be little impact on pedestrian amenity associated with the operation of the site and the link road. It is expected that traffic flows on Fort Road (south of the site) and A1089 Ferry Road (south of the link road) would decrease significantly, which could positively influence health by increasing opportunities for active travel in the local population and reducing stress associated with unpleasant pedestrian journeys. The health effect is rated as Direct, Positive, Permanent, Minor.</p> <p>8.118 The Land Side Transport assessment suggests that there would be a beneficial impact on road safety on Fort Road, and negligible impacts on road safety in other nearby roads including the A1089 Ferry Road. Therefore, there could be positive impacts of the scheme on this health determinant. This health effect is rated as Direct, Positive, Permanent, Minor.</p> <p>Open Space and Active Travel incorporating Physical Activity</p> <p>8.136 The Land Side Transport chapter identifies that most of the roads within the study area will experience an increase in total traffic flow of less than 10% against 2020 baseline flows. Fort Road (south of the site) will experience a 25% increase in traffic flow, which includes a 29.6% increase in the % of HGV. These impacts on traffic flow could influence health in the local population by discouraging active travel, physical activity, and the use of open space. The health effect has been assessed as Direct, Negative, Temporary, Minor/Moderate.</p>	

1.13 HISTORIC ENVIRONMENT

FWQ	Question to:	Question:	Response:	Highways England response
1.13.	Historic Environment			
1.13.1.	Applicant and English Heritage (EH)	<p>English Heritage states in its relevant representation [RR-011] that "<i>National policies and best practice guidelines for the conservation and sustainable management of the historic environment are clear as to how heritage values should be assessed and we do not believe that the Tilbury2 proposals have been drawn up in line with these documents</i>":</p> <ul style="list-style-type: none"> a) Would EH state what it sees to be the deficiencies in the current Tilbury 2 proposals, and what EH would expect the Applicant to produce for consistency with best practice guidelines, notably with regard to Tilbury Fort? b) What matters remain to be resolved? c) How does EH envisage its needs being met in the dDCO? 	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.	No comment
1.13.2.	Applicant/ Essex County Council (ECC)	<p>ECC states [RR-018] that it objects to the Proposed Development in principle, due to considerable harm caused to the setting of Tilbury Fort, a Scheduled Monument of international significance, and also that the effectiveness of proposed mitigation/enhancement appears limited, with further clarity, detail and amendments required:</p> <ul style="list-style-type: none"> a) Would the Applicant state its response to ECC's position? b) Would ECC state what in its view should be done to mitigate any harm due to the Proposed Development? 	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.	No comment
1.13.3.	Applicant/ Gravesham Borough Council (GBC)	GBC asserts [RR-019] that the operation of the Proposed Development is likely to have a potential impact upon the settings of the Scheduled Monuments of New Tavern Fort and Gravesend Blockhouse, and the non-	a) The ES describes the designated heritage assets of New Tavern Fort and Gravesend Blockhouse in Table 12.9. Shornemead Fort, although undesignated, has been recognised for its heritage value and is described accordingly in Table 12.10.	No comment.

FWQ	Question to:	Question:	Response:	Highways England response																				
		<p>designated but nationally important Shornemead Fort:</p> <p>a) Would the Applicant state its position on this matter?</p> <p>b) Would GBC state what in its view should be done to mitigate any impact that the Proposed Development will have on these monuments, including lighting and views from Gravesham?</p> <p>c) Does GBC consider the assessment of lighting from the Proposed Development on views to be satisfactory?</p>	<p>The potential impact for each of these heritage assets is described in paragraphs 12.211 – 12.216 and Table 12.13 of the ES and in Section 5.3 of the Built Heritage Assessment.</p> <p>It is considered that the Tilbury2 proposals are likely to have a minor adverse impact upon the setting of New Tavern Fort through further industrialising the northern river bank and partially disrupting the wider crossfire sightlines between New Tavern Fort and Tilbury Fort. This is likely to result in a low level of less than substantial harm to its overall significance.</p> <p>It is considered that the Tilbury 2 proposals are likely to have a minor impact upon the setting of Gravesend Blockhouse, resulting in a negligible impact upon its significance.</p> <p>It is considered that the Proposals are likely to have a potential negligible visual impact upon the wider setting of Shornemead Fort and thus likely to have a neutral impact upon its significance, as the key historic sightlines to Coalhouse Fort and Cliffe Fort will be preserved.</p> <p>Excerpt Table 12.13 from the ES:</p> <table border="1"> <thead> <tr> <th>Receptor</th> <th>Designation</th> <th>Value</th> <th>Magnitude of Effect</th> <th>Likely Significance of Effect</th> </tr> </thead> <tbody> <tr> <td>Gravesend Blockhouse</td> <td>Scheduled Monument</td> <td>High</td> <td>Low Adverse</td> <td>Minor Adverse</td> </tr> <tr> <td>New Tavern Fort, including Milton Chantry</td> <td>Scheduled Monument</td> <td>High</td> <td>Low Adverse</td> <td>Minor to Moderate Adverse</td> </tr> <tr> <td>Shornemead Fort</td> <td>Non-designated</td> <td>High</td> <td>Negligible</td> <td>Neutral</td> </tr> </tbody> </table> <p>c) The Applicant has committed to ongoing discussion regarding mitigation of potential effects through the Statement of Common Ground.</p>	Receptor	Designation	Value	Magnitude of Effect	Likely Significance of Effect	Gravesend Blockhouse	Scheduled Monument	High	Low Adverse	Minor Adverse	New Tavern Fort, including Milton Chantry	Scheduled Monument	High	Low Adverse	Minor to Moderate Adverse	Shornemead Fort	Non-designated	High	Negligible	Neutral	
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Shornemead Fort	Non-designated	High	Negligible	Neutral																				
1.13.4.	Historic England	<p>Historic England asserts in its relevant representation [RR-002] that Tilbury Fort is of exceptional significance and that the impact of the Proposed Development on its setting would cause severe harm to its significance:</p> <p>a) Would Historic England state what in its view should be done by way of mitigation to minimise this harm?</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.</p>	No comment																				
1.13.5.	Applicant/ Thurrock	<p>TC states in its relevant representation [RR-031] that it considers that any impact on the setting of the Tilbury Fort heritage</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.</p>	No comment																				

FWQ	Question to:	Question:	Response:	Highways England response
	Council (TC)	<p>asset from the Proposed Development is an important relevant consideration, and also that the extent to which the proposals can contribute to the policy objective of enhancing public access to the Fort and riverside is a relevant consideration:</p> <ul style="list-style-type: none"> a) Would TC state whether the current mitigation measures are in its view sufficient, and if not what other mitigation measures it would propose? b) Would the Applicant state how the Proposed Development will contribute to the policy objective of enhancing public access to the Fort and riverside? <p>TC also states that it would be unable to support the application, and asserts that at present the Proposed Development (eg the impact of the extended jetty, and the impact of the new infrastructure corridor on movement and lighting closer to the fort) will cause considerable harm to the setting of a Scheduled Monument of international significance, with the proposed mitigation/enhancement measures lacking clarity and detail, and the overall effectiveness of the proposed mitigation/enhancement appearing limited:</p> <ul style="list-style-type: none"> c) Would the Applicant state its position with regard to TC's assertions above? d) Would TC state specifically what further mitigation/enhancement measures it would propose? 		
1.13.6.	Applicant	<p>Would the Applicant review the methodology presented in the ES [APP-031] in light of the publication of <i>Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets</i>, and provide comment on whether this has any bearing on the assessment presented within the ES?</p>	<p>The revised <i>Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets</i> from December 2017 was intended to update the previous edition (2015) through incorporation of relevant advice from the withdrawn document <i>Seeing History in the View</i> (2011), in particular the contribution made by views to heritage significance. As the 2015 edition did, the <i>Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets</i> from December 2017 focuses on the management of change within the setting of heritage assets, in order to aid practitioners with the implementation of national policies and guidance relating to the historic environment found within the NPPF and PPG.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>The guidance contained within the <i>Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets</i> from December 2017 is largely a continuation of the philosophy and approach of the 2011 and 2015 documents and does not present a divergence in either the definition of setting or the way in which it should be assessed. Due to the timing of the Application an assessment of <i>Seeing History in the View</i> (2011) and details of how it informed the heritage assessment was included within the Built Heritage Assessment (ES Appendix 12B) and has therefore informed the preparation of the ES.</p> <p>Given this continuation of philosophy and approach, the revision of <i>Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets</i> from December 2017 has no bearing on the assessment presented within the ES. The assessment stands as presented for the application.</p>	
1.13.7.	Applicant	<p>In response to the Scoping Opinion , Historic England asserts that in accordance with the Historic England <i>Piling and Archaeology</i> guidance document (2007) all piling techniques result in damage to or loss of archaeological sites. ES [APP-031] Chapter 12 does reference this guidance (Paragraph 12.5), but:</p> <p>a) Would the Applicant clarify whether this guidance has been taken into account during the impact assessment of archaeology?</p>	<p>Historic England’s guidance note Piling and Archaeology was originally published in 2007 and then subsequently updated in 2015. It was used to guide the assessment of impact of piling on terrestrial and marine archaeology and is referenced in Technical Appendix 12A Archaeological Statement para 1.4.2-1.4.3 and AS1 Archaeological Desk Based Assessment, section 5 and in Chapter 12 paragraph 12.5-12.6, 12.12-13 and 12.156-160, 12.163 and 12.166.</p> <p>The Historic England guidance advises that new piling impact should be no more than 2% of the site. The worst case number of new structural piles to be used across the marine and terrestrial zone were calculated and the results provided in Technical Appendix 12A AS6 (Technical Note New Terrestrial Piling) and AS7 (Technical Note Berth Frontage Piling). These results were then used to calculate the area of impact (12.6., 12.13, 12.156-12.158, 12.166, Appendix 12A Archaeological Statement para 1.4.2-1.4.3 and AS1 Archaeological Desk Based Assessment section 5)</p> <p>The Historic England guidance recommends that when considering the impact of displacement piles 4x pile area should be considered the zone of disturbance. Consequently the guidance note informed the impact assessment that the likely worst case effect from piling on archaeology would be from displacement piles (12.6, 12.13, Table 12.1, 12.156-12.158, 12.166, Appendix 12A Archaeological Statement para 1.4.2-1.4.3 and AS1 Archaeological Desk Based Assessment section 5).</p> <p>The Historic England guidance suggests that in most cases isolated piles are less damaging to archaeological deposits than groups of piles of three or more. This is considered in chapter 12. 12.12, Table 12.1, 12.159, 12.166, Appendix 12A (AS-019) Archaeological Statement para 1.4.2-1.4.3 and its appendix AS1 Archaeological Desk Based Assessment section 5.</p> <p>The Historic England guidance suggests that piling a waterlogged site could potentially have an indirect effect on the preservation of any archaeological</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			or palaeoenvironmental deposits preserved within the alluvial sequence. This is considered further in Chapter 12 12.163, Appendix 12A Archaeological Statement para 1.4.2 and AS1 Archaeological Desk Based Assessment section 5.	
1.13.8.	Historic England	<p>The Applicant has stated in ES [APP-031] Chapter 12 Table 12.2 that tidal dynamic modelling was undertaken prior to the Scoping Opinion, and the results have now been discussed with Historic England:</p> <p>a) Would Historic England provide comment on the tidal dynamics modelling presented in the baseline assessments?</p>	<p>Historic England requested in their Scoping Opinion Statutory Response 24th April 2017 that PoTLL liaise directly with them regarding the tidal dynamics modelling to be undertaken. Chapter 12 Table 12.4 responded to this by highlighting that the modelling was undertaken prior to receipt of this request from Historic England but the results were discussed with Historic England.</p> <p>The results of the hydrodynamic and sedimentation study (HR Wallingford August 2017) were sent to Historic England on 24th August 2017 and subsequently discussed as part of the review of their PEIR response during the 3rd pre-application consultation meeting on 30th August between the Applicant's archaeological consultant from CgMs Heritage, Historic England and Essex County Council Place Services. Historic England accepted the comments relating to tidal dynamics outlined in the table prepared to support these discussions and consequently included in Appendix 12A Archaeological Statement paragraph 1.4.3, AS 3 Marine Desk Based Assessment para 1.2.5 and 5.2.5 and Chapter 12 12.167 and 12.169-170. This matter will also be agreed with Historic England as the Statement of Common Ground develops during the Examination.</p>	No comment
1.13.9.	Applicant	<p>The built heritage assessment study area is unclear. The ES [APP-031] Chapter 12 (paragraph 12.61 et seq) states that the study area has been established manually through assessment and walkovers, and then states that the study area is 2km from the Order Limits. Scheduled monuments outside the 2km boundary have been included within the assessment in agreement with Historic England:</p> <p>a) Would the Applicant confirm the study area for the built heritage assessment presented in the ES?</p>	<p>The initial study area was determined through a 2 kilometre zone from the Site. This was considered sufficient to capture heritage assets in the preliminary stages to inform the PEIR. This zone was supported in subsequent stages of the assessment process with site walks and interdisciplinary observations made on the ground to inform the final ES. For completeness, further assets were identified and assessed in consultation with relevant stakeholders and subject matter experts in line with best practice guidance, particularly HE GPA3.</p> <p>The Built Heritage Assessment (ES Appendix 12B (Document Reference APP-068)) identifies the process in further detail:</p> <p><i>5.2.3 The identification and assessment of heritage assets was undertaken through a mixture of desk-based research and a suite of site/study area visits. In line with Paragraph 5.12.6 of the NPS, the initial identification of built heritage assets was undertaken through consulting the National Heritage List for England (NHLE), the Essex Historic Environment Record (EHER) and the Kent Historic Environment Record (KHER). The significance and settings of these assets were then assessed through a combination of desk-based research including analysis of the NHLE list descriptions and other relevant reports or documentation, a suite of site visits, professional judgement and in accordance with adopted guidance.</i></p> <p>...</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>5.2.7 In addition, three further heritage assets have been identified beyond this 2km search radius and, given their importance, potential for inter-visibility with the Site and historic connection with Tilbury Fort, have also been included within the assessment.</p> <p>These assets are as follows and their locations are identified in Figure 39:</p> <ul style="list-style-type: none"> • Coalhouse Fort (Scheduled Monument); • Cliffe Fort (Scheduled Monument); and • Shornemead Fort (non-designated heritage asset) <p>5.2.8 Inclusion of these additional heritage assets was agreed in consultation with Historic England (meeting on 23 May 2017).</p>	
1.13.10	Applicant	<p>ES [APP-031] Chapter 12 paragraph 12.64 states that the determination of the importance of heritage/ archaeological assets is based on statutory designation and/or professional judgement. Professional judgement will also be applied during the assessment of heritage significance; including where there is a choice in the significance of effect after the magnitude of effect and sensitivity of receptor are combined (paragraphs 12.72 and 12.76-77):</p> <p>a) Would the Applicant clarify where the significance of effect has been established using professional judgement?</p>	<p>The 'significance' of a heritage asset in NPS and NPPF refers to the 'value' or 'importance' of the asset. The 'value' of the heritage asset subsequently informs the 'significance of effects' of the proposed development on heritage assets when combined with the magnitude of effect.</p> <p>The value of designated heritage assets has been based on statutory designation and professional judgement whilst the value of non-designated heritage assets have been determined by professional judgements informed by baseline investigations set out in the accompanying Technical Appendices. Chapter 12 should therefore be read in conjunction with these appendices.</p> <p>Table 12.8a, b c, Table 12.9 and Table 12.10 outline the value of the known and potential archaeological and built heritage assets based on professional judgement informed by baseline investigations set out in the accompanying Technical Appendices (12A-12C).</p> <p>The magnitude of effect is the predicted change to the existing or future baseline environment. Table 12.6 sets out the matrix for defining the magnitude of effect on the historic environment. This has been adapted from guidance set out in the Design Manual for Roads and Bridges Vol 11 HA2008/07 by professionals with extensive experience in the identification and assessment of development related effects and has been used by POTLL's historic environment consultants as standard on other EIA planning applications.</p> <p>Table 12.11a, b and c, Table 12.12 and Table 12.13 outline the significance of effect of the proposed development on the historic environment and is dependant on the value of the assets as informed by professional judgement and the magnitude of effect. The matrix for this table has been adapted from that set out in the Design Manual for Roads and Bridges Vol 11 HA208/07.</p> <p>Consequently, whilst the significance of effect has been established according to defined matrices these effects have been informed by professional judgement in defining the value of the asset and development related effects.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.13.11	Applicant	<p>a) As stated in ES [APP-031] Chapter 12 paragraph 12.67, the site visits informed the sensitivity and value given to heritage assets and their settings. The site visits were undertaken before demolition of Tilbury B Power Station chimneys:</p> <p>b) Would the Applicant comment on whether the demolition of Tilbury B Power Station chimneys has an effect on the assessment of the sensitivity and value of the heritage assets and their setting and whether or not this was taken into account within the ES?</p>	<p>The preparation of proposals for the Tilbury2 site was informed by an understanding of the sequence of development at the fort and the contributing elements as found today. With respect to FWQ 13.1.11, the understanding of the future baseline is also accounted for in the assessment of impact and decisions have been weighed with the understanding that the Tilbury B power station and its chimneys will no longer exist when construction of the Tilbury 2 port proposal commences.</p> <p>The Built Heritage Assessment explains how the assessment has been undertaken in relation to the preparation of wireline images which remove Tilbury B from view:</p> <p><i>4.22 As the demolition of Tilbury B will occur prior to the commencement of the Proposals, it is within the context of this future baseline that the potential impacts of the Proposals upon the settings and significance of surrounding built heritage assets has been assessed. This is supported by a series of wirelines of the Proposals which are shown in the context of the future baseline, i.e. without Tilbury B</i></p> <p>The Landscape chapter for the ES explains that the removal of the power station is only relevant to Built Heritage and Landscape because of its visual impacts and that other disciplines are not affected by its presence, nor by its absence:</p> <p><i>2.14 Although remaining current structures form part of the existing baseline, the future baseline prior to commencement of the Tilbury2 proposals has been defined on the basis that the Tilbury B power station will have been entirely removed and will not yet have been replaced by any other permanent structure or power station. This approach gives clarity for the purposes of undertaking the ES and, moreover, is a practical way of undertaking the assessment rather than selecting a future baseline with the power station still in the process of being demolished.</i></p> <p><i>2.15 This is only relevant in some cases such as in the landscape and visual assessment and heritage assessment. The approach taken ensures that the immediately proximate baseline that will pertain when the power station is demolished is properly assessed. As per the approach taken by the ES throughout, the situation with the Tilbury B power station entirely demolished represents the 'worst-case' scenario for assessing the landscape and heritage impacts, as a major feature in a semi-industrialised landscape will have been removed. For other environmental topics, the temporary continued existence of the moth-balled power station or its complete demolition will make no difference to the assessment of environmental effects.</i></p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.13.12	Applicant	<p>The assessment criteria have been set out in ES [APP-031] Chapter 12 Tables 12.5-7, including definitions of receptor sensitivity, magnitude of effect, and significance of effect particular to archaeology and cultural heritage:</p> <p>a) Would the Applicant clarify whether the assessment criteria have been informed by guidance documents which have been referenced elsewhere in the chapter?</p>	<p>The Assessment criteria have been informed by guidance documents referenced elsewhere in Chapter 12 and within the supporting Technical Appendices (Appendices 12A – 12C) and should be read in conjunction with these documents. The guidance documents have been used to assist in the assessment of the value of the heritage assets including the contribution of setting and the potential impact of the proposals. They have also been used to ensure that the baseline investigations and subsequent assessment have been undertaken following best practice.</p> <p>The assessment criteria have, for consistency and completeness, been based on the following national policies and best practice guidance:</p> <ul style="list-style-type: none"> • <i>Conservation Principles, Policies and Guidance</i> (English Heritage, April 2008) • <i>Historic Environment Good Practice Advice in Planning</i> • <i>GPA2: Managing Significance in Decision-Taking in the Historic Environment</i> (March 2015) • <i>GPA3: The Setting of Heritage Assets</i> (July 2015) <i>Seeing the History in the View</i> (May 2011) • <i>Standard and Guidance for Historic Environment Desk-Based Assessments</i> (Cifa 1994, revised 2014) • <i>Piling and Archaeology</i> (Historic England 2015) • <i>Preserving Archaeological Remains Appendix 3: Water Environment Assessment Techniques</i> (Historic England 2016) • <i>Scheduled Monuments and Nationally Important Non-Scheduled Monuments</i> (DCMS 2013) • <i>Research and Archaeology revised: A revised Framework for the East of England</i> (EAA 2011) • <i>JNAPC Code of Practise for Seabed Development</i> (JNAPC 2006) • <i>Marine Archaeology Legislation Project</i> (English Heritage 2003) • <i>Environmental Archaeology, A guide to the theory and practise of methods from sampling and recovery to post excavation</i> (Historic England 2011) • <i>Geoarchaeology, Using Earth Sciences to Understand the Archaeological Record</i> (Historic England 2015) 	No comment
1.13.13	Applicant	<p>ES [APP-031] Chapter 12 Tables 12.15a-c and 12.16 do not state which residual effects are applicable to the construction phase, and which are applicable to the operational phase:</p> <p>a) Would the Applicant please clarify?</p>	<p>Table 12.15a-c set out the residual impacts on the known and potential terrestrial and marine archaeological assets following mitigation undertaken before or during the construction phase.</p> <p>There will be no residual impacts on the known and potential terrestrial archaeological assets during the operation phase as all potential effects will have occurred during the construction phase.</p> <p>The residual impacts on the potential marine archaeological assets during the operation phase will be from maintenance dredging and will be neutral following the implementation of the measures set out in the marine WSI (AS-30) secured through the DML within the dDCO (Document Reference PoTLL/T2/EX/35, 3.1).</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response								
			Table 12.16 identifies residual effects during the operational phase in that context.									
1.13.14	Applicant	<p>ES [APP-031] Chapter 12 Table 12.2 states the realistic worst case scenario is that the construction period will be 22 months, while the Construction Environmental Management Plan (CEMP) which secures this element of the Proposed Development inconsistently states that the construction period will be 24 months and 22 months:</p> <p>a) Would the Applicant clarify the duration of the construction period?</p>	<p>A diagram which sets out the estimated period of construction of the various elements of the development formed part of the application at Appendix N of the Transport Assessment [APP-072] and is attached in answer to this question in order to assist the Panel. This shows that if the Order is made, development would commence on 1/02/2019. The final completion of the site is programmed for 19/02/2021, a period of 24 months and two weeks.</p> <p>A full review of the application documentation has been undertaken and it is accepted by PoTLL that in some cases the construction period is quoted as 22 months and in others 24 months. In each case where the period of 22 months has been quoted, it is considered that the difference of 2 months makes no difference to the significance of the environmental effect being assessed, including in respect of Heritage impacts (Chapter 12) identified by the Panel.</p>	No comment								
1.13.15	Applicant	<p>The retained and proposed vegetation will be secured through Requirement 11 (Schedule 2, Part 1) of the dDCO [APP-016], within the Landscape and Ecological Management Plan (LEMP, Appendix 10.P of the ES [APP-061]), but Figure 1 within the LEMP appears to have been redacted; therefore the vegetation to be retained and proposed as part of the dDCO is unclear:</p> <p>a) Would the Applicant clarify the vegetation to be retained and proposed as part of the dDCO?</p>	<p>Figure 1 of the Landscape and Ecological Management Plan (LEMP, Appendix 10.P of the ES [APP-061]; now PoTLL/T2/EX/42 and PoTLL/T2/EX/43) was redacted (at the request of PINS) in order to obscure the precise location of the proposed artificial badger sett. No other information has been deliberately redacted.</p> <p>However, it is recognised that due to the limitations of showing a large site on a single page, adjacent linear features may not be clearly visible. As such, some clarification is provided in the response to FWQ 1.2.10, and under a) below. Further clarification may also be gained by reference to figures presented within the ES Drainage Strategy (APP-090, Document Reference 6.2, 16E).</p> <p>a) The broad areas of vegetation to be retained and proposed as part of the DCO is defined in Table 1 below and indicated in the attached Figure 10.15 within Appendix A.</p> <p>Table 1. Vegetation lost, retained and proposed, by reference to Figure Reference 10.15</p> <table border="1"> <thead> <tr> <th>Description</th> <th>Area in hectares</th> </tr> </thead> <tbody> <tr> <td>Vegetation Retained</td> <td>22.4</td> </tr> <tr> <td>Vegetation Lost</td> <td>27.2</td> </tr> <tr> <td>Vegetation Proposed</td> <td>4.3</td> </tr> </tbody> </table> <p>Note that vegetation has been defined as that which performs a landscape and visual function, and therefore excludes skeletal vegetation on manmade substrates (for details of which, refer to the response to FWQ 1.2.10 on 'Overall Habitat Loss'). As a result, summing together the figures presented in the response to FWQ 1.2.10 will not necessarily arrive at the same totals</p>	Description	Area in hectares	Vegetation Retained	22.4	Vegetation Lost	27.2	Vegetation Proposed	4.3	No comment
Description	Area in hectares											
Vegetation Retained	22.4											
Vegetation Lost	27.2											
Vegetation Proposed	4.3											

