

PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

TILBURY2

TRO30003

RESPONSE TO THE WRITTEN REPRESENTATIONS, LOCAL IMPACT REPORTS AND INTERESTED PARTIES' RESPONSES TO FIRST WRITTEN QUESTIONS

TILBURY 2 DOCUMENT REF: PoTLL/T2/EX/60



Response to Written Representations, Local Impact Reports and Interested Parties' Responses to First Written Questions

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 for Deadline 2 on Wednesday 4th April 2018

- 1.1 This document outlines the Applicant's Response to Written Representations, Local Impact Reports and Interested Parties' Responses to First Written Questions.
- 1.2 The Applicant's responses are divided into individual tables by the topic chapters provided by the Examining Authority. The purpose of doing so is to avoid the need to repeat responses for points raised by more than one Interested Party. Points that are repeated are responded to in the same row.
- 1.3 In some cases, the responses have been supplemented through appended documents. References to these papers are indicated in the individual responses.

Table of Contents

1.0. GENERAL AND CROSS TOPIC3

1.1. AIR QUALITY4

1.2. BIODIVERSITY AND 1.11 HABITATS REGULATION ASSESSMENT8

1.3. COMPULSORY ACQUISITION, 1.8 DRAFT DEVELOPMENT CONSENT ORDER MATTERS AND 1.10 ENGINEERING AND DESIGN41

1.4. CONSIDERATION OF ALTERNATIVES68

1.5. CONSTRUCTION69

1.6. CONTAMINATED LAND AND WASTE70

1.7. CUMULATIVE AND COMBINED73

1.9. DREDGING AND NAVIGATION74

1.12. HEALTH.....78

1.13. HISTORIC ENVIRONMENT79

1.14. PLANNING POLICY107

1.15. LANDSCAPE AND VISUAL IMPACTS108

1.16. NOISE AND VIBRATION.....110

1.17. SOCIO-ECONOMIC EFFECTS113

1.18. TRAFFIC AND TRANSPORTATION118

1.19. WATER QUALITY, FLOOD RISK AND WATER FRAMEWORK DIRECTIVE126

1.0. GENERAL AND CROSS TOPIC

PoTLL Response

The Applicant offers no response to Written Representations, Local Impact Reports and Interested Parties' Responses to First Written Questions relating to this topic as it considers that no points made by Interested Parties in respect of these topics require a response at this stage.