FWQ	Question to:	Question:	Response:	Highways England response
			as presented here, although clearly the two presentations are broadly comparable.	
1.13.16	Applicant	<p>It is unclear if the effects of the construction compound and temporary welfare facilities have been considered within the ES [APP-031] Chapter 12 <i>Archaeology and Cultural Heritage</i> in terms of setting:</p> <p>a) Would the Applicant clarify whether the effects of the construction compound and temporary welfare facilities have been considered within the Archaeology and Cultural Heritage Chapter of the ES?</p>	<p>a) The potential effects of the proposed welfare facilities and construction compound have been considered in regard to noise, lighting and visual effects as part of the wider scenario during the temporary construction phase in paras 12.173-12.188. Para 12.174 describes the potential effects, including 'other built development' and 'site access':</p> <p><i>'Potential effects during the construction phase are likely to be associated with: site preparation, including clearance, demolition, crushing, stockpiling, site access, river wall works, dredging and earthworks; and site development, including the phased construction of roads, new railway infrastructure, bridge crossing, aggregate processing related structures and silo, jetty modification/construction and other built development.'</i></p> <p>b) Possible effects of the construction compound and temporary welfare facilities on cultural heritage would most likely result from visual effects on the setting of heritage assets, which were considered as part of the consideration of construction impacts in the ES.</p> <p>The need to mitigate potential visual effects of the construction phase have been considered within the Construction Environmental Management Plan (PoTLL/T2/EX/38). As stated in the Construction Environmental Management Plan, <i>'The following measures should be undertaken by the contractor in constructing the proposals to reduce the impacts to visual amenity of local residents:</i></p> <ul style="list-style-type: none"> • <i>Appropriate screening should be installed at all times, particularly on the infrastructure corridor. This should include the retention of the existing Monterrey Pine trees on the western boundary where design permits.</i> • <i>The works should be phased so as to retain as much of the vegetation and soil mounds that exist on the northern part of the Tilbury2 site as is practicable during construction.</i> • <i>Where operationally practicable, taller CMAT concrete and asphalt related plant and buildings should be constructed within the southern half of the areas designated for these uses.</i> • <i>Where operationally practicable, retain as many existing mature trees and scrub as practicable within the designated general storage areas, and land to the south of the proposed general storage areas.</i> • <i>Unobtrusive construction lighting should be used in construction where it is practicable to do so, including at the jetty. Lighting equipment that is used must be designed in accordance with Institute of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light GN01:2011.'</i> <p>Compliance with the Construction Environmental Management Plan is secured by a requirement in Schedule 2 to the dDCO (Document Reference APP-016).</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>In addition, the Landscape chapter of the Environmental Statement summarises the description of effects on visual amenity arising from construction and identifies mitigation measures that have been adopted in the proposals as well as additional primary and secondary landscape mitigation measures. Maintenance and management of landscape mitigation measures are secured through the Landscape and Ecological Management Plan (PoTLL/T2/EX/42), compliance with which is secured through the dDCO.</p>	
1.13.17	Applicant	<p>All committed developments (as present in ES [APP-031] Chapter 2 Table 2.2; Chapter 13) have been assessed for cumulative impacts on archaeology and built heritage, with the exception of effects on Land Adjacent Tilbury Power Station Fort Road (re-profiling works):</p> <p>a) Would the Applicant provide justification for the exclusion of Land Adjacent Tilbury Power Station Fort Road from the assessment of cumulative effects on archaeology and built heritage?</p>	<p>The cumulative effect of planning application 17/00412/FUL Land Adjacent to Tilbury Power Station Fort Road on built heritage is included in paragraph 12.244 of Chapter 12. It is referenced as the Ash Fields landfill site and is not considered to have any cumulative impact on the settings of surrounding built heritage assets.</p> <p>The cumulative effect of Land Adjacent Tilbury Power Station Fort Road on archaeology is covered in paragraph 12.243 of Chapter 12 which is a statement which incorporates all committed developments and considers that the implementation of the proposed mitigation measures for Tilbury2 would remove the potential for any adverse cumulative effect on the archaeological resource.</p>	No comment
1.13.18	Applicant	<p>Historic England raised concern in its statutory response to the PEIR (Table 12.4), that the Tilbury Energy Centre (TEC) proposed redevelopment project did not appear to be included within the cumulative effects assessment. The Applicant has provided justification for this approach in ES Chapter 12 paragraphs 12.246-247 on the basis that no details of the proposal are yet available. No Scoping Report has yet been received from the TEC which puts it in Tier 2. However:</p> <p>a) Would the Applicant comment on whether it intends to undertake a cumulative assessment of the Proposed Development with the Tilbury Energy Centre, proportionate to the information that is available to the Applicant, such that the Applicant can then demonstrate that it has at least considered the matter?</p>	<p>PoTLL remain of the view that it should not be for the Environmental Assessment of Tilbury2 to consider the cumulative effect with TEC. PoTLL have set out their position and reasoning in this regard in a number of documents, most recently in their Response to Relevant Representations document (Document Reference PoTLL/T2/EX/32) and in the Summary of the Port of Tilbury London Limited's Submissions to the Preliminary Meeting (Document Reference PoTLL/Tilbury2/EX31). It must rightly be for RWE, the promoters of TEC to undertake the assessment of the TEC (once it has reached a stage where there is enough certainty and relevant information) with Tilbury2.</p> <p>However, in view of the Panel's questions, PoTLL has prepared this 'high level' Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to the above view. This is attached as Appendix C. It is based on information published by RWE as part of their non-statutory consultation. Even based on this limited information, the assessment within this document is high level and includes assumptions and in some instances speculation as to the nature and content of the TEC proposals, mitigation and hence the assessed cumulative effects.</p>	No comment
1.13.19	Applicant	<p>ES [APP-031] Chapter 12 paragraph 12.142 states that the CEMP and Deemed Marine Licence (DML) "contains (or will facilitate) construction restrictions which</p>	<p>a) The CEMP and Deemed Marine Licence (DML) define standards for future construction work to adhere to. Measures are not included specifically in relation to archaeology and cultural heritage within the CEMP as these measures are captured in the Landscape and Visual Chapter of the CEMP and</p>	Highways England is content that the outline Written Scheme of Investigation and CEMP are appropriate for the level of known specific impacts on buried

FWQ	Question to:	Question:	Response:	Highways England response
		<p><i>will indirectly minimise impacts on the archaeological resource”:</i></p> <p>a) Would the Applicant clarify what specific construction restrictions have been proposed which would indirectly minimise effects on archaeology and cultural heritage?</p> <p>b) Would the Applicant quantify how effective such techniques would be?</p>	<p>the Terrestrial and Marine Archaeological Written Schemes of Investigation (Document References PoTLL/T2/EX/55 and AS-030).</p> <p>Construction restrictions in relation to Terrestrial and Marine Archaeology are secured through the Terrestrial and Marine Written Scheme of Investigations. These restrictions are to ensure an appropriate level of archaeological mitigation measures are implemented ahead of construction works commencing and any subsequent mitigation measures required are undertaken ahead of or during construction works following a scope of work and method statements approved by Historic England and Essex County Council Place Services in their role as archaeological advisor to Thurrock DC. No construction work can commence until these mitigation measures have been implemented in accordance with the Terrestrial and Marine Archaeological WSIs.</p> <p>In relation to Marine Archaeology the Marine Archaeological WSI highlights the potential use of Archaeological Exclusion Zones (AEZ) if initial investigations identify archaeological assets of national importance. AEZs would allow for important archaeological remains to be preserved in situ and as such these areas would be out of bounds to dredging and to anchored Jack Up barges and Spud Leg barges. If AEZs are not feasible then the full recovery and recording of the asset would be required ahead of construction in accordance with the WSI.</p> <p>As set out in the CEMP (paragraph 10.2), prior to the commencement of any piling activities (either terrestrial or marine), if deemed necessary in consultation with English Heritage and Historic England, the Contractor will develop and implement a monitoring and mitigation regime to monitor and mitigate the vibration effects of piling on built heritage assets, in consultation with English Heritage and Historic England.</p> <p>b) Without implementing the above measures there will be a potential low to high adverse impact on the archaeological and built heritage resource. By implementing these minimisation measures there will be a major reduction to the potential adverse development impact.</p>	<p>remains. The documents clearly outline the requirement for a programme of evaluation to understand the buried resource and additional detailed method statements to address specific areas of impact on the scheme where necessary. The requirement for consultation with Historic England and Essex County Council is clearly outlined.</p> <p>Highways England is content that the CEMP includes measures to mitigate adverse effects on cultural heritage assets by reducing noise, dust, visual and lighting effects.</p>
1.13.20	Applicant	<p>According to ES [APP-031] Chapter 12 paragraphs 12.151, 12.181 and 12.229, the contractor will develop and implement a monitoring and mitigation regime for vibration effects of piling on historic assets, in consultation with English Heritage and Historic England:</p> <p>a) Would the Applicant state how this will be secured through the dDCO?</p> <p>b) Would the Applicant state whether there are any details available for</p>	<p>a) The Monitoring and Mitigation regime for the construction phase was secured as part of the application by its inclusion in paragraph 10.2 of the Construction Environmental Management Plan (Document Reference PoTLL/T2/EX/38), which is itself secured by a requirement in Schedule 2 to the dDCO.</p> <p>b) As set out in that paragraph, the Monitoring and Mitigation regime will be developed in detail in consultation with Historic England and English Heritage, once the details of piling methodology are known.</p> <p>c) The scheme would allow for piling techniques to be considered by all parties and (if after monitoring and pursuant to the agreed scheme it is</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>the content of the monitoring and mitigation regime?</p> <p>c) Will piling activities cease until further notice if vibration effects occur?</p>	<p>determined to be necessary), adjusted appropriately to ensure the protection of heritage assets.</p>	
1.13.21	Applicant	<p>According to ES [APP-031] Chapter 12 paragraphs 12.216 et seq, the likely significant effect on Tilbury Fort scheduled monument, was moderate to major adverse pre mitigation, and reduced to moderate adverse post mitigation. Officers Barracks Tilbury Fort Grade II* listed building was moderate adverse both pre and post mitigation:</p> <p>a) Would the Applicant justify why no further mitigation measures were proposed to reduce the effects on both Tilbury Fort scheduled monument and Officers Barracks Tilbury Fort Grade II* list building?</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.</p>	No comment
1.13.22	Applicant	<p>ES [APP-031] Chapter 12 paragraphs 12.228-12.236, detail the potential further mitigation or compensation measures for built heritage impacts, on which the Applicant is continuing to engage key stakeholders in relation to mitigation measures:</p> <p>a) Since all mitigation measures need to be secured and discussions are on-going, would the Applicant clarify how any resulting mitigation measures would be secured within the dDCO?</p> <p>b) How are these mitigation measures assessed within the ES? Note: this also applies to all other areas that are subject to potential further mitigation or compensation measures;</p> <p>c) How is the Section 106 agreement cited at ES Chapter 12 paragraph 12.236 as the means of securing any heritage enhancements secured in the dDCO?</p>	<p>a) The mitigation measures set out in paragraphs 12.228 – 12.232 are already secured through the dDCO and have been taken into account in the ES assessment, as described in (b) below. This has led to the built heritage assessment concluding no significant effects to built heritage assets arising from Tilbury2. PoTLL continues to discuss the details of these measures with stakeholders (as noted in ES paragraph 12.233 and as can be seen in the draft Statements of Common Ground submitted at Deadline 1 (PoTLL/T2/EX/54), and will update the dDCO as required to reflect any amendments or additions to these measures.</p> <p>b) The mitigation measures are secured in the dDCO and assessed within the ES as follows:</p> <ul style="list-style-type: none"> • Retention of mature Monterrey Pine trees located at the western boundary to reduce and potentially screen low level views of the RoRo container operations from Tilbury Fort, thus potentially reducing the impact of an increased industrial character without altering the existing landscape. This is secured through the Landscape and Ecological Management Plan (PoTLL/T2/EX/42), compliance with which is secured by a dDCO requirement. • Colour proposed 100m high silo and other taller buildings and built structures light grey to potentially reduce the visual impacts of these elements on the setting of Tilbury Fort and in views from heritage assets to south of the river in Gravesend. Taller structures are likely to be seen against the sky and lighter colouration would reduce their presence. To secure this, details of the surface treatment of infrastructure corridor, 	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>fencing the silo and the CMAT processing facilities are required by the dDCO to be approved by Thurrock Council, in consultation with Historic England and Gravesham Borough Council.</p> <ul style="list-style-type: none"> • Provide low key lighting, where appropriate, and health and safety allows, to illuminate waterside elements of the proposals to help reduce impacts on the setting of Tilbury Fort and heritage assets within Gravesend. This will be secured through the DCO requirement for a detailed lighting strategy to be approved by Thurrock Council, in consultation with Historic England, and Gravesham Borough Council, to be in general accordance with the Preliminary Lighting Strategy and Impact Assessment (Document Reference 6.2 9.J). <p>c) Paragraphs 12.234-12.236 of the ES refer to enhancements, rather than mitigation measures. In respect of these measures, it can be seen in the Statements of Common Ground with Historic England, English Heritage, and Gravesham Borough Council ((PoTLL/T2/EX/54) that the details of these measures are still being negotiated but will, in any event, be secured through a section 106 agreement with Thurrock and Gravesham Councils (as appropriate), rather than through the dDCO.</p>	
1.13.23	Applicant	<p>ES [APP-031] Chapter 12 paragraphs 12.240-242 state that additional mitigation measures 'could' help to reduce potential visual impacts on designated assets - specifically surface treatments and colour of elements, design, low key lighting:</p> <ol style="list-style-type: none"> Would the Applicant confirm whether additional mitigation measures are to be implemented? If so, would the Applicant clarify what these would be and how they would be secured in the dDCO? 	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.</p>	No comment