1.1. AIR QUALITY

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Gravesham Borough Council	Gravesham BC Local Impact Report for Tilbury2 – page 17	Air quality work within Gravesham has already led to the declaration of seven Air Quality Management Areas (AQMA), adoption of two Air Quality Action Plans and an Air Quality Strategy. The seven areas of the borough have been declared as the air quality in those areas does not meet the National Air Quality Strategy Objectives for Nitrogen dioxide (NO ₂) and/or Particulate matter (PM ₁₀). This is primarily due to exhaust emissions from traffic or in the Northfleet Industrial Area AQMA to fugitive dust, in particular windblown dust from the local aggregate sites and construction. Air Quality Management Areas (AQMA) have been declared in those areas	<p>The ES (Document Reference 6.1/APP-031) Chapter 18 describes the air quality management areas (AQMA) that are relevant to the Tilbury2 air quality assessment study area (paragraph 18.51), including those in Gravesham (paragraph 18.173). Traffic associated with Tilbury2 will not use roads in proximity to the Gravesend town centre AQMA or others within the GBC area. The Northfleet Industrial Area AQMA, which is approximately 2 km west of Tilbury2, was declared by GBC in 2005. It is outside the area that may be affected by the proposals, as PM₁₀ emissions will be negligible at such a distance upwind (IAQM Minerals Planning Guidance 2016, Appendix 2).</p> <p>The applicant understands from the GBC local air quality management (LAQM) reports* that there was a specific issue regarding the Lafarge Cement Works in the Northfleet Industrial Area. The cement works closed in 2009, and replaced with a cement import terminal operating under an environmental permit. The continuous monitoring station (CMS) in the Northfleet Industrial Area has recorded PM₁₀ concentrations since 1999*. Concentrations have been well below the short and long-term UK air quality strategy (AQS) objectives for PM₁₀ (ES Table 18.4) since 2010, with annual average concentrations 20 µg/m³ or lower and the number of exceedances of the daily mean standard well within the AQS objective allowance. Concentrations in recent years have been in line with those recorded at the A2 Roadside CMS.</p> <p>The three actions relating to achieving improvements in PM₁₀ concentrations in this AQMA are noted as complete (GBC Annual Status Report, 2017) although Action 3 (emissions reduction) is retained as an ongoing activity. As noted above, the Tilbury2 proposals are too far from the AQMA to affect concentrations within it. The applicant notes the success of Action 3 and will be enacting similar measures through the OMP (Document Reference POTLL/T2/EX/40), which will be secured through the DCO (Document Reference POTLL/T2/EX/35).</p> <p>(*Reports and data obtained from KentAir website, 28/03/18).</p>
Gravesham Borough Council	Gravesham BC Local Impact Report for Tilbury2 – page 17	Paragraph 18.357 advises that operational shipping emissions have been screened out as not significant therefore the effects of residual emissions will not be significant. Both Thurrock and Gravesham BC in our Relevant Representations highlighted that we felt further work was needed on the ability to provide shore power to vessels as technology improves so vessel engines can be turned down in port, reducing air quality and noise emissions. Gravesham BC stated that, at present, we were not convinced that the Tilbury2 is fulfilling its potential as a strategically important infrastructure project in this regard. Gravesham BC's response to first written question 1.1.1 provides more information on this issue.	<p>The Applicant has provided further detail on shore power in its response to the GBC response to FWQ 1.1.1a, both in relation to shore power and the relevant EU Directives mentioned by them. The Applicant confirms that the port will conform with the relevant Directives and compliance will be secured within the Operational Management Plan (Document Reference: APP-165). This is subject to the constraints highlighted within the Applicant's response to 1.10 (Engineering and Design).</p> <p>Generally, the Applicant disagrees with the assertion of GBC that Tilbury2 is not fulfilling its potential as a strategically important infrastructure project in this regard. As set out the Applicant's response to the GBC response to FWQ 1.1.1a and the Applicant's response to FWQ 1.1.1b, the Applicant is mindful of its future potential and making the appropriate proportionate passive provision for shore power.</p> <p>The Applicant once again highlights the conclusions in Paragraph 18.357 of the ES which state that operational shipping emissions have been screened out as not significant and therefore the effects of residual emissions will not be significant.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Gravesham	RFWQ 1.1.1It is GBC's view that this is a golden opportunity to embed shore power from the outset at Tilbury2 instead of the ship operators controlling whether they equip their ships or not. Having ships docked in the river with their engines running to power the ship will cause unnecessary air pollution and noise pollution. GBC wants the Panel to consider whether there should be some commitment to install a facility in a given period of time	<p>In PoTLL's first written responses in question 1.1.1a the Applicant has responded in reference to this point and refers the panel and GBC to this response. The Applicant also makes the following further comments as follows in relation to GBC's response to 1.1.1a</p> <p>Whilst the Applicant recognises the points that GBC has highlighted, at the present time there are no vessels that have the capability to receive shore power currently calling at the existing port or which are likely to call at the RoRo or CMAT terminal on Tilbury2.</p> <p>GBC references certain legislation in its response: Directive 2014/94/EU on the Deployment of the Alternative Fuel Infrastructure provides that "Member States shall ensure that the need for shore-side electricity supply for inland waterway vessels and seagoing ships in maritime and inland ports is assessed in their national policy frameworks. Such shore-side electricity supply shall be installed as a priority in ports of the TEN-T Core Network, and in other ports, by 31 December 2025, unless there is no demand and the costs are disproportionate to the benefits, including environmental benefits." (article 4(5)). Notwithstanding that there is no identified demand (see below), the Applicant has already committed to the provision of the necessary infrastructure pending provision of suitable electricity supply. This is a proportionate approach.</p> <p>The Alternative Fuels Infrastructure Regulations (2017/897) refer to the installation and design standards for shore power so that provision, where made, is consistent across EU ports. The Regulations do not determine whether shore power should or could be installed. The Applicant has already committed to install the cabling should this become an opportunity in the future and is therefore in line with the Directives for shore power infrastructure. Once installed, the Applicant will ensure that such infrastructure conforms with the required standard.