1.14 PLANNING POLICY

FWQ	Question to:	Question:	Response:	Highways England response
1.14.	Planning Policy			
1.14.1.	Applicant	<p>The Applicant, in its Planning Policy Compliance Statement [APP-032] considers the Proposed Development against the policy requirements contained in the National Policy Statement for Ports. Please could the Applicant explain whether, in its view, the Proposed Development should also be considered against the policy requirements within the National Policy Statement for National Networks?</p>	<p>Pursuant to section 104 of the PA2008, in considering a DCO, the Secretary of State must have regard to any relevant National Policy Statements (NPS) that have effect and decide the application in accordance with such statements (subject to certain exclusions). For the ports sector, the relevant NPS is the National Policy Statement for Ports, DfT (2012). Given the nature of the NSIP and thresholds of port development are met and exceeded in this case, this NPS is clearly applicable.</p> <p>In respect of highways and railway infrastructure projects, the PA2008 (as amended by the Highway and Railway (Nationally Significant Infrastructure Project) Order 2013) describes projects of this type that fall to be considered as nationally significant.</p> <p>Section 14 of the PA2008 defines what is an NSIP and in the case of a highway this is covered under section 14(h). For highways to fall under section 14(f), a number of criteria are set out in section 22 PA08. In each case, to be nationally significant, the highway in question must be a highway for which the Secretary of State or a strategic highways company⁷ is the highway authority. The proposed highway that forms part of the Tilbury2 proposals will be adopted by the Local Highway Authority (Thurrock Council) and therefore the highway does not fall to be considered as an NSIP.</p> <p>In respect of the railway infrastructure this is covered by section 14(k). Section 25 goes on to set out criteria for rail infrastructure to fall with 14(k). Under section 25 (ba) the railway will only fall under 14(k) if when constructed it will include a stretch of track that is a continuous length of more than 2km.</p> <p>The length of railway proposed by PoTLL that lies outside of the Tilbury2 site (within which it is ancillary to the operation of the land itself as a Port) is approximately 1.2km.</p> <p>As such, even without considering the other qualifying criteria, neither the road nor rail proposals that form part of the application are considered to form part of an NSIP in their own right. Moreover, the Secretary of State has made no direction in this regard under Section 35 of PA2008 to the effect that the road and rail proposals should be considered nationally significant in their own right. That said, Section 104 (d) of the PA2008 allows the Panel to consider any other matters that it thinks are both</p>	<p>Highways England considers that the National Policy Statement for National Networks, Department for Transport Circular 02/2013 and the National Planning Policy Framework are all material to consideration of the Proposed Development.</p>

⁷ ""strategic highways company" means a company for the time being appointed under Part 1 of the Infrastructure Act 2015."

FWQ	Question to:	Question:	Response:	Highways England response
			<p>important and relevant to its decision and the NPS on National Networks could fall into this category of consideration. In this regard PoTLL would highlight the guidance of the NPS for National Networks at para. 2.8 that indicates</p> <p><i>"There is also a need to improve the integration between the transport modes, including the linkages to ports and airports. Improved integration can reduce end-to-end journey times and provide users of the networks with a wider range of transport choices."</i></p> <p>This is relevant to the infrastructure elements of the Tilbury2 proposal, which are advanced on the basis of ensuring maximum integration between the use of the River Thames and the road and rail networks that serve the proposed port extension.</p>	
1.14.2.	Applicant and Thurrock Council	The National Policy Statement for Ports discusses bulk and general marine traffic, where the threshold for a port application to be a Nationally Significant Infrastructure Project (NSIP) is "5 million tonnes for other (bulk and general) traffic". However the NPS for Ports is silent on the need for bulk aggregate facilities. To what extent should the proposals for the Construction Materials and Aggregate Terminal (CMAT) be considered against the policies for minerals in the National Planning Policy Framework (NPPF) and its associated guidance?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.14.3.	Applicant	The Planning Policy Compliance Statement [APP-032] does not appear to mention the minerals policies within the NPPF, or the supporting guidance on minerals. Nor do these appear to be considered elsewhere in the ES or supporting documents. Why is this?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.14.4.	Thurrock Council, Essex County Council and Kent County Council	Please can the host and neighbouring councils confirm whether they prepare and publish Annual Aggregate Assessments, and if so, how long have these been prepared for and please provide either the web-links to the documents, or provide the documents as PDFs to the Examination?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.14.5.	Crown Estate Commissioners	Please can the Crown Estate Commissioners provide any information	The applicant offers no response to this question as it is directed at an Interested Party.	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		that is in the public domain that identifies the amounts of marine dredged aggregates that have been landed annually at wharves in Essex, Thurrock, North Kent, Medway and East London in recent years, together with an explanation of any changes or trends that are reflected in the data?		
1.14.6.	Thurrock Council, Essex County Council	Are you participants in the East of England Regional Aggregate Working Party (RAWP)? If so, please could you provide any annual reports or other relevant documents prepared by the RAWP that provide information on annual volumes of marine dredged aggregates, crushed rock and recycled/secondary aggregates that are landed at wharves in Thurrock and Essex together with any RAWP documents may indicate a need for new or replacement aggregate wharves on the Thames?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.14.7.	Kent County Council	Do you participate in the South East England RAWP? If so, please could you provide any relevant RAWP documents that provide information on volumes of marine dredged aggregates, crushed rock and recycled/secondary aggregates that are landed at Kent wharves together with any RAWP documents that may indicate a need for a new or replacement aggregate wharf on the Thames?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.14.8.	Applicant	Please can the Applicant explain how the Ro-Ro facilities within the Proposed Development would interact with and supplement or replace the existing Ro-Ro port facilities? Paragraph 1.18 of the Applicant's Errata version of the Outline Business Case [AS-016] explains that there is a limitation on existing Ro-Ro sailings due to restricted operational times because of the additional sailing time necessary through the lock, together with a restriction on the size of ships (2,400 lane metres). Would the existing and new Ro-Ro facilities be operated in tandem or would the new facilities for Ro-Ro replace some or all of the existing facilities?	The RoRo facilities within the proposed development would replace those within the existing dock. This gives the customer the ability to expand into a larger landside terminal with direct river access. It also gives them the ability to handle two vessels at the same time as well as providing significant operational efficiencies and ensuring there are no restrictions to the operation of the lock, saving at least two hours per call. The new berth will also cater for larger vessels as the operation expands. The existing facilities in dock will be turned over to other port uses.	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.14.9.	London Gateway Port Limited	Please provide details of your operational port, including a location plan and a link to the relevant planning permission(s) and a summary of the types of operations/shipping that London Gateway Port is used for?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.14.10.	London Gateway Port Limited	Please can this IP provide summary details concerning any potential overlap in its market and current operations, or competition with, the Proposed Development?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.14.11.	Applicant	Please can the Applicant provide a copy of the Project Appraisal Framework (PAF) for Ports, Department of Transport 2003, as this is apparently out of print and not available on-line.	<p>Paragraph 2.32 of the Outline Business Case (Document Reference 7.1/APP-166) makes reference to the Project Appraisal Framework for Ports 2003 (the PAF for ports). The PAF for Ports was published by the Department for Transport in 2003. It has been referenced as part of the OBC because the National Policy Statement for Ports makes direct reference to the document.</p> <p>The PAF for ports sets out the approach to project appraisal for port-related developments. It is a non-statutory advice document and is intended to guide and support procedural requirements for ports, thereby ensuring consistency in the appraisal process.</p> <p>The PAF is out of print, and no longer available online. It is however available for viewing at the British Library. Interested parties should therefore arrange to view and borrow the document directly from the library, as copyright limitations prevent it being copied and circulated.</p>	No comment
1.14.12.	Thurrock Council	What is the view of the host authority regarding the need for 1.32ha of Green Belt land for the Proposed Development? Does Thurrock Council consider this Proposed Development to be "very special circumstances" (NPS for Ports, paragraph 5.13.10)?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.14.13.	Thurrock Council	Are there any proposals to change the boundaries of the Green Belt in the vicinity of the Proposed Development?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.14.14.	Thurrock Council, Gravesham Council	Does the application conflict with any proposals or policies in any development plan documents? If so, please provide a summary and a link to the relevant policy and/or proposals map?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.14.15.	Applicant	The NPS for Ports in paragraph 1.2.1 states that it applies, "...wherever relevant, to associated development, such as road and rail links, for which consent is sought alongside that for the principal	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p><i>development. Non-ports associated development should be considered on a case-by-case basis, using appropriate assessment methods consistent with this NPS and with applicable official guidance.</i>"</p> <p>How does the Applicant justify the breadth of associated development included within Works 2 to 12 of Schedule 1 of the dDCO, especially Works 2 and 8, relating to the various aspects of the CMAT?</p>		
1.14.16.	Applicant	<p>How does the breadth of Associated Development provided in Works 2 to 8 (especially that in Works 8D (iii)) of Schedule 1 of the dDCO) comply with paragraph 5 of the DCLG guidance on associated development applications for major infrastructure projects? In particular please address how:-</p> <ul style="list-style-type: none"> a) the CMAT facilities proposed either support the construction or operation of the principal development, or help address its impacts; b) the CMAT facilities are not an aim in themselves, but are subordinate to the principal development; and whether c) the CMAT facilities are only necessary as a source of additional revenue to the Applicant, in order to cross-subsidise the principal development? 	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.</p>	No comment
1.14.17.	Applicant	<p>Paragraph 6 of 'Planning Act 2008: associated development applications for major infrastructure projects' (Published by Department for Communities and Local Government April 2013) explains that associated development will, in most cases, be typical of types of development brought forward alongside the relevant types of principal development or of a kind that is usually necessary to support a particular type of project, for example (where consistent with the core principles above), a grid connection for a commercial power station. Can the Applicant review previous NSIP applications for ports and</p>	<p>The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>provide details identifying whether any of the previous port NSIP applications have had any or all of the following accepted as associated development in a made DCO:-</p> <ul style="list-style-type: none"> • Aggregate processing and covered storage; • silo(s) for the storage of cementitious material; • permanent asphalt plant; • permanent concrete plant; or • permanent concrete product manufacturing plant? 		
1.14.18.	Thurrock Council	What is the host authority's view on the inclusion of these CMAT processing facilities as associated development within the dDCO?	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix B: CMAT Position Statement'.	No comment
1.14.19.	Applicant, English Heritage Trust and Historic England	<p>The NPS for Ports, paragraph 3.5.2 explains that consideration of applications for ports should start with a presumption in favour of granting consent to applications for port developments. That presumption applies unless any more specific and relevant policies set out in this or another NPS clearly indicate that consent should be refused.</p> <p>In section 5.12 it goes on to explain that the decision maker should "<i>seek to identify and assess the significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, taking account of...</i>" and then lists various sources of information, including the Applicant's own assessment. In paragraph 5.12.12 -5.12.13 it explains that significance can be harmed or lost through development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of designated assets of the highest significance (including Scheduled Monuments) should be wholly exceptional.</p> <p>a) Please could the Applicant confirm whether, in its view, the Proposed Development would lead to "<i>substantial harm</i>" to Tilbury Fort</p>	The Applicant's response to this FWQ is outlined in the attached appendix; 'Appendix D: Tilbury Fort Paper'.	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>Scheduled Monument, giving reasons?</p> <p>b) Please can English Heritage Trust and Historic England confirm whether, in their view, the Proposed Development would lead to "substantial harm" to the Scheduled Monument, giving reasons?</p>		
1.14.20.	Applicant	<p>In the event that you consider that "substantial harm" would occur to Tilbury Fort, please identify what "substantial public benefits" would occur that would, in your view, outweigh that harm?</p>		No comment
1.14.21.	Applicant	<p>What is the Agricultural Land Classification (ALC) of the parts of the Order Limits that are currently fields? Please provide an ALC map of these areas that would be lost to the development.</p>	<p>By reference to the National Policy Statement (NPS) for Ports, paragraph 5.13.8: "<i>Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5), except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality, taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.</i>"</p> <p>The ALC of the parts of the Order Limits that are currently fields is in the main defined as 'Other land primarily in non-agricultural use', by reference to the attached.</p> <p>ALC Grade 3 level land (i.e. good to moderate) is shown for the parts of the Order Limits at the western end of the infrastructure corridor, i.e. parts of the Order Limits which are mainly encompassed by the Fortland Distribution Park (i.e. 'previously developed land', and not 'currently fields'). It is possible that a further sliver of Grade 3 level land also extends into the Tilbury Marshes, land which is currently fields but with <i>de facto</i> use as common land, rather than agricultural fields.</p> <p>A further sliver of ALC Grade 3 level land is shown extending alongside the railway line on the attached map, within land which would be considered 'previously developed land', and not 'currently fields'. The mapped ALC Grade 3 level land also appears to encompass the northern portion of the Green Belt land. This could arguably be considered as 'currently fields' although it does include an engineered structure, in the form of the existing 'RWE compensation pond'.</p> <p>It should also be noted that the mapped extents of ALC are high-level and low-resolution, and therefore it is not possible to accurately determine the precise extent of coverage. Furthermore, no subdivision of ALC Grade 3 level data is given in the information made available from Natural England, and thus it is not clear whether the green shading represents</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>Grade 3a or 3b land. In summary, and on the basis of the information available therefore, there are no known impacts on the best and most versatile agricultural land (i.e. on land in Grades 1, 2, and land specifically identified as Grade 3a). There may be impacts on broader Grade 3 land (including land which has not been subdivided into Grade 3a and 3b) but much of this would be considered 'previously developed land', and not 'currently fields'.</p> <p>A map of these areas is provided in Figure FWQ 1.14.21 (see Appendix A attached), which is based on information provided by Natural England.</p>	
1.14.22.	Applicant	<p>The NPS for Ports in paragraph 5.10.9 states that, "<i>The decision maker should be satisfied that the proposals will meet the following aims:-</i></p> <ul style="list-style-type: none"> • <i>Avoid significant impacts on the environment, human health and quality of life from noise;</i> • <i>Mitigate and minimise other adverse impacts on health and quality of life from noise; and</i> • <i>Where possible, contribute to improvements to health and quality of life through the effective management and control of noise".</i> <p>Given the conclusions of the ES chapter on noise, how does the Applicant consider that the Proposed Development accords with this part of the NPS?</p>	<p>The noise chapter of the ES assesses the impacts for significance, both in terms of EIA and in terms of policy. The NPS for Ports uses the same aims as the Noise Policy Statement for England. The noise chapter concludes that the residual impacts from the Tilbury2 proposals, once embedded and further mitigation has been taken into account, would be as follows (paragraph 17.229 – 17.231) for EIA significance:</p> <p><i>"17.229 Predicted operational noise impacts on nearby residential receptors from the operation of plant onsite would result in moderate/major significant effects, particularly in the night time. Once further mitigation is included i.e. glazing and/or mechanical ventilation is included for dwellings with high sensitivity to noise this would result in a residual minor significant effect, as per Table 17.14, which is considered to be not significant in EIA terms.</i></p> <p><i>17.230 Impacts from the permanent movement of operational traffic would remain negligible to minor for nearby residential receptors and therefore it is considered to be not significant in EIA terms.</i></p> <p><i>17.231 The proposal transport corridor noise impacts on nearby residential receptors from the road and rail link will result in negligible significance and therefore it is considered to be not significant in EIA terms".</i></p> <p>For policy significance the assessment considers if noise levels are above or below thresholds for significant adverse effects (SOAEL), which is described in Paragraph 17.92. If levels are below SOAEL impacts are assessed for significance in EIA terms by considering if there is a major impact. The assessment concludes for operational noise</p> <p><i>"17.170 Table 17.38 shows that the noise from the CMAT operations does not exceed SOAEL."</i></p> <p>The assessment in the following paragraphs considers receptors in Gravesend and concludes that night-time CMAT activities may give rise to a major and significant impact at receptors in Clarendon Road, but limited to receptors with a direct view of the port. Impacts during the day at all receptors and night-time impacts at all other receptors are not significant.</p>	<p>Highways England is content that the assessment of noise effects within the ES has been carried out in accordance with the requirements of the DMRB in compliance with the policy in Department for Transport Circular 02/2013.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p><i>"17.179 Table 17.39 shows that the noise levels from the RoRo operations do not exceed SOAEL."</i></p> <p>The assessment in the following paragraphs considers impacts from RoRo activities are not significant at all times of day at all receptors.</p> <p>In respect of impacts from the road link (Paragraph 17.188), general road traffic noise (Paragraph 17.194) and the rail link (Paragraph 17.201), impacts are shown not to be significant as levels are below the threshold for significant effects:</p> <p><i>"17.188 Levels at all receptors are below SOAEL indicating that these impacts are not significant, and the adverse effects are considered to be negligible."</i></p> <p><i>17.194 There are approximately 50 properties with 50m of the section of the A1089 with moderate increase in the short term and the minor increase in the long term. Given the flow on this road noise levels are unlikely to exceed SOAEL.</i></p> <p><i>17.201 Levels at all receptors are below SOAEL indicating that these impacts are not significant, and the adverse effects are considered to be negligible."</i></p> <p>All of the noise mitigation measures proposed by PoTLL will ensure that significant impacts are avoided and that adverse impacts are minimised. This ensures that the proposals comply with the NPS for Ports.</p> <p>In particular, the proposed scheme of noise monitoring and receptor based noise mitigation is important in this regard. It is designed to allow for the actual noise impacts of the proposals to be re-assessed when more is known about the tenant's requirements. This can be compared with the ES noise assessment which adopts a likely worst case scenario with all of the component parts of the development operational 24/7. The scheme is set out in the Draft DCO under requirement 10 "Noise Monitoring and Mitigation", and must be agreed with Thurrock and Gravesham Councils prior to opening of the port. On this basis PoTLL consider that the proposals will avoid significant impacts on the environment, human health and quality of life from noise and mitigate and minimise other adverse impacts on health and quality of life from noise, in accordance with the NPS.</p>	
1.14.23.	MMO	Please can you provide details of the likely timescales for the preparation of the relevant marine plan for the Tilbury area? Is there likely to be a draft marine plan during the Examination phase of Tilbury2?	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.14.24.	Thurrock Council	What is the status of the Tilbury Development Framework, referred to in	The applicant offers no response to this question as it is directed at an Interested Party.	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		paragraph 2.39 of the Applicant's Planning Policy Compliance Statement [APP-032]?		

1.15 LANDSCAPE AND VISUAL IMPACTS

FWQ	Question to:	Question:	Response:	Highways England response
1.15.	Landscape and Visual Impacts			
1.15.1.	Applicant/ Essex County Council (ECC)	ECC asserts in its relevant representation [RR-018] that clarification, additional information and mitigation measures are required, and that the majority of proposed landscape mitigation fails to adequately address wider significant adverse visual impacts on the setting of Tilbury Fort and wider surrounds including East and West Tilbury: a) Would ECC provide more detail on where it believes the Applicant's mitigation proposals are deficient? b) Would the Applicant state its response to ECC's assertion above?	The following response relates to both FWQ 1.5.1 and 1.5.2: PoTLL has been in discussions with Thurrock Council and Essex County Council on this topic, and has updated the LEMP for Deadline 1 to provide more information in respect of landscape mitigation proposals. A technical note has also been produced at Appendix E, to explain the rationale for, and explanation of, the landscape mitigation proposals in relation to the infrastructure corridor. As set out in the ES, it is considered that the proposed landscape mitigation would prevent substantial adverse effects occurring in respect of landscape character and visual amenity with the majority of effects falling within the moderate-slight range. The mitigation reflects a balance between operational requirement, ecological mitigation and the need to reflect the open character of the Tilbury Marshes where practicable.	No comment
1.15.2.	Applicant/ Thurrock Council (TC)	TC's states in its relevant representation [RR-031] that there are major concerns over the effects of the scheme on the setting of Tilbury Fort, in which key concerns are: the impact of the extended jetty which will bring the large ships much closer to the Scheduled Ancient Monument; the new infrastructure corridor which will have adverse effects introducing more movement and lighting closer to the Fort; the junction with Fort Road which will also be more visually intrusive. According to TC, the overall landscape mitigation package is considered to be very limited and will not achieve any significant benefits: a) Would TC state what further mitigation/enhancement it would propose for the landscape and visual area? b) Would the Applicant state its position to TC's stated concerns above?	The potential effect on views from receptors further afield to the north east, such as East Tilbury, is represented in the LVIA Appendix 9.F, Viewpoint 6 (Document Reference APP-040). The effect would be of slight to slight-imperceptible significance. At this level of effect the proposed landscape mitigation would perform adequately. In respect of effects on the setting of Tilbury Fort, the Built Heritage Assessment (ES Appendix 12.B) considers that proposed development, incorporating recommended landscape mitigation, will alter the wider setting of the fort through an increase in the industrial character and activity within its setting. These effects will however not reflect a fundamental change in the wider industrial context of the future baseline in which the heritage asset will be experienced. The presence of proposed shipping at the RoRo jetty is not considered to be significantly harmful to the setting of Tilbury Fort as the key crossfire sightlines will be retained, as would the visual connection between Tilbury Fort and New Tavern Fort. Further explanation as to the need for the location of shipping at the RoRo jetty and other operational elements of the Tilbury2 site; and how heritage impacts have been sought to be minimised in developing the design, can be found in the Masterplanning Statement (ES Appendix 5A (Document Reference APP-034), and the Minimisation Statement appended to PoTLL's Response to Relevant Representations (PoTLL/T2/EX/32).	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>The proposed infrastructure corridor would result in less than substantial harm to the overall significance of Tilbury Fort, once recommended landscape mitigation measures are taken into account.</p> <p>In summary the Built Heritage Assessment considers that the proposals are likely to have an overall moderate adverse impact upon the setting of Tilbury Fort.</p>	
1.15.3.	Applicant	<p>Ms Wendy McDowell asserts in her relevant representation [RR-032] that, due to Gravesend's conservation status, the outlook from Gravesend looking towards Tilbury port on the opposite side of the Thames should be protected, and that a positive solution would be to plant a line of large trees on both the Tilbury and Gravesend side of the Thames:</p> <p>a) What is the Applicant's response to this proposal from Ms McDowell?</p> <p>Re Ms McDowell's assertion that there will be an unsightly landscape impact due to container storage at the port, which could also be mitigated by a line of high trees:</p> <p>b) What is the Applicant's response to this proposal from Ms McDowell?</p>	<p>The scheme allows for the retention of mature Monterrey Pine trees along the part of the western boundary of the main site as part of the Landscape and Ecological Management Plan secured through a DCO requirement (Document Reference PoTLL/T2/EX/42). These will continue to grow and eventually provide a measure of screening to development. There is very little suitable available space along the Tilbury2 site river frontage to accommodate trees notwithstanding the tidal conditions. Within the Tilbury2 main site there is no space available near the river frontage as this would be occupied by the operational RoRo facility.</p> <p>Furthermore, planting on either river edge would potentially obscure the sight lines of the historic cross fire pattern between Tilbury and New Tavern forts.</p>	No comment
1.15.4.	Applicant	<p>ES [APP-031] Chapter 9 paragraph 9.236 explains that further mitigation would prevent substantial adverse effects but substantial-moderate effects would remain in the short-medium term for residents at London Road, Elizabeth Close, Edinburgh Mews, The Beeches and Bown Close at the southern margins of Tilbury (declining to moderate once scrub planting establishes):</p> <p>a) Why has the Applicant not proposed 'further mitigation'?</p> <p>b) What further mitigation would be possible to reduce the substantial impacts and which receptors would benefit from this?</p> <p>c) Why has the ES not considered such mitigation?</p>	<p>a) The loss of amenity in views from these locations rests primarily with the replacement of relatively extensive first floor views- over the existing mainline railway and grazing marshes to Tilbury Fort and beyond to Gravesend, with a shortened view -over the mainline railway to proposed acoustic screening and planting in the medium to long term. Whilst this represents a moderate level of significance, it also represents a conventional level of mitigation in relation to roads and is considered appropriate, as the eventual view will be to vegetation.</p> <p>b) and c) Further mitigation would require the re-instatement of the extensive views currently experienced. To achieve this, the proposed infrastructure corridor would need to be lowered to the extent that road and rail traffic is set below these views within a cutting or tunnel.</p> <p>The mitigation required would be disproportionate (given also the potential noise and air quality effects that could arise) to this level of effect on visual amenity. Additional information relating to the proposed mitigation in this location is included in the updated LEMP submitted at Deadline 1 (Document Reference PoTLL/T2/EX/42) and in Appendix E to this response to First Written Questions.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.15.5.	Applicant/ Thurrock Council (TC) and Gravesham Borough Council (GBC)	<p>ES [APP-031] Chapter 9 paragraph 9.245 explains that lighting is designed to avoid or reduce potential lightspill. Effects are assessed as moderate adverse but are considered to be acceptable and would to some extent represent re-establishment of historic industrial and waterfront relating lighting along the Thames:</p> <ul style="list-style-type: none"> a) Would the Applicant explain why these moderate adverse effects are considered to be acceptable? b) Would TC and GBC state whether they are content with this position, and if not, propose further mitigation measures? 	<p>Artificial lighting would become unacceptable in the event that significant levels of obtrusive light and lightspill occurred, affecting landscape character as well as visual amenity.</p> <p>Obtrusive light, as defined in the Preliminary Lighting Strategy and Impact Assessment (ES Appendix 9J Document Reference APP-044, clause 2.3.10) is that causing a statutory nuisance by reference to the Clean Neighbourhoods and Environment Act 2005 (Section 102), as such, clearly, significant levels of such light would be unacceptable. Whilst the terms of reference within the Act exclude lighting associated with the proposed infrastructure corridor, the scope of the assessment includes this element.</p> <p>As such effects have not been assessed to occur in relation to Tilbury2, and making due allowance for the wider urban context and historic industrial waterfront uses, the net effect of proposed lighting is considered to be acceptable.</p>	No comment

1.16 NOISE AND VIBRATION

FWQ	Question to:	Question:	Response:	Highways England response
1.16. Noise and Vibration				
1.16.1	The Applicant.	Paragraph 17.164 of the ES states that noise levels from dredging have not been assessed in detail. Can the Applicant justify that a detailed assessment is not required in general, and with particular reference to impacts on the marine environment.	<p>Suction dredging is the louder of the dredging noise source options proposed and is a continuous noise source. The following text describes in more detail the likelihood of reaching the permanent hearing damage (Permanent Threshold Shift - PTS) criteria and the lower recoverable injury (Temporary Threshold Shift - TTS) criteria for fish and marine mammals for the worst case assessment of suction dredging.</p> <p>Fish For continuous noise, the TTS criteria for fish (swim bladder involved in hearing) from <i>Popper et. al</i> (2014) is 158 dB RMS re. 1 µPa for 12 hours. This level is likely to only occur within 30 m of a dredger and the exceedance would only occur if the fish were to remain at this range for the whole 12 hours. As such the likelihood of criteria exceedance for fish is considered to be low.</p> <p>Marine Mammals With regards to marine mammals, the NMFS (2016) HF cetacean criteria is the most onerous at 153 dB (TTS) and 173 (PTS) SEL_{cum} re. 1 µPa².s for continuous noise, weighted to account for the mammals' hearing sensitivity. Assuming a conservative swim speed of 1.5 m/s the animal would need to be within 5 m of the dredger at the start of dredging activities for the PTS criteria to be exceeded and would need to be within 230 m for the TTS criteria to be exceeded. For LF and MF cetaceans and PW (or PP) pinnipeds, an animal moving at 1.5 m/s would not exceed the PTS criteria at any range. To exceed the TTS criteria the animal would need to be within 5 m of the dredger at the start of dredging activities.</p> <p>The above ranges were obtained using simple modelling and measured data and indicate that the maximum range to the TTS criteria (i.e. 250m as discussed above) for a moving animal extends across less than a third of the river and in most cases the range is much shorter. As such, noise levels across the majority of the river are below the TTS criteria, and do not pose an acoustic barrier that could restrict the movement of species past the dredger. Thus the effects from dredging noise are not expected to be significant. Over such short ranges, a more detailed assessment would be expected to reach a similar conclusion.</p> <p>Glossary</p> <p>HF High frequency species (True Porpoises including Harbour Porpoise) LF Low frequency species (Baleen Whales) MF Mid Frequency (Dolphins, Beaked Whales, Toothed Whales) PW or PP Pinnipeds in Water (True Seals) (PP – Phocid Pinnipeds may also be used).</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			<p>NMFS National Marine Fisheries Service</p> <p>PTS Permanent Threshold Shift</p> <p>RMS Root Mean Squared</p> <p>SEL_{cum} Cumulative Sound Exposure Level</p> <p>TTS Temporary Threshold Shift</p>	
1.16.2.	The Applicant	<p>It is noted that during the pre-application phase, Thurrock Council highlighted the use of BS7385-2:1993 (see Table 17.3 of the ES) which is the standard for assessing the effects of vibration on buildings. No further specific reference has been made to this British Standard, however the ES does assess the effects of vibration on buildings. Please can the Applicant confirm that BS7385-2:1993 was used to assess the effects of vibration on buildings?</p>	<p>Thurrock Council highlighted the use of BS7385-2:1993 which is the standard for assessing the effects of vibration on buildings. The standard was not used in the ES as it was not considered to be required after reviewing the results of the human exposure assessment.</p> <p>When comparing the thresholds for human response to vibration and building damage from vibration, it is found that the human thresholds are much lower than the thresholds for cosmetic building damage.</p> <p>As an example, at the nearest property to the bridge works, the predicted magnitude of vibration from the bridge works is 1.9 mm/s, when expressed as a "Peak Particle velocity" (PPV). For cosmetic damage to occur in residential and light commercial buildings PPV values need to be above:</p> <ul style="list-style-type: none"> • 15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz, and • 20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above <p>The predicted 1.9 mm/s is significantly below all of these thresholds.</p> <p>BS5228 part 2 was used for the vibration assessment. This standard cross references BS 7835 and notes in its section B.3.2. that the probability of damage to buildings tends to zero at vibration levels of 12.5mm/s PPV.</p> <p>As such, the vibration assessment carried out has been proportionate to the likely vibration effects (as required by paragraph 5.10.4 of the NPS).</p>	No comment
1.16.3.	The Applicant	<p>Construction vibration - The assessment assumes that compaction activities will be undertaken using a single drum roller (Bomag BW 145 operating at 0.8mm amplitude) (ES paragraph 17.42). Can the Applicant confirm whether this is considered to be a worst case scenario, and if so justify this?</p>	<p>The Applicant can confirm that compaction activities will be undertaken using a single drum roller (Bomag BW 145 operating at 0.8mm amplitude) and that this is considered to be a worst case scenario based on what will likely be the most effective equipment for local compaction. When assessed at a distance of 75m from the roller, the Bomag BW 145 PPV is expected to give rise to vibration levels of 1.1mm/s, expressed in terms of Peak Particle Velocity (PPV). As a comparison a two-drum roller (Bomag Tandem Vibratory Roller BW 100 AD-5 operating at 0.5mm amplitude) would have a PPV vibration level of 0.6 mm/s at a distance of 75m. The two-drum roller would give rise to lower vibration levels than the single drum roller.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.16.4.	The Applicant	The assessment assumes a railway line speed of 24 km/h (paragraph 17.63 of the ES). There is no line speed stipulated within the draft DCO. Can the Applicant explain how the railway line speed would be controlled?	<p>The design speed for the rail infrastructure is 15mph (24km/h), which is the same as the existing design speed limit at the existing Riverside Sidings connection. The 15mph speed limit will be controlled practically onsite by speed boards (signs).</p> <p>On departure the train will need to wait at the stop boards just inside the Rail Gate (where the track changes from PoTLL to Network Rail ownership) and wait for the exit signal to clear. The train therefore will not be able to reach the 15mph speed limit at the Gate.</p> <p>Railway line speeds below 15mph (24km/h), will not cause any greater effect on noise sensitive receptors than that described in the ES.</p>	No comment
1.16.5.	The Applicant	Paragraph 17.96 of the ES states that <i>"For the situation where impacts are above LOAEL and below SOAEL then mitigation will be considered where adverse impacts are Major. Mitigation would be included in the scheme where it is shown to be both practical and cost effective."</i> In terms of construction noise, for an impact to be major, it must be >75dB. This is the same as the SOAEL. Therefore, it is not possible for there to be a major impact below SOAEL. As such, it is unclear on what basis mitigation would be provided. Can the Applicant clarify?	<p>Paragraph 17.96 covers the approach to mitigation for both construction and operational impacts.</p> <p>In terms of construction impacts, table 17.31 shows that the only construction activities which give rise to noise levels above LOAEL are the road and rail link construction activities. These activities are also potentially above SOAEL and mitigation has been provided for these activities as described in paragraphs 17.143 and 17.223.</p> <p>Note 2 details the assessment of the main site construction noise impact, which is noted as being equal to LOAEL for NSR1 as a worst case assessment. The note describes that in practice noise levels are likely to be below LOAEL. As noted in Table 17.1 LOAEL marks the onset of adverse effects, and mitigation is not required for impacts which are below the onset of adverse effects.</p>	No comment
1.16.6.	Thurrock Council; Gravesham Council	Noise sensitive receptors (NSRs) are listed in Table 17.27 and illustrated on Figure 17.2 of the ES. This includes five receptors along the infrastructure corridor by the town of Tilbury, one at Tilbury Fort and two in Gravesend (across the River Thames). The same receptors have been used for the vibration assessments. Have the LPA's agreed the NSRs?	<p>Whilst this question is directed to Thurrock Council and Gravesham Council, PoTLL would highlight to the Panel that the location of NSRs has been agreed with the two LPAs as referenced in the Statement of Common Ground, with each stakeholder, drafts of which were submitted to the Panel prior to the opening of the Examination (PoTLL Document Reference PoTLL/Tilbury2/EX/33)</p> <p>The Thurrock Council SoCG (SoCG001) states at para. 4.4.3 as follows: <i>"It is agreed that the identified receptors in the ES are representative of all of the nearest sensitive receptors to the Tilbury2 site and the infrastructure corridor. It is also agreed that the baseline measurements are representative of typical conditions at those receptors."</i></p> <p>The Gravesham Borough Council SoCG (SoCG002) states at para. 4.3.3 as follows:</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response												
			<i>"It is agreed that the identified receptors within Gravesham are representative of all of the nearest sensitive receptors to the Tilbury2 site. It is also agreed that the baseline measurements within the ES are representative of typical conditions at those receptors."</i>													
1.16.7.	The Applicant	With reference to ES para 17.142, it is unclear whether the noise modelling has been undertaken with the noise barrier in place. Please can the Applicant confirm?	The Applicant can confirm that the noise barrier has not been included in the construction predictions. The noise barrier has only been included in the infrastructure corridor (road and rail link) noise modelling for the operation of the Project. The intention is to construct the noise barriers prior to the road and rail link construction (as secured by a requirement in Schedule 2 to the dDCO). The noise barriers will then provide sufficient attenuation to bring the construction noise levels below the criteria.	Highways England is content that the assessment of noise effects within the ES has been carried out in accordance with the requirements of the DMRB in compliance with the policy in Department for Transport Circular 02/2013.												
1.16.8.	The Applicant	Table 17.8 of the ES presents 'Transient vibration guide values for cosmetic damage to property'. The assessment of vibration presented in paragraphs 17.148-17.152 of the ES does not appear to assess the potential for cosmetic damage. Can the Applicant confirm whether a significant effect to properties from construction or operational vibration is likely, and if so what mitigation measures are proposed?	The Applicant can confirm that there are no effects to properties from construction or operational vibration. See response to 1.16.2.	No comment												
1.16.9.	The Applicant	The worst case impact ranges for percussive piling of 3.5m piles are set out in the following sections of the ES: (i) Tables 17.33-34 (ii) paragraph 17.238 (iii) Table 11.44. The impact ranges presented in these sections of the ES differ from one another and it is unclear why this is the case. Please can the Applicant clarify?	<p>The data in Tables 17.33-34 and Table 11.44 are generally the same as the data reported in Appendix 17.A, which is summarised in Section 7 of that appendix. In Table 11.44 the 4500m for PTS range of High Frequency cetaceans should be 4550m, and this is a typo.</p> <p>The data presented in Paragraph 17.238 is an error. This data relates to the impact ranges for 2.5m piles which were assessed in a previous version of Appendix 17.A. When the appendix was updated to reflect larger piles the bulk of the report was updated with the revised ranges although paragraph 17.238 was overlooked. Below are the corrected values.</p> <p>17.238 The worst case impact ranges for species functional groups during percussive piling of 3.5 m piles are as follows:</p> <table border="1"> <thead> <tr> <th></th> <th>PTS range m</th> <th>TTS range m</th> </tr> </thead> <tbody> <tr> <td>Low frequency cetaceans</td> <td>3900</td> <td>4950</td> </tr> <tr> <td>Mid frequency cetaceans</td> <td>100</td> <td>2300</td> </tr> <tr> <td>High frequency cetaceans</td> <td>4550</td> <td>5000</td> </tr> </tbody> </table>		PTS range m	TTS range m	Low frequency cetaceans	3900	4950	Mid frequency cetaceans	100	2300	High frequency cetaceans	4550	5000	No comment
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FWQ	Question to:	Question:	Response:	Highways England response									
			<table border="1"> <tr> <td>Phocid pinnipeds</td> <td>1900</td> <td>4650</td> </tr> <tr> <td></td> <td>Recoverable Injury</td> <td>TTS range m</td> </tr> <tr> <td>Fish</td> <td>250</td> <td>3600</td> </tr> </table> <p>It is noted that the assessment reports that with the larger 3.5m piles and the distances in Tables 17.33, 17.34 and 11.44 the noise impacts from piling on marine life are assessed as negligible.</p>	Phocid pinnipeds	1900	4650		Recoverable Injury	TTS range m	Fish	250	3600	
Phocid pinnipeds	1900	4650											
	Recoverable Injury	TTS range m											
Fish	250	3600											
1.16.1	The Applicant	There are discrepancies in the names of the locations of the NSRs in ES Table 17.37 compared to Tables 17.27 and 17.38-40. It is assumed that these are typos, please can the Applicant clarify?	<p>Table 17.27 provides a summary of baseline noise levels at measurement locations using long term and short term measurements. Table 17.37 provides the proxy (Representative measurement location) location used to undertaken the BS4142 assessment for each noise sensitive receptor then assessed in Tables 17.38-40.</p> <p>As noise levels are measured at a discreet set of locations, as part of the assessment it is necessary to consider the baseline levels at locations where measurements were not taken.</p> <p>For locations where measurements were not undertaken the measurement data was reviewed and the most appropriate measurement data was selected to be representative, based on both distance between locations and the noise sources affecting both the measurement and assessment locations. The measured data is used as a proxy for the likely baseline levels at the assessment location. This is exemplified in the table below.</p> <p>Table 1: Example Selection of Proxy Data for Assessment Locations</p> <table border="1"> <thead> <tr> <th>NSR</th> <th>Assessment Location (Tables 17.38-17.40)</th> <th>Measurement Proxy (Table 17.37)</th> </tr> </thead> <tbody> <tr> <td>NSR5</td> <td>Hume Ave, Tilbury</td> <td>Kimberley House, Tilbury</td> </tr> <tr> <td>NSR7</td> <td>Clarendon Road, Gravesend</td> <td>Venture Court, Gravesend</td> </tr> </tbody> </table>	NSR	Assessment Location (Tables 17.38-17.40)	Measurement Proxy (Table 17.37)	NSR5	Hume Ave, Tilbury	Kimberley House, Tilbury	NSR7	Clarendon Road, Gravesend	Venture Court, Gravesend	No comment
NSR	Assessment Location (Tables 17.38-17.40)	Measurement Proxy (Table 17.37)											
NSR5	Hume Ave, Tilbury	Kimberley House, Tilbury											
NSR7	Clarendon Road, Gravesend	Venture Court, Gravesend											
1.16.1	The Applicant	Can the Applicant provide revised versions of Tables 17.38-39 which incorporate the background noise level (for ease of reference), the specific noise level and the rating level for each NSR? The Applicant is requested to double check the accuracy of the table as the ExA is unclear how some conclusions have been drawn. As an example, why the rating level is more than the background + 10dB at NSR2 in the daytime.	<p>The rating level (which includes penalties for specific acoustic characteristics) has been compared to the measured background noise levels as highlighted in Tables 17.38 – 39 below. As required by BS4142 the background noise level is expressed in terms of the L_{A90} noise index, the level which is exceeded for 90% of the time.</p> <p>As requested, the L_{A90} background levels from Table 17.27 have been added to expanded versions of Tables 17.38 and 17.39, below, along with the Rating noise levels for each source. The rating level is 6dB higher than the specific levels, using the BS4142 acoustic correction of 6dB as described in paragraphs 17.77 to 17.81. The expanded tables are shown as Tables 1 and 2, below, and from this the data for both comparisons can be seen.</p> <p>The "Above LOAEL?" and "Above SOAEL?" columns compare the Specific Noise for each source with the LOAEL and SOAEL values given in Table 17.16. The "Rating \geq Background+10" column compares the "Background Noise Level, L_{A90}" column with the "Rating Noise from CMAT" and "Rating Noise from RoRo" columns. The "Specific \geq Baseline" column compares the "Baseline L_{Aeq}" column with the "Specific Noise from CMAT" or "Specific Noise from RoRo" columns. Four examples are given, highlighted in the tables:</p>	No comment									