</p> <p>There are, however, significant constraints at present which are outside of the control of the Applicant which prevent shore power from being utilised at the port as we have explained in our written response, these being:</p> <p>A.) The majority of vessels calling at UK ports do not have shore power capability and the costs of fitting retrospectively are significant and the installation of the equipment to vessels is not within the control of a commercial port operator. New vessels under construction may well have this fitted in the future as part of their construction and the Applicant has therefore committed to put in the infrastructure so that should this become available then it can facilitate shore power. The port cannot commit to a timeframe for this as it is beyond the port's control. The GBC response also makes reference to a press article related to Southampton, but it should be noted that whilst there are good intentions in this regard, no shore power facilities are currently available in Southampton. Whilst the port operator has indicated they would like to see this in place, the Applicant can find no record of this commitment being followed up with a clear plan. Tilbury2 has already committed to put in place the</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>infrastructure for shore power to be facilitated in the future subject to the technology improvements on the vessels themselves.</p> <p>B.) In the UK (as widely reported) there are currently capacity issues on the electricity network which mean that availability of electrical supplies is constrained in a number of areas. This will continue to be the case without significant investment in National Grid substations and UKPN substations. The Tilbury2 electrical need for its operations on site including the CMAT will utilise all of the current available power in the area without a further significant upgrade. The Applicant has no visibility on when the capacity in the area will be increased nor is it within the Applicant's control. The port would therefore be restricted from supplying the required power to vessels until such upgrades are made. In this regard therefore the port cannot commit to a timeframe for the provision of shore power.</p>
Gravesham Borough Council	Gravesham BC Local Impact Report for Tilbury2 – page 8	Gravesham BC understand that odour, polluting water, hazardous waste and pests were scoped out of the health assessment at an early stage. Gravesham BC is surprised that odour was scoped out as an asphalt manufacturing plant is included within the proposal and these can generate odour complaints	The ES (Document Reference 6.1) Chapter 18 (Air Quality) describes the odour assessment that was carried out. This was included in response to a specific concern raised by GBC during consultation (Table 18.7, row 8). The assessment approach is described in paragraphs 18.65 to 18.67 and 18.115 to 18.118. The assessment findings are described in paragraphs 18.308 to 18.311. The risk of odour exposure was found to be negligible and consequently, the likely magnitude of effect was deemed to be negligible for all receptor types. On this basis, the Health assessment (Chapter 8) was able to scope out effects of odour.
Port of London Authority	RFWQ (TR03003) 1.9.15 – paragraph 6	Other environmental concerns relate to Air Quality. The baseline mentioned in the ES does not include the inventory data for shipping, so the PLA is uncertain what basis PoTLL has used for the assessment of impact from the air quality impact. In addition, the PLA considers that future proofing the site for the provision of shore power must be considered and is raising these matters with PoTLL.	<p>The air quality baseline for the ES Chapter 18 used the standard approach which is to use DEFRA maps of background concentrations and to add the modelled emissions from road and rail to this in order to estimate total concentrations. It was assumed that emissions from the existing Tilbury port were included in the DEFRA background maps, but it has since come to light that DEFRA, while including shipping in the maps, had not applied any emissions to the existing port. The new PLA emission inventory, which explicitly includes Tilbury port, should help rectify the DEFRA maps in the long term. Meanwhile the omission of the port emissions has not affected the robustness of the air quality assessment for Tilbury2, as it has been addressed through the verification process for background locations.</p> <p>The DEFRA mapped estimates used in the ES were verified through comparison to measured concentrations at the Thurrock continuous monitoring station TK1 (ES Appendix 18.C.6), in an approach discussed and agreed with the local authority. This comparison gave an uplift factor of 1.66 which was applied to all mapped background concentrations, to account for the underestimate evident in the mapped estimates. The applicant has since undertaken a further comparison with an urban background diffusion tube site in the centre of Tilbury (Sydney Road, a location which is likely to receive input from emissions from the existing port) and obtained a very similar uplift factor (1.63) to that of TK1.</p> <p>In addition, the modelled results for the base year 2016 were verified against monitoring data for the same year (ES Appendix 18.D). This found that model results were systematically underestimating total NO₂ concentrations in the Tilbury area. This was thought to be due to congestion and other urban factors causing the modelled emissions to underestimate actual contributions from road vehicles (a typically encountered situation in roads modelling) and was corrected for by applying an adjustment factor of 3.7 to modelled road NO_x. It is now known that the existing port shipping emissions are not accounted for in the DEFRA background maps, therefore this underestimate may have partially been attributable to an underestimate of background rather than the road contribution.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>Nevertheless, the model adjustment factor applied ensured that the modelled results were brought in line with actual measured concentrations in Tilbury.</p> <p>Overall, the applicant is satisfied that through these two separate verification processes, and the uplift factors subsequently applied to the background concentrations used and the modelled emissions respectively, any influence of shipping emissions in Tilbury that was not explicitly accounted for in the DEFRA mapped background has been duly accounted for in the assessment process.</p> <p>The Applicant has provided further detail on shore power in the response to GBC First written response 1.1.1a. The Applicant confirms that the port will conform with the relevant directives and compliance will be secured within the Operational Management Plan (Document Reference: APP-165). This is subject to the constraints highlighted within the Applicant's response to FWQ 1.10 (Engineering and Design) (PoTLL/T2/EX/49).</p>

1.2. BIODIVERSITY and 1.11 HABITATS REGULATION ASSESSMENT

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Natural England	Natural England Written Rep (TR030003-000655) 3.1 (page 4)	3.1 International conservation designations “our advice relating to the [Thames Estuary and Marshes] SPA is equally applicable to the Ramsar”	Noted. This is consistent with the approach taken to cited interests common to both sites, e.g. birds, in the Habitats Regulations Assessment (HRA) Report (Document Reference 6.2, 10.O/APP-060) so confirmation of its acceptability here is welcomed.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 7-8)	4.2a. Potential impacts on terrestrial invertebrates <u>Description of the Value of Component Parts of the Site</u> “our view is that the Lytag site has retained its overall value, albeit with some limited decline in condition” and (of TEEC); “Without management it looks like this site will decline further.”	PoTLL welcome this recognition of processes of decline, which should be noted when considering later sections of NE’s Written Representation and the position taken by Buglife.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 8)	“The invertebrate survey reports do not state how much survey effort was placed where and when”.	PoTLL are not aware of any analytical technique for invertebrate surveys that relies on standardised effort for active sampling beyond very broad comparative measures (such as numbers of days a static trap is <i>in situ</i>). Such broad detail is provided in the 2016 invertebrate survey report (Document Reference 6.2, 10.K /APP-056) which sets out at section 1.1 the dates the site was visited and survey activities undertaken (including the duration traps were <i>in situ</i> for static sampling methods). The most recent (2017) invertebrate survey report (Document Reference 6.2, 10.L /APP-057) sets out at ‘Section 3.1 Fieldwork Visits’ the dates the site was visited (including a breakdown of compartments visited) and what survey activities were undertaken. A significant measure of active sampling was employed in 2017. Constraints are listed at Section 3.2 which states that productive fieldwork was possible throughout all the survey visits except for one curtailed by a thunderstorm. While it might be possible to break this down further into minutes for each compartment, such measures would be prone to such margins of variability and error that they would be meaningless. It is considered neither practical nor worthwhile (in terms of understanding) to break survey time down into numbers of net sweeps, minutes spent in direct observation, minutes spent on ID, minutes spent scanning for likely profitable sample spots, etc.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 9)	<u>Background to Invertebrate Interest of the Thames Gateway</u> “We now understand much better the unique contribution that several of these sites make to the overall resource of the Thames Gateway, such that it should not be thought that one brownfield invertebrate site is much the same as the next. Sites can now be shown to be statistically distinct from one another, and placed in a more refined context”	The Applicant would encourage Natural England to provide further information on this ‘contextual’ evidence– e.g. where the Lytag, ‘The Rest’, TEEC, ‘whole site’ and Infrastructure Corridor assemblages sit statistically within this Thames Gateway framework. The Applicant does not have access to this information on Pantheon and ISIS outputs for other Thames Estuary brownfields. Thus it is unclear on what evidential basis the statement is made that several sites make ‘unique’ contributions to the overall resource.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 9)	“The cumulative effect of these projects presents a significant threat to the remaining invertebrate resource of the Tilbury area, and which, in our view, would benefit from a holistic approach to development via a strategic solution, which initially would be well served by appropriate EIA cumulative impact assessment (see below)”.	See response on HRA (under 4.2b below) and CIA (under 4.2c below) for coverage of in-combination effects.
Natural	Natural England Written Rep (TR030003-	“We regard the invertebrate assemblage of the Tilbury2 site (and its subsections as described above) as being demonstrably distinct from other sites in the Thames Estuary, and therefore within scope for SSSI	See response two rows above. Notwithstanding that the Applicant agrees that the invertebrate assemblage of the Tilbury2 site is of national significance, the Applicant

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
England	000655) 4.2a (page 10)	notification in its own right.”	<p>considers that it would be helpful if Natural England could set out their understanding of how this site sits within the nationally important Thames Estuary brownfield resource in ‘league position’ terms in order to determine how much weight to attach to the discussion of ‘SSSI quality’ having regard to the amount of brownfield habitat still remaining in the Thames Estuary (noting that the ‘All of a Buzz’ project¹ did not identify all brownfield sites), the extent to which other sites have been studied to an equivalent level as the Tilbury2 site and the Guidelines for the Selection of Biological SSSIs² ‘exemplary site principle’.</p> <p>It is noted that Natural England’s position vis-à-vis potential for SSSI notification has emerged very late in the DCO process, first being cited in their Relevant Representation of 08 January 2018. The agreed minutes of meetings with Natural England during the course of 2017 squarely place the ‘invertebrate interests of the post-industrial habitats on the former power station site’ within the suite of matters of a non-statutory nature that Natural England would take an interest in addition to their main remit.</p>
8	Natural England Written Rep (TR030003-000655) 4.2a (page 10)	“Please note that [the JNCC Guidelines for SSSIs] are subject to revision, with the updated version expected shortly (current timeframe March 2018)”.	It would clearly be useful for all parties to have a better defined timetable for this and clarity on whether the latest revision will include the long-awaited revision to Chapter 20 (‘Invertebrates’). NE are presumably in a position to provide this update.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 10)	<p><u>Progress with the Invertebrate Mitigation / Compensation Package</u></p> <p>“we have recently met with the developer at a senior level to discuss our concerns on Friday 16th March 2018”</p>	Minutes of this constructive meeting have been taken and a draft issued to Natural England for approval. These will be appended to the next version of the Statement of Common Ground (SoCG). Subsequent to the meeting of 16 March 2018, there has been further correspondence to explore and discuss options for invertebrate mitigation/compensation, as jointly agreed as an action. The Applicant is also continuing discussions with a number of third party landowners and their agents with a view to settling on the best possible solution for invertebrate mitigation/compensation.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 10)	“Whilst we recognise the objective of the applicant to maximise economic profitability of their proposal, we are not yet satisfied that efforts to avoid the highest quality areas of the development site are proportionate to the nationally significant nature conservation interests found within it.”	<p>The question of adherence to the mitigation hierarchy is addressed in general terms in the Applicant’s response to FWQ 1.2.3. The justification for <i>in situ</i> retention being discounted as an option is given in the CMAT Position Statement set out at Appendix B to its Response to First Written Questions (PoTLL/T2/EX/49). This document set out the legal, policy and operational justification for the CMAT (the aspect of the development which most affects invertebrate, botanical and lichen interests) and its location at Tilbury2. The Masterplanning Statement referred to in NE’s written representations explains the need for the RoRo terminal to be located closer to the river, and thus why the CMAT is located at the ‘back’ of the overall Tilbury2 site.</p> <p>The relative hierarchy of finer grained mitigation and compensation decisions beyond the justifications set out in the documents referenced above , and in particular the decision to accommodate translocated protected water voles on-site and to translocate substrates associated with invertebrate, lichen and botanical interests to a near-site or off-site location was made with reference to JNCC Biological Translocation policies, having regard to the consenting, regulatory and industry-standard factors attendant with water vole licensing, relative to the non-statutory</p>