FWQ	Question to:	Question:	Response:	Highways England response																																																																																																																																
			<ul style="list-style-type: none"> For CMAT, at NSR2, the daytime background level is 44dB L_{A90}, and the rating level of 56dB is more than 10dB above this level. This is shown as a "Yes" in the "Rating >= Background+10" column. For CMAT, at NSR7 the night-time baseline level is 46dB L_{Aeq}, and the specific level of 46dB is higher than this level. Therefore, the specific level is higher than baseline level, shown as a "Yes" in the last column. For RoRo, at NSR4, the night-time background level is 43dB L_{A90}, and the rating noise of 52dB is not more than 10dB above. This is shown as a "No" in the "Rating >= Background+10" column. For RoRo, at NSR6, the daytime baseline level is 48dB L_{Aeq}, which is lower than the specific noise of 45dB. Therefore, the specific level is not higher than baseline level, shown as a "No" in the last column. <p>As advised in the ES, in paragraphs 17.82 to 17.87, the consideration of significance must consider the context of the situation as well as the assessment results. The significance for CMAT is described in paragraphs 17.170 to 17.178, which considers the context of the receptors, the uncertainty of the assessment and the likely noise climate from previous uses of the site. The significance for RoRo is described in paragraphs 17.179 to 17.185, which considers the similarity to existing noise sources and the application of acoustic character corrections.</p> <p>Table 1: Expanded Table 17.38 Significance of CMAT Operational Noise</p> <table border="1"> <thead> <tr> <th>NSR Name</th> <th>Location</th> <th>Period</th> <th>Background Noise Level, L_{A90}</th> <th>Baseline L_{Aeq}</th> <th>Specific Noise from CMAT</th> <th>Rating Noise from CMAT</th> <th>Specific Above LOAEL ?</th> <th>Specific Above SOAEL ?</th> <th>Rating >= Background+10</th> </tr> </thead> <tbody> <tr> <td rowspan="2">NSR 1</td> <td rowspan="2">Byrons Close, Tilbury</td> <td>Daytime</td> <td>40</td> <td>58</td> <td>53</td> <td>59</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>Nighttime</td> <td>35</td> <td>50</td> <td>48</td> <td>54</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td rowspan="2">NSR 2</td> <td rowspan="2">Sandhurst Road, Tilbury</td> <td>Daytime</td> <td>44</td> <td>53</td> <td>50</td> <td>56</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>Nighttime</td> <td>39</td> <td>51</td> <td>48</td> <td>54</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td rowspan="2">NSR 3</td> <td rowspan="2">Kimberley House, Tilbury</td> <td>Daytime</td> <td>43</td> <td>54</td> <td>52</td> <td>58</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>Nighttime</td> <td>39</td> <td>51</td> <td>49</td> <td>55</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td rowspan="2">NSR 4</td> <td rowspan="2">London Road, Tilbury</td> <td>Daytime</td> <td>46</td> <td>55</td> <td>50</td> <td>56</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>Nighttime</td> <td>43</td> <td>54</td> <td>48</td> <td>54</td> <td>Yes</td> <td>No</td> <td>Yes</td> </tr> <tr> <td rowspan="2">NSR 5</td> <td rowspan="2">Hume Ave, Tilbury</td> <td>Daytime</td> <td>49</td> <td>61</td> <td>46</td> <td>52</td> <td>No</td> <td>No</td> <td>No</td> </tr> <tr> <td>Nighttime</td> <td>43</td> <td>54</td> <td>45</td> <td>51</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> <tr> <td rowspan="2">NSR 6</td> <td rowspan="2">Tilbury Fort, Tilbury</td> <td>Daytime</td> <td>46</td> <td>48</td> <td>45</td> <td>51</td> <td>No</td> <td>No</td> <td>No</td> </tr> <tr> <td>Nighttime</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>NSR 7</td> <td></td> <td>Daytime</td> <td>49</td> <td>55</td> <td>47</td> <td>53</td> <td>No</td> <td>No</td> <td>No</td> </tr> </tbody> </table>	NSR Name	Location	Period	Background Noise Level, L _{A90}	Baseline L _{Aeq}	Specific Noise from CMAT	Rating Noise from CMAT	Specific Above LOAEL ?	Specific Above SOAEL ?	Rating >= Background+10	NSR 1	Byrons Close, Tilbury	Daytime	40	58	53	59	Yes	No	Yes	Nighttime	35	50	48	54	Yes	No	Yes	NSR 2	Sandhurst Road, Tilbury	Daytime	44	53	50	56	Yes	No	Yes	Nighttime	39	51	48	54	Yes	No	Yes	NSR 3	Kimberley House, Tilbury	Daytime	43	54	52	58	Yes	No	Yes	Nighttime	39	51	49	55	Yes	No	Yes	NSR 4	London Road, Tilbury	Daytime	46	55	50	56	Yes	No	Yes	Nighttime	43	54	48	54	Yes	No	Yes	NSR 5	Hume Ave, Tilbury	Daytime	49	61	46	52	No	No	No	Nighttime	43	54	45	51	Yes	No	No	NSR 6	Tilbury Fort, Tilbury	Daytime	46	48	45	51	No	No	No	Nighttime	-	-	-	-	-	-	-	NSR 7		Daytime	49	55	47	53	No	No	No	
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1.16.1	Thurrock Council; Gravesham Council	Based on the calculations presented in Tables 17.38-39, the ES concludes: <ul style="list-style-type: none"> Major and significant effects from the CMAT at 	Whilst this question is directed to Thurrock Council and Gravesham Council, PoTLL would highlight to the Panel that the conclusions referred to are prior to the further noise mitigation measures identified in para. 17.225 of the Environmental Statement [APP-031] and secured by R10 of the dDCO.	No comment																																																																																																																																																																																									

FWQ	Question to:	Question:	Response:	Highways England response
		<p>night time for receptors in Gravesend (NSR 7 & 8) (para 17.174);</p> <ul style="list-style-type: none"> Localised significant effects at NSR 2 from the RoRo from general storage areas (para 17.181 & 17.221). <p>Do the local authorities have concerns regarding the proposals, with regard to noise? Please detail any concerns.</p>	<p>The dDCO requires that prior to first operation PoTLL must carry out a reassessment of the predicted noise impacts arising from the finalised design and operational procedures to be implemented for those works. Following the assessment, if a significant noise effect is predicted for any receptor, PoTLL must offer that receptor a package of mitigation that must include the installation of noise triple glazing or any other noise insulation at that receptor. Moreover, the proposals cannot be opened for operational use until a noise monitoring and mitigation scheme based on the results of the re-assessment is agreed with Thurrock Council and Gravesham Borough Council. The scheme must detail the nature and temporal length of monitoring; the trigger point at which PoTLL will be required to make an offer of mitigation to an affected receptor during such monitoring; and that any mitigation offered to an affected receptor must include the offer of the installation of noise insulation or triple glazing at that receptor.</p> <p>This approach to re-assessment is advanced on the basis that the assessment of noise and vibration in the Environmental Statement has been undertaken on a 'worst case' scenario and details of the exact configuration and operational characteristics of some of the works (particularly the CMAT) are not yet known.</p> <p>As set out in the Environmental Statement, once this scheme is implemented (should it indeed be necessary following the re-assessment) the impact reduces to a residual minor significant effect which is considered to be not significant in EIA terms.</p> <p>The approach to operational mitigation is agreed with Thurrock Council (Document Reference PoTLL/T2/EX/33, SoCG001, para. 4.4.9). The approach to operational mitigation is "agreed in principle" with Gravesham Borough Council (SoCG002 para. 4.3.9).</p>	
1.16.1	The Applicant	<p>Ref ES para. 17.196, refers to properties in Dock Road and Calcutta Road for which '<i>... there will be a perceptible increase in noise, giving rise to short term significant effect at these properties. The effect is negligible in the long term and the overall assessment is considered not to be significant.</i>' Can the Applicant justify how overall this is not considered to be significant, when short term significant impacts have been acknowledged?</p>	<p>The short term impacts on Docks Road and Calcutta Road will have minor increases and are considered not significant in EIA terms. These impacts are potentially significant in the short term in respect of Policy, but since the significant effects are not present in the long term the overall balance between policy significance and EIA significance is that impacts are not significant.</p>	No comment
1.16.1	The Applicant	<p>Although the ES has referred to vibration dose ranges from BS6742, the</p>	<p>The vibration dose value, or VDV, is a measure of the cumulative vibration at a location. The VDV is often expressed over a 16 hour day or an 8 hour night. The VDV is more sensitive to the magnitude of vibration than it is to the duration of vibration.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
		<p>assessment presented within the ES is qualitative only (see paragraphs 17.203-205). Please provide calculations to support this conclusion. In addition how will the number of railway movements be restricted in the dDCO? In your answer please detail proposals for night time operation of the railway.</p>	<p>The baseline vibration survey shows that the 8hr night and 16hr day VDV values are typically 0.04, with the highest value of 0.05. The line currently is a mix of passenger and freight trains and the VDV is representative of baseline vibration levels.</p> <p>The baseline levels adequately capture the variation in magnitude, and the key factor is the change in vibration duration. As an example calculation we assume that the number of passenger and freight trains doubles so that the trains are there for twice as long – This is representative of there being twice as many passenger trains and twice as many freight trains.</p> <p>The resulting VDV is estimated using: $VDV_{total} = (VDV_1^4 + VDV_2^4)^{0.25}$</p> <p>By adding two VDV's of 0.05 together this results in a combined VDV of 0.06.</p> <p>A VDV of 0.06 is significantly below the LOAEL of 0.2 given in Table 17.15. Based on this result there is no need to assess the VDV of trains in more detail than has been done in the ES. If the number of trains was increased by an order of magnitude the VDV would still remain below 0.1, which would still be significantly below 0.2.</p> <p>On this basis it is considered unnecessary to limit the number of railway movements in the dDCO.</p>	
1.16.15	The Applicant	<p>ES paragraphs 17.213-17.215 conclude that there would be no significant effects from operational noise from vessels. Please provide the calculations that underpin the figures provided within the ES.</p>	<p>Currently there are 44 existing vessel movements per day and 5 proposed vessels movement per day due to the Tilbury2 proposals, as is explained in the navigation chapter of the Environment Statement (Chapter 14). This would constitute a 11% increase in marine traffic when the proposal is operational.</p> <p>The basic rule for the acoustics of multiple noise sources is that a doubling of the number of sources would result in an increase of 3dB in overall noise levels, which would have a minor impact.</p> <p>Using the underlying relationship, an 11% increase in the number of vessels would result in an increase in noise of less than 1dB. A 1dB change is not perceptible and therefore the impacts from changes to the number of vessels in the Thames as a result of the Project would not be significant. If, for example, there were 12 vessel movements per day using Tilbury2 the change in noise would be 1dB, which would have a negligible impact.</p>	No comment
1.16.16	Gravesham Council	<p>With regard to vessel noise, additional confirmatory work has been undertaken by the Applicant, and a technical note detailing the findings prepared and shared with Gravesham Council. Please provide an update on your response to this matter.</p>	<p>The applicant offers no response to this question as it is directed at an Interested Party.</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
1.16.1	The Applicant	Paragraphs 17.135-17.137 detail the embedded mitigation for the Proposed Development. Can the Applicant update the OMP to reflect the measures that are set out in the ES?	The OMP includes the measures set out in paragraph 17.135 – 17.137 at sections 6.3, 6.4, 6.6 and 6.7.	No comment
1.16.18	The Applicant	Thurrock Council [RR-031] provided comments on the OMP, specifically noting that the Port has been subject to noise complaints from ship generators operating overnight and the suggestion to provide shore power. What is the Applicant's response to this suggestion?	<p>The Port has only ever received one noise complaint related to ships' generators and upon receiving the complaint the cause was identified as a vessel on layby; the matter was dealt with immediately and the issue was satisfactorily resolved.</p> <p>The number of large shipping vessel movements associated with the proposals is considered at paragraph 18.325 to 18.331 of the ES (Document Reference APP-031, 6.1). The DEFRA local air quality management guidance criteria for further assessment are not exceeded and there is no sensitive exposure in the vicinity of the shipping movements. The effect of emissions from shipping was therefore concluded not to be significant. This agrees with the Secretary of State scoping opinion (Document Reference 6.2.2A, paragraph 3.36).</p> <p>Air quality monitoring is undertaken by the local authorities and a site specific survey was undertaken by PoTLL. The results were presented in Appendix 18.B of the ES (Document Reference APP-095, 6.2) and summarised in the ES (Document Reference APP-031, 6.1, paragraphs 18.168, 18.176). The results show that concentrations of nitrogen dioxide and sulphur dioxide in Tilbury are below the air quality objectives (Document Reference 6.1, paragraph 18.330). The AQMAs for nitrogen dioxide in Thurrock and Gravesend are road traffic-related. They are also a substantial distance away from the shipping movements. As stated in the consultee response (Table 18.7 of the ES (Document Reference APP-031, 6.1)) existing technology on ships is not currently suitable for shore power to be utilised at Tilbury2. A further constraint, at present, is that the electrical capacity is extremely limited due to the National Grid infrastructure locally. This would require an upgrade at significant cost to provide more capacity in the local area.</p> <p>PoTLL understands from its RoRo customers that its vessels cannot presently connect to shore power. It is also understood that there is limited benefit for vessels with a short stay in port. The vessels that will call on the aggregate berths are likely to be large "self discharge" vessels or smaller dredgers. The age profile of the majority of "self discharge" aggregate vessels means they do not currently have the ability to take shore power. PoTLL will provide the infrastructure to ensure that shore power can be accommodated at the Tilbury2 site (in effect shore power ready) in the future should the vessel profile change.</p> <p>There is a commitment to this effect in the Operational Management Plan (Document Reference PoTLL/T2/EX/40), a document that will be certified through the DCO. In Section 6.3 of the OMP, it is stated that future improvements including the ability to provide shore power to vessels will be considered as and when the vessel fleet and local infrastructure can support such improvements.</p>	No comment
1.16.19	The Applicant	Limited information is provided in the ES regarding the noise	The height of the noise barriers has been prescribed in the dDCO submitted at Deadline 1 to match with the ES - i.e. 3m high for roads and 1.5m high for the railways.	Department for Transport Circular 02/2013 states at para A1. For reasons of safety, liability and maintenance,

FWQ	Question to:	Question:	Response:	Highways England response
		barriers. Can the Applicant confirm the detailed design of the proposed noise barriers including all dimensions (including foundations), details of materials etc.	<p>The detailed design of the proposed noise barriers will not be known until the detailed design stage as the dimensions and foundations of the barriers will be determined by the ground conditions, the needs of the surrounding ecological and landscape mitigation, and the need for them to be located in a location where they will be most effective (within the limits of deviation of the work in which they are prescribed by the dDCO).</p> <p>However, although the details are ultimately subject to detailed design, it is anticipated that the detailed design of the noise barriers will comply with BS EN 1793-2:2012, Category B2.</p>	<p>with the sole exception of fences owned and provided by the Highways Agency at its own cost, all noise fences, screening and other structures must be erected on the developers land, and far enough within the developers land to enable maintenance to take place without encroachment onto highway land.</p> <p>Highways England submits that this policy requirement should, where necessary, be incorporated into the draft DCO. Any requirement for noise barriers adjacent to the SRN should become clearer once agreement is reached on traffic generation from the Proposed Development and the works required to the SRN to mitigate the impact of the Proposed Development. The Applicant should make arrangements to acquire any land needed to provide noise fences, screening and other structures.</p> <p>Any noise fences, screening and other structures should be designed and maintained so that they do not compromise the safe and efficient operation of the SRN.</p>
1.16.20	The Applicant, Gravesham Council.	Gravesham Council [RR-019] is concerned over 24 hour operation of the CMAT as the CMAT would operate 312 days a year 7am - 7pm Monday – Friday and 7am – 12pm Saturdays. Gravesham states that they are discussing this with the Applicant and the Application will provide a justification for 24/7 hour operation. Please provide an update on discussions.	<p>By way of clarification, PoTLL seek 24/7 operation of the Tilbury2 site as a whole and consider this is essential for Port operations. PoTLL have provided a comprehensive explanation of the need for 24/7 operation at Tilbury2 to Gravesham Borough Council. This has been submitted into the Examination as Appendix 2 to PoTLL’s Response to Relevant Representations (PoTLL/T2/EX/32)</p> <p>The provision of this document was followed by a discussion with GBC regarding the subject at stakeholder engagement meeting on 9 February 2018.</p> <p>The Statement of Common Ground with Gravesham Borough Council (SoCG), submitted as part of the Statement of Common Ground Update Report (PoTLL/Tilbury2/EX33) indicates at para. 5.2.1 the response of Gravesham Borough Council to this document, as follows :-</p> <p><i>“GBC have considered this and understand and appreciate this imperative and consider that PoTLL have provided a robust justification in this regard. GBC are considering further the implications of this for the residential environment of Gravesend.”</i></p>	No comment

FWQ	Question to:	Question:	Response:	Highways England response
			As noted in respect of FRQ 1.16.12, PoTLL understand that GBC agree the mitigation with respect to operational noise in principle (para. 4.3.9 of the SoCG) , with this mitigation including the scheme of reassessment and, if needed, receptor based mitigation secured through R9 of the dDCO.	