¹Buglife (2005-2012). <<https://www.buglife.org.uk/campaigns-and-our-work/habitat-projects/all-buzz-thames-gateway>>

² JNCC (Under Revision). Guidelines for selection of biological SSSIs:Rationale, Operational approach and criteria, Detail guidelines for habitats and species groups. Available from: <http://jncc.defra.gov.uk/page-2303>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			nature of the Lytag Brownfield and TEEC LoWS designations and their associated invertebrate, plant and lichen species. Since the 16 March 2018 meeting with Natural England referred to above and left, and on the basis of discussions with NE at that meeting that indicated an alternative hierarchy might be welcomed by the statutory authority in this specific case, there has been further correspondence with NE connected with further exploration and discussion of options for invertebrate mitigation/compensation. The Applicant is also continuing discussions with a number of third party landowners and their agents with a view to discussing and agreeing with NE the best possible overall solution for mitigation/compensation having regard to the ecological requirements of the habitats and species concerned.
Natural England	Natural England Written Rep (TR030003-000655) 4.2a (page 10-11)	"at the time of submitting these Written Representations, we remain of the view that no appropriate conservation outcome for terrestrial invertebrates has yet been presented to us"	The Applicant understands that Natural England was unable to revise its Written Representation in the time between the meeting with the Applicant on 16 March 2018 and Deadline 1. Please see response in above row for information about the ongoing nature of discussions and exploration of options.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 11)	4.2b. Potential impacts on internationally designated sites and their qualifying species [HRA matters] "Natural England agrees with the HRA that Thames Estuary and Marshes SPA and Ramsar are, in our opinion, the only internationally designated sites that are likely to be affected by the proposal"	These comments relate to the Habitats Regulations Assessment (HRA) report (Document Reference 6.2, 10.O /APP-060). This confirmation is welcomed.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 11)	"Paragraph 4.5.2 [of the HRA Report] states: <i>'4.5.2 - In respect of [cited species of] birds making use of (predominantly intertidal) habitats for feeding that are closer to the Tilbury 2 site than the designated SPA/Ramsar boundaries], the assumption can readily be made that such species will to a greater or lesser extent form part of or at least interchange with the nationally or internationally significant numbers that underpin the SPA/Ramsar designations and thence significant effects on them (for example from displacement) even outside the designated area could give rise to indirect significant effects within the designated sites, potentially up to and including threats to the continued sustainability of the key populations and thus site integrity.'</i> Natural England is broadly happy with the above statement subject to the interpretation of ' <i>including threats to the continued sustainability of the key populations and site integrity</i> ' adequately assessing whether the affected area is necessary to maintain or restore favourable conservation status"	For the avoidance of doubt, this consideration (i.e. the possible role of functionally linked habitat in not only maintaining but 'restoring' favourable conservation status) formed part of the HRA assessment. A change will nonetheless be made to the HRA report (Document Reference 6.2, 10.O /APP-060) for Deadline 3 to clarify this in line with Natural England's request. The Applicant does not contest the premise that the intertidal/foreshore habitats falling within the Tilbury2 proposed Order Limits may have some degree of functional linkage to the designated SPA/Ramsar Site (the existence and strength of that linkage depending between the various cited species) and adopts the precautionary principle in their consideration. The Applicant is nonetheless satisfied having conducted the assessments reported in the HRA report (Document Reference 6.2, 10.O /APP-060) that having regard to the zone of potential influence of effects arising from the Tilbury2 construction or operation, the magnitude of such effects and the extent of use of that zone by the more sensitive of the species in question, that there is no risk of a significant impact on any of the interest features underpinning the SPA/Ramsar Site, no likely significant effect on either designation and by extension no threat to the integrity of either the SPA or Ramsar Site.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 12)	"For the avoidance of doubt Natural England is also broadly satisfied with section 4.5.3 of the HRA, which states: <i>'4.5.3 - In respect of populations of cited plant and invertebrate species relevant to the Ramsar Site but outwith the designation boundary and closer to the Tilbury 2 site, interrelationship with the Ramsar Site populations cannot be assumed so readily. However, the restricted distribution of such species and their specialist habitat requirements indicate that the health of populations outside of the designated site is very likely to have at least some degree of functional linkage to the health of the populations within it (for example in performing a role in genetic flow and exchange). These extra-boundary populations thus also fall to be considered in the HRA process.'</i> "	Noted.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 12)	<u>Section 1 - Additional potential impacts</u> “ Invasive Non-Native Species - Natural England acknowledges there is information within the ES but advises this should also be addressed within Section 5 of the HRA to specifically address the Habitats Regulations requirements”	The information on Invasive Non-Native Species (INNS) in the ES will be included into a revision of the HRA Report for the avoidance of doubt, to be submitted at Deadline 3.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 12)	“ Construction Waste and Pollutants – The construction activities within the development footprint have the capacity to introduce or mobilise environmental contaminants via a range of activities (eg, elevated construction dust; increased quantity and affected quality of surface water run-off; use or application of non-biodegradable toxic chemicals, etc) to potentially impact on the Thames Estuary and Marshes SPA and Ramsar site. Natural England acknowledges the information within the ES and the Construction Environment Management Plan (‘CEMP’), however we recommend the potential impacts to the SPA and Ramsar site features and proposed mitigation are separately addressed within the HRA to ensure the CEMP has an appropriate framework of reference to demonstrate compliance with the Habitats Regulations.”	The HRA Report will be updated for Deadline 3 to review and where necessary clarify these assessments of construction phase activities.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 12)	“ Operational Waste and Pollutants – The Port operations enabled have the capacity to increase and alter water discharges to the Thames which may potentially impact on the functionally-linked habitat. They also have the capacity to introduce or mobilise contaminants via a range of activities (eg, surface run-off from increased vehicle movement, operational spillages). Natural England acknowledges the information within the ES and the Operational Management Plan (‘OMP’), however we advise the potential impacts to the SPA and Ramsar site features and proposed mitigation are separately addressed within the HRA to ensure the OMP has an appropriate framework of reference to demonstrate compliance with the Habitats Regulations.”	The HRA Report will be updated for Deadline 3 to review and where necessary clarify these assessments of operational phase activities.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 13)	<u>Section 2 - Points of detail about potential impacts listed within HRA with reference to paragraphs</u> “Natural England advises that reference to ‘ <i>the European Site</i> ’ in Chapter 5 should be interpreted as Thames Estuary & Marshes SPA and Ramsar site”.	Agreed.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 13)	“ Water and/or sediment quality ... Natural England considers that this section requires additional text (as illustrated in bold) to confirm the need to consider impacts on Functionally-Linked habitats.	Suggested additional text will be added to the HRA report for Deadline 3 for clarity. For the avoidance of doubt, the submitted Habitats Regulations Assessment report included consideration of potential for likely significant effects on functionally linked habitats from changes to water and/or sediment quality.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 13)	“ Disturbance – shipping ... Natural England advises that the proposed development is not only likely to increase shipping traffic in this area but also alter current shipping operations in the river”. Additional bold text proposed to para 5.1.6 of HRA report.	Suggested additional text will be added to the HRA report for Deadline 3 for clarity. For the avoidance of doubt, the submitted Habitats Regulations Assessment report included consideration of potential for likely significant effects on functionally linked habitats from changes to shipping operations.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 13)	Natural England advises that the proposed development is not only likely to increase shipping traffic in this area but also alter shipping operations in the river at this location, as described in the additional text proposed for section 5.1.6 above. Text is suggested for addition to para 5.1.7 (noise and lighting disturbance).	Suggested additional text will be added to the HRA report for Deadline 3 for clarity. For the avoidance of doubt, the submitted Habitats Regulations Assessment included consideration of potential for likely significant effects on the European Site from noise and lighting disturbance associated with changes to shipping operations.
Natural England	Natural England Written Rep (TR030003-000655)	Suggested additional text (bold): ‘5.2.1 - <i>The marine elements of the Tilbury2 project site include representations of ‘intertidal habitats including ‘saltmarsh, and mudflat’ and shingle/cobble beach that are a continuation of habitats present within and integral to the European Site. The potential for impacts on these to have implications for the European Site lies mainly in the scope for impacts on</i>	Suggested additional text can be added to the HRA report for Deadline 3. However the Applicant suggests it would be helpful for Natural England to confirm the purpose of requesting this change. To the extent that shingle/cobble beach habitats occur within the proposed Order Limits at all, they are captured under the description of