1.17 SOCIO-ECONOMIC EFFECTS

FWQ	Question to:	Question:	Response:	Highways England comments
1.17.		Socio-economic effects		
1.17.1.	Essex Chambers of Commerce	<p>Essex Chambers of Commerce asserts in its relevant representation [RR-009] that the development will be of major benefit to exporters and importers after Britain leaves the EU in handling trade not just from the EU but elsewhere around the globe. Essex Chambers of Commerce further asserts that the development will bring major economic benefits to Thurrock and the wider area in terms of job creation and security, ensure Tilbury's contribution to the local economy continues and is safeguarded, and enhance the local, regional and national economy:</p> <p>a) Can Essex Chambers of Commerce provide any evidence for its assertions on the benefits of the Proposed Development?</p>	<p>The applicant offers no response to this question as it is directed at an Interested Party.</p>	No comment
1.17.2.	Applicant and Essex County Council (ECC)	<p>ECC asserts in its relevant representation [RR-018] that clarification is required on how the benefits and use of the local supply chain and economy would be realised:</p> <p>a) Would the Applicant state its response to ECC's assertion?</p> <p>b) Would ECC specify what clarification is required?</p>	<p>a) The Applicant is happy to provide such clarification to Essex County Council (ECC). It is helpful to highlight a number of documents submitted with the Application which may be of assistance. The socio-economic assessment included within the Chapter 7 of the Environmental Statement submitted with the Application (Document Reference; APP-031, 6.1) assessed construction and supply chain opportunities. As stated in paragraph 7.111, these have been included within the employment estimates.</p> <p>Section 3, 'Economic Case' of the Outline Business Case (Document Reference: APP-166, 7.1) sets out the likely employment generation at construction and operational phases both within Tilbury2 itself, and across the wider supply chains. Paragraph 3.30 states that there is likely to be increased supply chain activity, and that job creation in the Port will contribute to footfall in local businesses, and could create new business opportunities. Further, some businesses on the River Thames will also benefit from increased shipping movements and ferry passengers.</p> <p>The Employment and Skills Strategy which is at Appendix 1 of the Heads of Terms for a section 106 Agreement with Thurrock Council (Document Reference: APP-029, 5.3) further details best practice approaches to secure local advertisement of employment and tendering opportunities. This will be secured through an agreement with Thurrock Council pursuant to section 106 of the Town and Country Planning Act 1990, and includes details on the</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>mechanisms PoTLL will use to support local employment, outreach and inclusion.</p> <p>Section 3 of the Employment and Skills Strategy details PoTLL's past initiatives and local engagement which have focused on increasing the chances of the local population to reach direct employment opportunities at the Port. The Employment and Skills Strategy sets out at Section 4 PoTLL's strategy to build upon successful past achievements and follow a similar positive and proactive approach with Tilbury2. PoTLL is keen to maintain a similar positive level of impact as the Port expands, while targeting specific groups.</p> <p>(b) If ECC requires any further clarification then the Applicant would be happy to assist.</p>	
1.17.3.	Thurrock Council (TC)	<p>TC states in its relevant representation [RR-031], that the impact of and opportunities/benefits arising from the Proposed Development during construction and operation are an issue for consideration:</p> <p>a) Would TC state what it sees to be the impact of and opportunities/ benefits arising from the Proposed Development?</p>	<p>Whilst this question is directed at an Interested Party, the following sets out further information to assist in answering the question:</p> <p>The socio-economic assessment for Tilbury2 (within the Environmental Statement, Document Reference: APP-031, 6.1, Chapter 7) provides an assessment of the potential effects of the Proposed Development during both construction and operation phases on socio-economic characteristics and receptors. Throughout the assessment, a number of opportunities and benefits are set out in relation to employment and GVA contributions along with skills and training initiatives.</p> <p>Paragraph 7.65 sets out the potential impacts of Tilbury2, associated with employment impacts and associated GVA impacts in the regional economy, local skills, training and employment programmes. Paragraph 7.69 identifies that Tilbury2 is expected to have temporary construction effects in the form of construction employment generated at the regional level. This effect comprises direct, indirect (supply chain) and induced (wage expenditure) employment and GVA elements. It is estimated that the construction phase is expected to create 218 construction FTE jobs within the regional economy (para 7.71), and contribute approximately £18.3 million in GVA to the regional economy (para 7.74).</p> <p>As set out in paragraph 7.78, the operation phase is expected to support around 527 net additional FTE jobs in the regional economy, and contribute approximately £25.8 million GVA to the regional economy. Similarly, this effect comprises direct, indirect (supply chain) and induced (wage expenditure) employment and GVA elements.</p> <p>The Skills and Employment Strategy (Document Reference, APP-029, 5.3) identifies opportunities for skills, training and apprenticeships associated with the Tilbury2 proposals. Section 2.5 of the Skills and Employment Strategy details PoTLL's past initiatives and local engagement which have focused on increasing the opportunities for the local population to reach direct employment opportunities at the Port. The SES sets out PoTLL's</p>	No comment

FWQ	Question to:	Question:	Response:	Highways England comments
			<p>strategy to build upon successful past achievements and follow a similar direction in the future. PoTLL is keen to maintain a similar positive level of impact as the Port expands, whilst targeting specific groups. The detail of the SES is being reviewed following discussions with Thurrock Council.</p>	

1.18 TRAFFIC AND TRANSPORTATION

FWQ	Question to:	Question:	Response:	Highways England response
1.18.	Traffic and Transportation			
1.18.1.	Applicant and Network Rail Infrastructure Limited (NRIL)	<p>Regarding Network Rail's need [RR-013] to have agreements in place to safeguard Network Rail's interests and the safety and integrity of the operational railway:</p> <p>a) What is the current position between Network Rail and the Applicant?</p> <p>b) What matters remain to be resolved?</p> <p>c) Can Network Rail confirm that it will table a Statement of Common Ground with the Applicant at Deadline 1 (20 March 2018)?</p> <p>d) Is Network Rail content with the Protective Provisions in dDCO Schedule 10 Part 6 <i>For the Protection of Railway Interests?</i></p>	<p>a) The applicant and Network Rail Property Services have been in detailed discussions for approximately 12 months. There are various issues still under active discussion as both parties move towards agreement. At the request of Network Rail the applicant has underwritten legal fees to enable Network Rail to appoint required legal representatives in order to progress matters.</p> <p>(b) As set out above in response to FWQ1.18.1(a), discussions continue with Network Rail appointed lawyers on the details of a Statement of Common Ground and relevant Protective Provisions. Full details of the Network Rail land holding in the vicinity of the Order limits have been requested by the Applicant on a number of occasions and are expected to be provided by Network Rail shortly. Further liaison through Network rail Property Services will resolve all matters going forward,</p> <p>(c) and (d) for Network Rail to respond</p>	<p>a) No Comments.</p> <p>b) No Comments.</p> <p>c) and d) No Comments.</p>
1.18.2.	Applicant and Royal Mail	<p>With reference to Royal Mail's interests [RR-029] and its request for the Applicant to give careful consideration to potential cumulative construction traffic impacts and remediation measures to mitigate adverse impacts on the capacity of the highways network; to acknowledge the requirement to ensure that major road users are not disrupted through full consultation at the appropriate times during the DCO and development processes; and to fully consult Royal Mail in advance on the Construction Environmental Management Plan (CEMP) and name Royal Mail in the list of transport operators for consultation on usage of the network:</p> <p>a) What is the current position between Royal Mail and the Applicant?</p> <p>b) What matters remain to be resolved?</p> <p>c) How does Royal Mail envisage its needs being met in the dDCO?</p>	<p>Responding to each point in turn:</p> <p>(a) and (b) The Applicant refers to the Construction Environment Management Plan (Document Reference: APP-164, 6.9) which covers Communications and Community Liaison in section 2. Paragraph 2.7 sets out that:</p> <p><i>"During the DCO consultation process, a number of organisations requested that they be communicated to during the construction phase of the project, or are within 500m of the site boundary and/or have development aspirations. These groups, and other groups will therefore receive a copy of the abovementioned newsletter and when on reasonable request, meetings will be arranged to discuss and update on progress on matters such as, but not limited to, construction traffic management, dusty work and noisy work".</i></p> <p>Royal Mail is named as one of the parties for on-going community engagement. The impact of the proposed construction and operation on the road network have been assessed in the Transport Assessment which is included as Appendix 13.A of the Environmental Statement (Document Reference: APP-031, 6.1) which demonstrates that with suitable mitigation the Tilbury2 development would not adversely impact the operation of the road network. The Applicant is not aware of any issues which remain unresolved between the parties.</p>	<p>a) and b) HE has requested further information relating to the assumptions underpinning the projected trip generation of the proposed development. No evidence has so far been provided to enable the forecasts to be verified. There are inconsistencies between the reports in terms volumes of materials at the CMAT and quantum of containers proposed for the Ro-Ro. Until this evidence is received the traffic impacts of the proposed development and the required level of mitigation cannot be determined.</p> <p>c) No Comments.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			C) Royal Mail to respond.	
1.18.3.	Applicant/ Essex County Council (ECC)/ Highways England (HE)/ Network Rail (NR)	<p>With reference to ECC's relevant representation [RR-018]:</p> <p>a) Would ECC give more detail on its outstanding concern regarding M25 J30 on which the Council requires further clarification?</p> <p>b) Would the Applicant and HE state their response to ECC's request for them to take account of respective proposals to ensure junction capacity?</p> <p>c) Would the Applicant state its response to ECC's request for clarification, information and mitigation concerning sustainable travel modes and provision of public transport to coincide with shift patterns?</p> <p>d) Would the Applicant and NR state their response to ECC's request for clarification on the cumulative impacts on the rail network, passenger and freight capacity, connectivity and network resilience between Essex and London?</p>	<p>a) The Applicant refers to the SoCG with Essex County Council (ECC) (Document Reference SOCG003 of PoTLL/T2/EX/33). Drafts of which have been agreed and exchanged between the parties as set out in the Statement of Common Ground Report for the Preliminary Meeting. Such report also includes a draft of the SoCG with ECC at Appendix 3. This states at 4.2.3 that "ECC has confirmed they have no concern regarding the impact on M25J30 which forms part of the Strategic Road Network which is the responsibility of Highways England." The Applicant therefore considers that no further clarification is required.</p> <p>b) ECC state in their Relevant Representation (Document Reference: RR-018): "Lower Thames Crossing. ECC expect Tilbury 2 & LTC to take account of respective proposals to ensure junction capacity." In response please refer to Applicants answer to FWQ 1.7.1.</p> <p>c) The Applicant again refers to the SoCG with ECC (Document Reference: SOCG003) 5.2.2 "PoTLL are seeking to discuss what further clarification and information is required." The matter is still under discussion.</p> <p>d) The Applicant refers to its Response to Relevant Representations (Document Reference: PoTLL/T2/EX/32) where it states at page 96 that: <i>Network Rail (NR) confirmed there is sufficient capacity on "the Essex Thameside corridor and beyond across London" (NR letter to P Ward dated 23 May 2017 - Appendix 1 to that document) to accommodate additional rail freight movement from Tilbury2 and cater for other demands along the Essex Thameside corridor. There are in excess of 50 rail freight paths available. Tilbury2 would generate up to 5 freight trains per day."</i></p>	<p>a) Refer to comment on 1.18.2 b). HE are awaiting further information to address outstanding queries with the applicant regarding the trip generation of the Proposed Development and changes in traffic levels at M25 Junction 30. Once this has been resolved, HE will then be able to form a view on the impact at M25 Junction 30</p> <p>b) HE has submitted a response to this point in our submission to the FWQs</p> <p>c) No comments</p> <p>d) Highways England is concerned that any shortfall in rail capacity might result in increased use of Heavy Goods Vehicles to service the Proposed Development. Highways England will monitor this issue and depending on the outcome may seek a review of the Transport Assessment.</p>
1.18.4.	Applicant/ Gravesham Borough Council (GBC)/ Highways England (HE)	<p>With reference to GBC's concern [RR-019] to see a SoCG between the Applicant and HE agreed to ensure that the traffic impacts on Gravesham "generated by the Port of Tilbury by virtue of the Lower Thames Crossing once built, are comprehensively modelled and mitigated for and don't fall between these 2 NSIP projects":</p>	<p>The Panel is referred to PoTLL's response to FWQ 1.7.1.</p> <p>It is inescapable that the promoters of LTC will have to undertake a CEA of Tilbury2 with LTC and this is confirmed by the identification of Tilbury2 as a cumulative project in the LTC Scoping Report. There is no danger that the cumulative effects will fail to properly assessed, with this assessment rightly falling to LTC, to be undertaken at a time when sufficient information is available to allow the assessment to be robustly undertaken.</p>	<p>a) HE has submitted a response to this point in our submission to the FWQs.</p>

FWQ	Question to:	Question:	Response:	Highways England response
		a) What are the Applicant's and HE's response to this concern of GBC?	This position is agreed with Gravesham Borough Council, as noted in the Statement of Common Ground submitted prior to the Preliminary Meeting (Document Reference PoTLL/T2/EX/33 SoCG002, Box 4.5.).	
1.18.5.	Applicant/ Highways England (HE)	<p>With reference to HE's relevant representation [RR-020], in which HE raises a number of concerns:</p> <p>a) What is HE's assessment of the fitness for purpose of the Transport Assessment (cited in ES [APP-031] Chapter 13 paragraph 13.3 et seq), including its compliance with WebTAG?</p> <p>b) What is the Applicant's response to HE's request for justification of the absence of proposed mitigation works at certain locations, namely A1089/A126 (Marshfoot Road junction), A1089/A13 merge and M25 junction 30?</p> <p>c) What is HE's current position on the effects of the Proposed Development on the strategic road network and whether they can be mitigated so that the residual impacts are not severe?</p> <p>d) Re HE's assertion that circular 02/2013 requires developers' proposals to comply with the Design Manual for Roads and Bridges, does the Applicant agree with this assertion?</p> <p>e) Would the Applicant and HE state the extent to which the Proposed Development complies with the DMRB, and highlight all areas in which it does not comply?</p>	<p>a) HE to respond.</p> <p>b) The Transport Assessment which is included as Appendix 13.A of the Environmental Statement (Document Reference: APP-072) provides justification of the absence of mitigation works at the A1089/A126 Marshfoot Road interchange, the A1089/A13 interchange and M25 junction 30.</p> <p>Since submission of Relevant Representations [RR-020], HE have reviewed the Transport Assessment and have confirmed their agreement to the impact of Tilbury2 at the A1089/A126 Marshfoot Road interchange and the A1089/A13 interchange. In respect of M25 junction 30 the Transport Assessment (Document Reference: APP-072) demonstrates traffic flows would increase by less than 2% which would have no measureable effect upon the operation of the junction (section 7.7, paragraphs 7.7.1 - 7.7.5).</p> <p>c) HE to respond.</p> <p>d) The Applicant agrees with HE's assertion, only insofar as the Proposed Development requires work to the Strategic Road Network, which for the purpose of the Application is limited to the improvements to the ASDA roundabout.</p> <p>e) The proposed improvement at ASDA roundabout complies with DMRB save for completion of a Walking, Cycling and Horse-Riding Assessment Report (WCHAR). The WCHAR was completed and submitted to HE for review on 15/03/2018.</p>	<p>a) HE has responded in our submission to the FWQs.</p> <p>b) HE has not confirmed our agreement to the impact of Tilbury2 at the A1089/A126 Marshfoot Road interchange and the A1089/A13 interchange. The correct position is as set out in the SoCG between HE and the Applicant.</p> <p>c) HE has responded in the submission to the FWQs.</p> <p>d) Any mitigation agreed at the Asda Roundabout, or at any of the other junctions on the SRN, needs to be designed to DMRB</p> <p>e) HE has received the WCHAR from the applicant. Comments on the WCHAR were provided to the applicant on Friday 23 March 2017.</p>
1.18.6.	Applicant/ Essex County Council (ECC)/ Thurrock Council (TC)/ Highways England (HE)	The ES [APP-031] Chapter 13 paragraph 13.3 et seq cite the Transport Assessment [APP-072], the Framework Travel Plan [APP-073], and Sustainable Distribution Plan [APP-074]. The latter two documents are secured within the dDCO [APP-016] Schedule 2 Part 1 by Requirement 11:	<p>a) The Transport Assessment is an ES appendix. As such, it falls within the definition of 'environmental statement' in Schedule 11 of the dDCO, and is therefore dealt with through references to the environmental statement in the dDCO.</p> <p>However, it does not need to be dealt with separately as a dDCO requirement, because it does not contain any of its own mitigation measures (as it references the Sustainable Distribution Plan, Active Travel</p>	a) A separate TA should be prepared in accordance with the NPPF. The ES should have a Transport chapter, which could contain other environmental matters in accordance with the Institute of Environmental Assessment.

FWQ	Question to:	Question:	Response:	Highways England response
		<p>a) Would the Applicant state where the Transport Assessment is secured in the dDCO?</p> <p>b) Would ECC and TC state whether they are content with the Transport Assessment as currently drafted?</p> <p>c) Would ECC, TC and HE state whether they are content with the Framework Travel Plan and Sustainable Distribution Plan as currently drafted?</p> <p>d) Would the Applicant state whether it intends to update the Framework Travel Plan and Sustainable Distribution Plan during the Examination?</p>	<p>Study and Framework Travel Plan) to which the authorised development would need to be subject.</p> <p>The Transport Assessment is therefore an assessment document, rather than a document developed or required to make the authorised development acceptable. It therefore does need to be 'secured' in the dDCO.</p> <p>b) The Applicant refers to the SOCG with Thurrock Council (Document Reference: SOCG001), section 4.3 confirms TC agree the Scope, Traffic Generation, Distribution and modelling of the impact.</p> <p>The Applicant refers to the SOCG with Essex County Council (ECC) (Document Reference SOCG003) 4.2.1 states "It is agreed that the scope of the Transport Assessment accords with guidance and provides a comprehensive basis for the preparation of the Transport Assessment." Drafts of the Framework Travel Plan and Sustainable Distribution Plan were reviewed by TC prior to submission. The submitted versions incorporated the comments of TC.</p> <p>c) Drafts of the Framework Travel Plan(FTP) and Sustainable Distribution Plan (SDP) were submitted to ECC prior to submission, although no response was received. The Applicant refers to the SoCG with ECC (Document Reference SOCG003) which states at 5.2.2 that: "PoTLL are seeking to discuss what further clarification and information is required." This includes ECC's review of the FTP.</p> <p>HE has now provided comments on the FTP and SDP. PoTLL are reviewing these comments and revised versions of these documents will be submitted to respond to their comments.</p> <p>d) Yes, the Applicant can confirm that it intends to update the Framework Travel Plan and Sustainable Distribution Plan once comments have been received from ECC.</p>	<p>The TA should set out all mitigation and quantify the residual impact.</p> <p>b) HE is content with the scope of the TA but is awaiting information to address outstanding queries with the applicant regarding the trip generation of the proposed development.</p> <p>HE would like to review the updated SDP and FTP.</p> <p>c) HE has provided a response to this point in the submission to the FWQs</p> <p>d) HE would like to review the updated SDP and FTP.</p>
1.18.7.	Applicant/ Kent County Council (KCC)	<p>KCC states [RR-021] that it supports modal shift from road to sea and rail, notes that the application proposes 2 or 3 train movements per day, and asserts that the application must ensure capacity of available train paths through London:</p> <p>a) Would the Applicant state how it is proposing to ensure capacity of available train paths through London, whilst not adversely affect passenger rail services?</p> <p>b) In response to KCC's call for consideration of lorry parking to be</p>	<p>(a) The Applicant has been in communication with Network Rail in respect of the availability of capacity on the network, and has commissioned timetabling work to identify capacity on the North London Line in support of the development.</p> <p>In applying for capacity on the rail network a bidder can only request the use of capacity that is unallocated i.e. bid for a path where no other trains are currently planned. Network Rail, in turn, cannot allocate capacity for a new train if the capacity requested (or an element of that capacity) is already utilised.</p> <p>Passenger services typically operate to a standard pattern (a clockface timetable) which allows for the allocation of paths for freight (standard</p>	<p>a) No Comments.</p> <p>b) HE has raised queries with the applicant over the HGV parking provision and how it will be enforced. These issues are currently under discussion with the applicant.</p>

FWQ	Question to:	Question:	Response:	Highways England response
		<p>provided as part of the Proposed Development, due to the significant HGV movements associated with the application, what is the Applicant's position on this matter?</p>	<p>freight paths) between those passenger trains; the assessment of capacity to date has utilised these standard freight paths to confirm that capacity exists for additional freight from Tilbury2 without adversely affecting passenger timetables.</p> <p>The assessment of capacity was undertaken utilising paths appropriate to the different commodities to be moved to/from the new development.</p> <p>(b) The typical operation of Tilbury2 would be a regular pattern of arrivals and departures of HGV's. Thus, there would be no accumulation of HGV's. Therefore, there would be no need for dedicated HGV parking as such, but instead 'holding operational areas' where arriving and departing vehicles are processed will be provided. The masterplan layout (Document Reference APP-008) shows that the principal operations of the CMAT and RoRo would have substantial holding operational areas which will fully accommodate such operation.</p>	
1.18.8.	Applicant	<p>With reference to resident Mr Colin Elliott's relevant representation [RR-001], in which he asserts that "the existing road that goes around the Ferry fields could be upgraded rather than putting a new road near to residential area":</p> <p>a) What is the Applicant's response to this assertion by Mr Elliott?</p>	<p>a) The Applicant refers to its Response to Relevant Representations (Document Reference: PoTLL/T2/EX/32) (Page 98) which states: "The Surface Options Access Report (Document Reference APP-034) sets out the appraisal of the existing Fort Road. The current alignment of Fort Road is sub-standard and therefore a revised alignment is necessary to accommodate access for Tilbury2". The full appraisal is set out in Section 2, Paragraphs 2.1 – 2.38 in the Surface Options Access Report (Document Reference APP-034).</p>	a) No comments.
1.18.9.	Applicant/ Purfleet Real Estate (PRE)	<p>With reference to PRE's relevant representation [RR-028], in which PRE states that its priority is to ensure the continued efficient and effective operation of its terminals:</p> <p>a) What assurance can the Applicant give to PRE and its related group companies with regard to the continued functioning of the M25 (notably J30) and the A13 during both construction and operations?</p> <p>b) How does the Applicant intend to take account of the existing planning permissions with Thurrock Council for development at Purfleet Thames Terminal (PTT) with regard to transport impacts?</p> <p>c) How will the Applicant ensure the continued access to, and use of, the River Thames by vessels serving PTT and Dartford International Ferry Terminal (DIFT)?</p>	<p>a) The Transport Assessment (TA) which is included as Appendix 13.A of the Environmental Statement (Document Reference: APP-072) includes an assessment of the M25 junction 30 (Section 7.7, Paragraphs 7.7.1) and the A13 (Section 7.6, Paragraphs 7.6.1 – 7.6.7). The assessments demonstrate that the operation (functioning) of the A13 and M25 junction 30 would not be adversely affected by Tilbury2.</p> <p>b) The TA allows for growth in traffic flows up to 2027 as a consequence of development across Thurrock such as those permitted at PTT.</p> <p>c) The Applicant refers to its Response to Relevant Representations (Document Ref: PoTLL/T2/EX/32) (Section 8.0 – Response to Relevant Representations: Dredging and Navigation Page 57) which states: "In respect of the wider river, as might be expected for a large, diverse, and high-profile port like London, the Port of London Authority (PLA) has extremely high standards of navigation and a pro-active approach to management of risk, which would be applied to Tilbury2 and its interaction with existing ports such as Purfleet".</p>	<p>a) HE are awaiting further information to address outstanding queries with the applicant regarding the trip generation of the Proposed Development and changes in traffic levels at M25 Junction 30. Once this has been resolved, HE will then be able to form a view on the impact at M25 Junction 30.</p> <p>b) No comments.</p> <p>c) No comments.</p> <p>d) No comments.</p>

FWQ	Question to:	Question:	Response:	Highways England response
		d) Would PRE highlight any mitigation measures that it wishes to propose?		
1.18.10.	Applicant/ Thurrock Council (TC)	<p>With reference to TC's relevant representation [RR-031], TC states that it disagrees with some of the assumptions and opinions within the submitted Transport Assessment [APP-072], in particular in relation to the local road network:</p> <p>a) Would TC specify the matters on which it disagrees with the Applicant?</p> <p>b) Would TC specify its outstanding issues regarding impact on the Asda roundabout junction and associated mitigation proposals, and state what other mitigation measures it would propose?</p> <p>c) Would the Applicant state how the Proposed Development has addressed vehicle movement on the local roads network?</p> <p>d) Would the Applicant state how it has addressed the needs of non-motorised users (local walking and cycle network, including public rights of way)?</p>	<p>(a) TC to respond.</p> <p>(b) TC to respond.</p> <p>(c) The Transport Assessment (TA) which is included as Appendix 13.A of the Environmental Statement (Document Reference: APP-072) includes an assessment of the impact of the Proposed Development traffic on the local road network between Tilbury2 and the Strategic Road Network (which commences at the existing main port entrance). The TA also assesses:</p> <ul style="list-style-type: none"> • the entire ASDA roundabout junction including the Local Road Network approaches (Dock Road and Thurrock Park Way); and • The A126 Marshfoot Road/A1089 interchange including the Local Road Network junctions (roundabout with Old Dock Approach Road and priority junction with A1089 southbound carriageway) <p>The TA demonstrates that the Tilbury2 development would not adversely affect the operation of the Local Road Network (Sections 7.4 and 7.5 of the Transport Assessment (Document Reference: APP-072).</p> <p>(d) Non-motorised users are considered in the TA the ES (Document Reference: APP-031 6.1 – Chapter 13 Landside Transport and APP-072) and the Framework Travel Plan (Document Reference: APP-073).</p> <p>The TA assesses the accessibility of the Tilbury2 development by walking and cycling. Notably the proposed Link Road includes a dedicated footway/cycleway which connects to the existing footway and cycle network. Tilbury2 would also deliver wider benefits to non-motorised users through implementation of measures contained in the Active Travel Study (Document Reference: APP-029, 5.3 Appendix B).</p> <p>The FTP outlines measures to encourage the use of these modes by staff travelling to and from Tilbury2.</p> <p>The ES assesses the following effects on non-motorised users:</p> <ul style="list-style-type: none"> • Safety (Paragraph 13.86); • Severance (Paragraphs 13.81 – 13.82); • Amenity (Paragraph 13.85); and • Delay (Paragraphs 13.83 – 13.84). 	<p>a) No Comments.</p> <p>b) No comments.</p> <p>c) Refer to HE comments on the trip generation. The traffic impacts presented in the TA cannot be verified, mitigated against until this is agreed.</p> <p>d) HE has concerns relating to the lack of additional walking and cycling facilities being provided at the Asda Roundabout as a result of the increase in HGVs using the A1089. Any other mitigation works to the SRN should adequately address the needs of non-motorised users.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			<p>During construction the residual effect is negligible for all of the above.</p> <p>During operation the residual effect on the safety and amenity of non-motorised users is moderately beneficial as a consequence of the Link Road and measures contained in the Active Travel Study. The residual effect on delay and severance is negligible.</p> <p>The link road would have a negligible effect on the above with the exception of severance, where the residual effect would be slight adverse.</p>	
1.18.11.	Applicant	<p>With reference to the relevant representation of London Gateway Port Limited (LGPL) [RR-022], LGPL asserts that the assessment carried out in support of the Tilbury 2 proposals does not appear to have considered available capacity on the regional/national rail network to accommodate the predicted rail movements:</p> <p>a) What is the Applicant's response to this assertion from LGPL?</p>	<p>Network Rail freight team were consulted in relation to the available capacity for Tilbury 2 and have provided written support to the application confirming that there is sufficient capacity on the existing Thames corridor and across London to accommodate the predicted rail movements this is included in Appendix 1 of the "Response to Relevant Representations" (Document Reference: PoTLL/T2/ EX32). They have also confirmed the further proposed investment on the network</p>	a) No Comments.
1.18.12.	Applicant	<p>The ES [APP-031] makes numerous references to an Active Travel Study for improvements to pedestrian and cyclist connectivity in the area which is stated to be secured through the draft DCO and a s106 agreement with the council. There appears to be no reference to an Active Travel Study within the draft DCO, although it is appended to a draft Heads of Terms for the s106 in Doc Ref 6.3:</p> <p>a) Would the Applicant state how the dDCO will secure the Active Travel Study?</p>	<p>The Active Travel Study (appended to APP-029) includes measures that are in the Order limits, and others that are outside the Order limits. This is why the Environmental Statement references both the section 106 agreement and the DCO.</p> <p>Measures not within the Order limits are to be secured through the section 106 agreement with Thurrock Council, as they cannot be included in the DCO.</p> <p>The measures that are within the Order limits are secured through the DCO through the operation of the protective provisions for the benefit of Thurrock Council as highways authority. This is because through these protective provisions, the Council will approve the final form of highways created and adjusted as a result of the Tilbury2 proposals. This will include the various non-motorised user measures included within the Active Travel Study, as these will all fall within the highway boundary.</p>	a) HE needs to look at the ATS and at the measures within and outside the Order limits before deciding whether we need to comment.
1.18.13.	Applicant	<p>ES [APP-031] Table 4.1 identifies existing buildings on the site which would be demolished as part of the Proposed Development. It states that material would be crushed and potentially reused on site. Without guarantee of the material being retained on site, the ExA will need to be satisfied that a worst case</p>	<p>a) Traffic movements associated with moving this material off site have not been specifically accounted for in the estimates of construction traffic for the reasons set out below.</p> <p>(b) The Applicant considers that such traffic movements would not have any bearing on the assessment presented within the ES. The estimate of construction traffic in section 8 of the Traffic Assessment (TA) which is</p>	<p>a) HE have reviewed the response to 1.18.13 b) below and consider that if the applicant has assumed the stated worst case scenario then we have no comments.</p> <p>b) No comments.</p>

FWQ	Question to:	Question:	Response:	Highways England response
		<p>assessment of traffic impacts has been undertaken:</p> <p>a) Would the Applicant confirm whether the traffic movements associated with potentially moving this material off site have been taken into account?</p> <p>b) If not, would the Applicant comment on, and justify, whether these movements would have any bearing on the assessment presented within the ES?</p>	<p>included as Appendix 13.A of the Environmental Statement (Document Reference: APP-072) was a worst case for the following reasons:</p> <ul style="list-style-type: none"> • All cut and fill was assumed to be exported and imported respectively i.e no re-use on site; • No allowance for material imported or exported by river; • Low average payload for each vehicle; and • All construction activities (link road, terminals and berths) occurring simultaneously. <p>Therefore, the assessments are based on an over estimate of the likely construction traffic.</p>	
1.18.14.	Applicant	<p>ES [APP-031] paragraphs 2.57-2.63 explain that the Lower Thames Crossing (LTC) will not be assessed for cumulative effects because of the limited information available. However, it should be noted that the scoping report for LTC was received by PINS on 2 November 2017 and there is a clear overlap of the application site boundaries along the infrastructure corridor. The Applicant was advised to update its assessment in post-acceptance section 51 advice:</p> <p>a) Would the Applicant state its current position with regard to the cumulative effects of the Proposed Development and the LTC?</p>	<p>As set out in PoTLL's response to FWQ 1.7.1, PoTLL's position on this issue is set out in detail in the "Response to Relevant Representations" (PoTLL Document Reference PoTLL/Tilbury2/EX/32) at paras. 2.35 – 2.42 and the ExA is referred to that commentary.</p> <p>PoTLL remain of the view that it is not possible for a cumulative effects assessment (CEA) to be undertaken of Tilbury2 with LTC at this stage, for the reasons set out in that document. Nor is it considered possible to undertake an in-combination assessment for the purpose of HRA for the same reasons.</p> <p>There is no reasonable basis on which to estimate the impact on the highway network from the implementation of the LTC as no data on this exists. This data is key to understanding the related environmental impacts on topics such as air quality, noise and health. Absent this data, we would respectfully suggest that any assessment would be so speculative as to be of no value to the development consent decision on Tilbury2 itself.</p> <p>Moreover, even if such a CEA were undertaken and conclusions were drawn as to the need for additional mitigation as a result of the cumulative impact of Tilbury2 with LTC, that mitigation would clearly fall to the promoters of the LTC and would not be for PoTLL to implement. It would not and could not have practical implications for the Tilbury2 DCO.</p> <p>It is inescapable that the promoters of LTC will have to undertake a CEA of Tilbury2 with LTC and this is confirmed by the identification of Tilbury2 as a cumulative project in the LTC Scoping Report. There is no danger that the cumulative effects will fail to be properly assessed, with this assessment rightly falling to LTC, to be undertaken at a time when sufficient information is available to allow the assessment to robustly undertaken.</p> <p>PoTLL note that the ExA is indeed correct that there is an overlap of the application site boundaries proposed by LTC with the existing Tilbury2 Order Limits along the infrastructure corridor. In undertaking EIA, LTC will need to consider the consistency of the proposals in terms of design, and the</p>	<p>a) HE notes that when the DCO was submitted there was no robust evidence/modelling available which would have permitted the applicant to accurately and robustly assess the cumulative impact of PoT2 and LTC.</p>

FWQ	Question to:	Question:	Response:	Highways England response
			impact of the LTC on any mitigation which is proposed by Tilbury2 that could be impacted upon by LTC.	

1.19 WATER QUALITY, FLOOD RISK AND WATER FRAMEWORK DIRECTIVE

FWQ	Question to:	Question:	Response:	
1.19.	Water Quality, Flood Risk and Water Framework Directive			
1.19.1.	Environment Agency (EA)	Please supply a copy of the Thames Estuary 2100 (TE2100) Plan to the Examination, as a web-link or as a PDF.	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.19.2.	EA	Please provide an explanation regarding the condition or grade of the flood defences bordering the River Thames in the Tilbury2 site, together with an explanation of your expectation on how the Applicant should be addressing any existing defects in the flood defences, in the application.	The applicant offers no response to this question as it is directed at an Interested Party.	No comment
1.19.3.	EA and Applicant	Who is the owner of the flood defences within the Order Limits?	The Applicant owns the land upon which the flood defences currently sit and is therefore the riparian land owner. It is therefore, in the absence of any contrary evidence, also the owner of the flood defences within the Order Limits.	No comment
1.19.4.	EA and Applicant	Who would be responsible for the maintenance and repair of the flood defences within the Order Limits, should the DCO be made?	<p>The Applicant understands it currently has the ultimate responsibility for maintenance and repair of the flood defences within the order limits. However, the Environment Agency, as part of the TE2100 plan, has chosen to carry out maintenance works in co-ordination with the landowner.</p> <p>The Applicant would expect this position to continue were the DCO to be made, with the addition of the operation of the EA protective provisions contained in the dDCO. These contain provisions in relation to the construction and maintenance of the DCO works which do include some changes to the flood defences.</p>	Highways England submits that the DDCO must contain robust provisions for the ongoing maintenance of the flood defences within the Order limits to ensure the continued protection of the SRN from flooding.
1.19.5.	Applicant	The EA, in their RR, [RR-017], paragraph 2.4 state that a foundation works risk assessment will be required, which should consider the impacts of possible detriment to water quality via infiltration. Please confirm when this risk assessment would be undertaken and how would the results and conclusions be provided to the EA and the host LPA? How would this be secured in the dDCO?	A piling risk assessment will be undertaken once the foundation design is sufficiently detailed. The piling risk assessment will include an assessment of foundations and ground improvements which may impact on groundwater. The requirement to prepare a piling risk assessment for the works is included in Section 8.11 of the CEMP (secured through the dDCO). The piling risk assessment, including any appropriate mitigation measures to prevent detriment to water quality recommended as part of it, will be agreed with the Environment Agency prior to works being undertaken.	No comment
1.19.6.	Applicant and EA	Please provide an update on discussions and agreements regarding the proposed Memorandum of Understanding (MoU) between the Applicant and the EA, in respect of the proposed Tilbury barrier.	PoTLL has provided a revised draft of the MoU to the EA following receipt of their comments on the initial draft. A response from the EA is awaited.	