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
	4.2b (page 13-14)	<i>associated fauna and flora that represent an integral part and/or extension of the populations for which the European Site is designated. Principal amongst these are wading birds and waterfowl, where they use these habitats closer to the Tilbury2 site, but also the populations of cited insect and plant taxa which may form part of or an important outlier to local metapopulations that are important for reasons such as genetic exchange and/or providing a failsafe against localised extinctions.'</i>	coastal saltmarsh in the ES, noting that much of that saltmarsh has developed over collapsed former sea defences that are comprised of stony material. To subdivide that habitat category further in the way suggested is likely to reduce the amount of 'priority' habitat requiring to be considered, given that 'shingle/cobble beach' is not a priority habitat.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 14)	Impacts with the potential to give rise to effects on functionally linked features. Natural England is content with this text (para 5.2.1 as above) providing the statement ' <i>where they use these habitats closer to the Tilbury2 site</i> ' is interpreted as 'birds using functionally-linked habitats that are closer to the Tilbury2 site than the habitats of the Thames Estuary & Marshes SPA and Ramsar site'.	Noted and agreed. A clarification can be made in updated HRA report for Deadline 3.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 14)	"For the avoidance of doubt, no firm conclusions can be made at this stage about the relationship between the likely scale of potential impact(s) and proximity to the Port of Tilbury2 site. This is important because the range of potential impacts identified include hydrodynamic processes, sediment regimes and involve intertidal habitats of different character and habitat importance. Furthermore, these effects can be cumulative and synergistic and need to be considered 'in combination' with other relevant plans and projects."	It is unclear from this statement whether Natural England are saying they dispute or accept the conclusions of the hydrodynamic impacts studies relied upon and referenced in the HRA report (<i>HR Wallingford (October 2017) Port of Tilbury Expansion: Hydrodynamic and sediment study</i> ; Document Reference 6.2, 10.D /APP-089). It is notable that no mention is made of this study in Natural England's WR.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 14)	Proposed additional text: "5.2.3 – Habitat Loss: Any loss of intertidal habitat (e.g. 'saltmarsh, or intertidal mudflat' and shingle/cobble beach 'habitat') 'would denude the local extent within and around the European Site' (including functionally-linked habitat) 'and may have implications for carrying capacity and/or pressure on the surviving examples within the European Site.'"	Suggested additional text can be added to HRA report for Deadline 3. However, in respect of the addition of 'shingle/cobble beach habitat' the Applicant suggests it would be helpful for Natural England to confirm the purpose of requesting this change. To the extent that shingle/cobble beach habitats occur within the proposed Order Limits at all, they are captured under the description of coastal saltmarsh in the ES, noting that much of that saltmarsh has developed over collapsed former sea defences that are comprised of stony material. To subdivide that habitat category further in the way suggested is likely to reduce the amount of 'priority' habitat requiring to be considered, given that 'shingle/cobble beach' is not a priority habitat.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 14)	Proposed additional text: "5.2.5 - <i>The construction of new and/or expanded marine structures and associated capital and maintenance dredging has the potential to interfere with coastal and estuarine processes, including patterns of sediment circulation, accretion and deposition close to the Tilbury2 site where it could affect the morphology, extent and condition of intertidal habitat including 'saltmarsh, and mudflat' and shingle/cobble beach 'habitats that are functionally linked to the European Site.'</i> "	Suggested additional text can be added to HRA report for Deadline 3. However the Applicant suggests it would be helpful for Natural England to confirm the purpose of requesting this change. To the extent that shingle/cobble beach habitats occur within the proposed Order Limits at all, they are captured under the description of coastal saltmarsh in the ES, noting that much of that saltmarsh has developed over collapsed former sea defences that are comprised of stony material. To subdivide that habitat category further in the way suggested is likely to reduce the amount of 'priority' habitat requiring to be considered, given that 'shingle/cobble beach' is not a priority habitat.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 14)	"References to 'local' 'proximal' and 'nearby' in paragraphs 5.2.3 – 5.2.9 should not be interpreted at this stage as only relevant to areas a short distance away from the Tilbury2 site, because no firm conclusions can be made yet about the relationship between the likely scale of potential impact(s) and proximity to the Tilbury2 site. The 'zone of disturbance to birds' caused by human movement (referred to in paragraph 5.2.9) and the relevant distance involved are likely to differ between bird species. The HRA should be able to refer to research on bird disturbance that provides a relevant framework of reference for assessing likely zone of influence."	See comments three rows up regarding non-disturbance effects. As regards the 'zone of influence' of disturbance to birds, the HRA report does draw on and refer to widely accepted and adopted research to define this envelope (TIDE toolkit ³ as referenced at paras 4.1.2 and 7.1.1 of the HRA report). The envelope is defined by reference to the maximum response distances of the relevant species, and the predicted decibel outputs of the most disturbing activities (i.e. piling) so is 'worst case' in its application. Some of the species using the envelope will be more resistant to disturbance than others, by reference to established studies as cited in TIDE, and for these the envelope of potentially disturbing effects may be smaller than allowed for. Thus, the approach taken in the HRA report is 'worst case'.
Natural	Natural England Written Rep (TR030003-000655)	"The 'zone of influence' of lighting and the relevant distance involved will differ from those relevant for	This is agreed, but as explained at paras 4.1.2-4.1.3 of the HRA report, and in the row above, the zone of influence for disturbance effects is defined on a 'worst case' basis.