FWQ	Question to:	Question:	Response:	
1.19.7.	Applicant	Further to the EA's RR [RR-017], paragraphs 4.2-4.15, please explain how you will address all of the EA's concerns regarding the Flood Risk Assessment (FRA), including updating the flood risk modelling with updated/additional breach modelling, infrastructure corridor culvert modelling and climate change allowances? Will an updated and revised FRA (and updated chapter 16 of the ES to reflect any new or changed findings), be prepared and submitted to the Examination? If so, when?	<p>The Applicant has produced an addendum to the FRA which has been submitted to the Examination at Deadline 1 (Document Reference PoTLL/T2/EX/46).</p> <p>As stated in the draft SoCG, the Applicant and the EA have agreed that the breach methodology outlined; the location, breach width, duration, roughness values, simulations and use of LIDAR and topographical survey are all appropriate subject to the Tilbury East and West Flood Storage Area embankments and infrastructure corridor culverts being included within the breach model.</p> <p>New national breach modelling guidance and River Thames flood levels have been released and the Applicant has agreed with the EA that the updated levels and guidance will be reviewed and compared in relation to the levels used in the existing breach model. It has been agreed that if previous guidance and data used in the FRA provides a precautionary approach then the model does not need updating.</p> <p>The updated extreme tide level data is included in Table 2-1 of the addendum to the FRA. The levels used within the breach model are shown in Table 2-2 and it can be seen that these are higher than the recent updated levels. As a precautionary approach the higher tide levels were used within the updated breach modelling.</p> <p>The addendum to the FRA (Table 4.1) provides clarity on the difference in depth between the baseline scenario and the proposed works, and therefore provides more clarity of the precise increase in flood depths, not just the depth bands as shown on the maps.</p> <p>The Applicant has agreed with the EA that Tilbury2 is not considered 'Safety Critical Infrastructure' and therefore it is not appropriate to apply the NPSF H++ climate change guidance to this scheme. This is also clarified in the addendum to the FRA</p>	Highways England is reviewing the FRA addendum referred to in the applicant's response and will provide comments in due course. Highways England wishes to ensure that the proposed development will not increase flood risk to the Strategic Road Network.
1.19.8.	Applicant	Please explain how you will address the EA's concerns in their RR [RR-017], section 5.0 regarding culvert design and associated flood risk matters?	<p>The Application and the EA have agreed that the crossing of watercourses by the infrastructure corridor is generally accepted and that this will be done through box culverts where possible.</p> <p>The design will ensure no reduction in the size of the culverts to ensure that the capacity to carry peak flow is maintained and where possible enhanced.</p> <p>Details of such culverts will be determined during detailed design and approved by the EA pursuant to their protective provisions within the DCO.</p>	Highways England is reviewing the details of the proposed watercourse crossings and culvert design referred to in the applicant's response. Any culverts beneath the SRN must be designed in accordance with DMRB.
1.19.9.	Applicant	Please explain how you proposed to address the EA's concerns regarding flood risk to buildings and to the people who work within them in paragraphs 6.1-6.5 of their RR [RR-017]?	It is not possible to provide definitive finished floor levels or a final Flood Emergency Plan given the stage of the development proposals. However the draft DCO requires PoTLL to comply with the Level 2 and Level 3 FRA, which include the requirement to produce a Flood Emergency Plan.	Highways England is reviewing the FRA addendum referred to in the applicant's response and will provide comments in due course. Highways England wishes to ensure that the proposed development

FWQ	Question to:	Question:	Response:	
			Section 6 of the FRA Addendum contains detailed flood depths on the site and within the buildings. Section 7 clarifies some of the principles of Flood Risk Management and sets out the recommended measures to be incorporated on the site to manage the residual risk. The draft DCO has been amended for Deadline 1 to include the addendum within the definition of Flood Risk Assessments to which PoTLL will be required to comply.	will not increase flood risk to the Strategic Road Network.
1.19.10.	Applicant	Please explain the status of the proposed 'Flood Emergency Plan' and how it will be agreed with the EA and secured within the dDCO?	It is not possible to provide definitive finished floor levels or a final Flood Emergency Plan given the stage of the development proposals. However the draft DCO requires the Applicant to comply with the FRAs produced for the DCO application, which include the requirement to produce a Flood Emergency Plan.	Highways England is reviewing the FRA addendum referred to in the applicant's response and will provide comments in due course. Highways England wishes to ensure that the proposed development will not increase flood risk to the Strategic Road Network.
1.19.11.	Applicant	Figure 6-3 of the Level 3 Flood Risk Assessment (FRA)[APP-087] contains a figure showing the existing flood wall. It is not currently legible. Please provide another version of this figure which is legible.	A full version of this drawing is provided in the errata Engineering Section Drawings (Document Reference PoTLL/T2/EX/6 or AS-010) and can be found at the following location within that set: Drawing Number: 5153187-ATK-ZZ-XX-DR-ZZ-1009 Drawing Title: Engineering Sections and Plans Illustrative Cross Sections Bridge Abutment / Flood Defence	Highways England is reviewing the corrected drawing (Document Reference PoTLL/T2/EX/6 or AS-010) referred to in the applicant's response and will provide comments in due course. Highways England wishes to ensure that the proposed development will not increase flood risk to the Strategic Road Network.
1.19.12.	Applicant	Please explain how you propose to address the EA's concerns about the East Dock Sewer in paragraphs 6.6-6.7 of their RR [RR-017], including explaining who will be responsible for the repairs/ refurbishment/ replacement of the retaining wall.	The impact on the supporting wall of East Dock Sewer will be further investigated during detailed design once the full impact that specifically arises from the Tilbury2 proposals has been assessed. This will ultimately be able to be determined (and any consequential actions arising from it) as part of the operation of the Environment Agency's protective provisions.	This information will be reviewed at a later date, when available.
1.19.13.	Applicant	Please provide the details required by Essex County Council in their RR [RR-018] regarding discharge rates for the area of the site and the access road.	Essex County Council RR-018 requests additional information and clarification concerning the discharge rates for the northern area of the site and the access road. As stated in the Response to Relevant Representations (Document Reference: PoTLL/T2/EX/32), the flows could be discharged to the existing watercourses at rates higher than greenfield peak flows if it can be demonstrated that there would be no increase in the flood risk. The design concept presented in the Drainage Strategy (Document Ref: APP-90) (of which compliance is required under the draft DCO (Document Reference APP-016) is to reduce flows to Q1 greenfield run-off limits, from the northern areas of the site and the access road. Refer to Tables 6-2 and 7-1 of the Drainage Strategy for the flow rates.	This information will be reviewed at a later date, when available. Highways England wishes to ensure that the proposed development will not increase flood risk to the Strategic Road Network.
1.19.14.	Applicant	Please explain what works would be carried out to the existing flood defences, in order to maintain flood defence for the site and	It is agreed between the Application and the EA that moveable aspects of the proposals (such as fencing) can be located less than 16m away from the landward toe of the flood defences.	This information will be reviewed at a later date, when available. Highways England wishes to ensure that the

FWQ	Question to:	Question:	Response:	
		<p>access maintained for the EA to enable them to carry out maintenance. Also explain how and when the existing flood defences would be raised to 8m AOD and how the design for crossing existing water courses would be agreed with the EA (paragraph 7.1-7.3 of their RR [RR-017]).</p>	<p>Impact on the existing flood defence, both from the temporary and permanent works, will be dealt with at the detailed design stage through the EA's proposed plan approval role under their protective provisions in the DCO.</p> <p>The Applicant has agreed that the EA would not expect the flood wall to be raised to 8mOD along the entire frontage as part of the Tilbury2 proposals, but that the proposed design is sufficient to provide for future raising if this is required.</p> <p>The design for crossing existing watercourses, such culverts, will be determined during detailed design and approved by the EA pursuant to their protective provisions within the DCO. These items have been agreed within the SoCG between the Applicant and the EA (Document Reference PoTLL/T2/EX/33 SoCG 004).</p>	<p>proposed development will not increase flood risk to the Strategic Road Network.</p>
1.19.15.	Applicant and EA	<p>Please provide an update regarding whether agreement has been reached on the wording of a new requirement within Schedule 2 of the dDCO regarding the submission and approval of detailed plans relating to work in relation to flood defences and watercourses.</p>	<p>Such a requirement is not needed in Schedule 2 of the dDCO, as the approval of detailed plans in relation to works that will affect flood defences and watercourses is provided for by the operation of the protective provisions for the benefit of the Environment Agency (and for ordinary watercourses, Thurrock Council as lead local flood authority). This is because such works would fall under the definition of 'specified works' under both sets of protective provisions, which require the submission and approval of such plans.</p>	<p>No comment.</p>
1.19.16.	Applicant	<p>Please provide an update of discussions with the operator of the adjacent Tilbury Energy Centre in relation to whether the new proposed foul sewage pumping station (SPS) could be sized to accommodate waste water flow from the new power station or provide an ability to increase at a later date.</p>	<p>The scheme design criteria includes an allowance for foul flows from the adjacent power station. The foul system outlined in the Drainage Strategy (Doc Ref: APP-090) already accommodates the foul water flows during the demolition phase and this will be retained for the permanent works. No detailed discussions have yet begun with RWE in respect of the details of the foul sewage system that would support the Tilbury Energy Centre project.</p>	<p>No comment.</p>
1.19.17.	Applicant	<p>Please provide a plan showing where permeable pavements are proposed over the Proposed Development area. Please explain how the provision of permeable pavements will only occur in areas where there is no risk of leaching of contaminants or other forms of pollution.</p>	<p>Please refer to drawing in Appendix B for locations of the proposed pavement types on the basis of the indicative design. Permeable paving is proposed for the "General Storage" and "RoRo Terminal Workshop/Admin/Welfare/Parking" as shown on Sheet 2 of the General Arrangement Drawings (Document Reference APP-008).</p> <p>There will be no contaminants or forms of pollution stored in these areas. For local areas such as the re-fuelling area these will have an impermeable pavement such as concrete paving and separate drainage to interceptors as required by the Drainage Strategy (Document Reference APP-090, Section 6.4.2).</p> <p>All permeable pavements are proposed to be lined, unless ground conditions permit the usage of infiltration and this will not mobilise</p>	<p>No comment.</p>

FWQ	Question to:	Question:	Response:																
			contaminants, as required by the Drainage Strategy (Document Reference APP-090, Section 6.4.2).																
1.19.18.	Applicant	Please explain where green rooves would be used and provide details of their design and construction so that the impact of these on drainage over the site can be understood.	<p>At this preliminary stage of design, green roofs are considered likely to be used for four of the proposed buildings within the site, as set out at Table 1 below. This will be considered further at the detailed design stage.</p> <p>Table 1: Tilbury2 buildings with potential to accommodate a green roof and approx. areas</p> <table border="1"> <thead> <tr> <th>Facility Description</th> <th>Purpose</th> <th>Estimated Area of Green Roof (m²)</th> </tr> </thead> <tbody> <tr> <td>Workshop welfare</td> <td>Welfare facility for workshop staff</td> <td>42</td> </tr> <tr> <td>Operations welfare</td> <td>Welfare facility for operational staff</td> <td>42</td> </tr> <tr> <td>LGV driver amenity</td> <td>LGV driver amenity</td> <td>42</td> </tr> <tr> <td>Tilbury2 Entrance Gate</td> <td>Port Security control building and welfare</td> <td>42</td> </tr> </tbody> </table> <p>Green roof design and construction details have not yet been determined as they will need to fit with the design of the buildings as a whole, but some factors that will influence their design are discussed below.</p>	Facility Description	Purpose	Estimated Area of Green Roof (m ²)	Workshop welfare	Welfare facility for workshop staff	42	Operations welfare	Welfare facility for operational staff	42	LGV driver amenity	LGV driver amenity	42	Tilbury2 Entrance Gate	Port Security control building and welfare	42	No comment.
Facility Description	Purpose	Estimated Area of Green Roof (m ²)																	
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Tilbury2 Entrance Gate	Port Security control building and welfare	42																	
1.19.19.	Applicant and EA	Please provide an update regarding the Applicant's wish to dis-apply the Environmental Permitting (England and Wales) Regulations 2016 (EPR), and the EA's statement that this could only be agreed if protective provisions are provided in lieu of the EPR relating to flood risk activity permits.	The Applicant is still in discussions with the EA regarding the protective provisions. In recent discussions the EA has indicated that they would not disagree in principle with the disapplication of the Environmental Permitting (England and Wales) Regulations 2016 (EPR).	No comment.															
1.19.20.	Applicant	The ES, [APP-031] in paragraph 16.63, identifies that an increase in flood risk to a field, to the East of Fort Road, (up to 140mm in depth) may occur as a result of the Proposed Development. It goes on to say that "Given the localised nature of the minor increase, the predicted change may be a result of residual uncertainty in the model. Mitigation measures are therefore not considered necessary for any off-site areas."	<p>a) The addendum to the FRA (Document Reference PoTLL/T2/EX/46) provides clarity on the difference in depth between the baseline scenario and the proposed works, and therefore provides more clarity of the precise increase in flood depths, not just the depth bands as shown on the maps. It also denotes the areas that are potentially subject to flood depth increases on the plan.</p> <p>b) With reference to the areas identified in the FRA addendum as potentially being affected by increased flood depths, the following parties hold land interests:</p>	Highways England is reviewing the FRA addendum referred to in the applicant's response and will provide comments in due course. Highways England wishes to ensure that the proposed development will not increase flood risk to the Strategic Road Network.															

FWQ	Question to:	Question:	Response:	
		<p>a) Please identify this area that would be at risk of increased flooding on a plan.</p> <p>b) Please provide details of who owns and/or has rights over this land, and the current uses of this field.</p> <p>c) Please provide a summary of discussions with these owners/tenants regarding the potential increase in flood risk.</p>	<ul style="list-style-type: none"> • Area 4 – PoTLL (owner) and the Port of London Authority (rights) • Area 5 – Historic England • Area 6 – Sue Cole, Jeremy Godsmark Finnis and Diana Mary Cole (pending first registration) • Area 7 – Anglian Water Services Limited • Area 8 – Diana Mary Cole and Sheila Elizabeth Hodson (freehold) Sue Cole, Jeremy Godsmark Finnis and Diana Mary Cole (tenants/occupiers) • Area 9 – Melville Hamilton Lowe Mott and Rita Maureen Mott <p>c) As can be appreciated, many of the parties identified above have been party to wider discussions in relation to the Tilbury2 proposals (see the Book of Reference (APP-020) and the Statement of Reasons (APP-018)). As such, this element of the proposals will be discussed as part of these wider discussions.</p> <p>For those parties that are not already affected by Tilbury2 in other ways, the Applicant has written to them inviting them to discuss this issue with the Applicant.</p>	
1.19.21.	Applicant	<p>Please explain the statement in ES [APP-031] paragraph 16.77, <i>“the total mass released or removed by the dredging is in the variability identified in the annual sediment budget and therefore the dredging will not change the fine sediment budget of the Thames budget outside natural variability.”</i> The Panel considers that dredging will release sediment which is in addition to the existing sediment levels. Therefore the Applicant should be considering/assessing the effects of the increase in sediment levels across the area. Has this been undertaken? If not, why not?</p>	<p>As detailed in sections 16.74 to 16.77 in the ES, the effect of the sediment released during dredging has been modelled in a Lagrangian plume model using modelled hydrodynamics. This serves as a basis of assessing the effects of the increase in sediment levels across the area. This is detailed further in the Hydrodynamic Sediment Modelling report submitted as part of the application (ES Appendix 16D, Document Reference APP-089)</p> <p>Dredging will release sediment which is in addition to the existing sediment levels into the water column. However, simulations indicate that, even with such dredging, the balance of sediments within the estuary system (the so called ‘sediment budget’) remain within the natural range of annual variability of erosion and accretion (as compared with the latest data for the Thames) which means no significant environmental effects from Tilbury2 activities are anticipated.</p> <p>The simulations have been undertaken using conservative assumptions in relation to sediment suspension and the results indicate that any effect of dredging is limited to an area within 2km of the dredge and will be of short duration.</p>	No comment.
1.19.22.	EA, MMO and NE	<p>Do the EA, MMO and NE agree with the Applicant’s statements in ES [APP-031] paragraphs 16.87, 16.88 and 16.91, in relation to WFD matters, that the Proposed</p>	<p>The applicant offers no response to this question as it is directed at an Interested Party.</p>	No comment.

FWQ	Question to:	Question:	Response:	
		Development would be unlikely to cause any deterioration in water body status in the Thames Lower and Middle water body, nor would it cause a deterioration in critical habitats?		
1.19.23.	Applicant	<p>The ES [APP-031] in paragraph 16.142 states that, <i>“the majority of the Tilbury2 site will be covered by hardstanding which will therefore limit rainfall infiltration through the ground.”</i> Please cross refer to statements in the ES regarding <i>“permeable pavements”</i>.</p> <p>a) Please explain the difference between <i>“permeable pavements”</i> and <i>“hardstanding”</i> in terms of construction design;</p> <p>b) Please show proposed areas of <i>“hardstanding”</i> on a map or plan. This could be combined with the map or plan to be provided in response of FWQ 1.19.17.</p>	<p>a) Hardstandings will comprise of concrete or asphalt concrete paving which are impermeable. Permeable paving comprises of permeable blocks with a granular base for storage of water. The blocks have gaps between them to allow the water to flow to the permeable base where it is stored.</p> <p>b) Please refer to drawing in Appendix A for locations of proposed pavement types. Areas where porous paving is proposed on the basis of the indicative design are also identified in the Drainage Strategy (Document Reference APP-090, Figures 6-2 and 6-3).</p>	No comment.

APPENDIX A: FIGURES

APPENDIX B: CMAT CLARIFICATION STATEMENT

APPENDIX C: TILBURY ENERGY CENTRE PAPER

APPENDIX D: TILBURY FORT PAPER

APPENDIX E: TECHNICAL NOTE ON TILBURY2 LANDSCAPE MITIGATION PROPOSALS

APPENDIX F: LAND NEGOTIATIONS TRACKER

APPENDIX G: LETTERS TO NO IMPEDIMENT