³ Waterbird Disturbance & Mitigation Toolkit. Accessed October 2017 from http://www.tide-toolbox.eu/tidetools/waterbird_disturbance_mitigation_toolkit/

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
England	000655) 4.2b (page 14)	noise and human bird disturbance.”	In impact assessment terms there is no real difference in a significant disturbance effect from lighting or noise. Hence if lighting might disturb a species at 50m from source, it is irrelevant if that species will not be approaching that close in any event due to noise disturbance. This is why the envelope used for disturbance effects is both defensible and conservative/worst case.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 15)	“References to ‘and around the European Site’ should be interpreted as ‘including functionally-linked habitat”.	Agreed. For the avoidance of doubt, the submitted Habitats Regulations Assessment included consideration of potential for likely significant effects on functionally linked habitats.
Natural England	Natural England Written Rep (TR030003-000655) 4.2b (page 15)	”The HRA Assessment of Potential Impacts requires an assessment of likely significant effects alone and in combination with other plans and projects. ... Natural England also has concerns relating to what has been excluded from the in combination assessment for the purposes of HRA. Specifically Natural England disagrees with the applicants view that the LTC and the Tilbury Energy Centre (‘TEC’) should be excluded from the in combination assessment.	See response in row below.
Natural England	Natural England Written Rep (TR030003-000655) 4.2c (page 15-16)	<p>4.2c. The Habitats Regulations in combination assessment and the Environmental Impact Assessment cumulative assessment</p> <p>Natural England disagrees with the applicant’s decision to exclude the proposed Lower Thames Crossing (LTC) and Tilbury Energy Centre (TEC) developments from the list of in combination plans and projects within the HRA. Several reasons are cited touching upon the degree of progress of those projects and their relevance to the Tilbury2 site and project.</p>	<p>Cumulative Impacts - LTC. PoTLL’s position on this issue is set out in detail in the “Response to Relevant Representations” (Document Reference POTLL/Tilbury2/EX/32) at paragraphs 2.35–2.42 and also in response to the FWQ 1.7.1 (Document Reference POTLL/T2/EX/49). PoTLL remain of the view that it is not possible for a Cumulative Environmental Assessment (CEA) (including HRA) 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. In particular, the impact on the highway network from the implementation of the LTC is unknown as no data on this exists. 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. It is highlighted that Highways England agree with this position.</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. 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>Cumulative Impacts - TEC. PoTLL also remain of the view that it should not be for the Environmental Assessment of Tilbury2 to consider cumulative or ‘in-combination’ effects with TEC. However, PoTLL has prepared a ‘high level’ Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to this view. This is attached as Appendix C to PoTLL’s response to the Examining Authority’s First Written Questions (POTLL/T2/EX/49). 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. Paragraphs 3.28 – 3.33 discuss cumulative effects on terrestrial ecology.</p>
Natural	Natural England Written Rep (TR030003-	4.2d. Potential impacts upon lichen communities	It is agreed that the EMCP presented to NE on 16 March 2018, in order to advise them of its future content, was incomplete. Ongoing discussions with Natural England

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England	000655) 4.2d (page 16-17)	Natural England broadly concurs with the conclusions drawn in ES para 10.191 in respect of lichens. "We consider that the lichen communities may be more easily replicable than the invertebrate interest however the ES defers to the EMCP for details regarding mitigation and compensation. Natural England was only presented with this document on the 16th of March 2018. It currently contains no details relating to the proposed offsite compensation site and is therefore incomplete."	and exploration of options, including possible adjustments to the mitigation and compensation proposals, are continuing. However, a fuller draft of the EMCP is provided at Document Reference PoTLL/T2/EX61. Future iterations of the document, which will be prepared as greater detail becomes settled, will be presented to the ExA and consultees (including Natural England).
Natural England	Natural England Written Rep (TR030003-000655) 4.2e (page 17)	4.2e. Licensable protected species "Natural England has prepared a Letter of No Impediment ('LONI') relating to bat species dated the 18th of March 2018 and water voles and badgers on the 20th March 2018. Please note that the letters contain caveats which Natural England advises must be observed."	These LONI have been provided to the ExA (Appendix G to the Response to the ExA's FWQs; Document Reference POTLL/T2/EX/49). Their caveats are noted and in the process of being addressed where it is possible to do so within the Examination timeframe.
Natural England	Natural England Written Rep (TR030003-000655) 4.2f (page 17)	4.2f. Marine Interests "In our Relevant Representation response Natural England indicated that we were broadly satisfied that the project is unlikely to have a significant impact on either the Medway Estuary Marine Conservation Zone or the Upper Thames recommended Marine Conservation Zone."	This is noted and welcomed. We do draw attention to the slight contradiction in this position as against the comments made earlier in the WR in the context of the HRA and European Sites – specifically <i>"no firm conclusions can be made at this stage about the relationship between the likely scale of potential impact(s) and proximity to the Port of Tilbury2 site. This is important because the range of potential impacts identified include hydrodynamic processes, sediment regimes and involve intertidal habitats of different character and habitat importance. Furthermore, these effects can be cumulative and synergistic and need to be considered 'in combination' with other relevant plans and projects"</i> . It is unclear why NE are broadly satisfied that these factors are unlikely to give rise to a significant effect on the Medway MCZ or Thames rMCZ, but not satisfied in respect of the Thames Estuary and Marshes European and Ramsar Site.
Natural England	Natural England Written Rep (TR030003-000655) 4.2g (page 17)	4.2g. Planning Policy: NPPF consultation draft "We wish to highlight the following [quote from draft NPPF] Paragraph 117 regarding the need to make <i>'as much use as possible of previously developed or 'brownfield' land, except where this would conflict with other policies in this Framework, including causing harm to habitats of high environmental value.'</i> Note that the wording here is similar to paragraph 111 of the current NPPF."	The emerging replacement National Planning Policy Framework (NPPF) has been noted generally, including this paragraph. We agree with NE that the substance of this paragraph remains very similar to established and incumbent policy, as indicated in paragraph 111 of the current (2012) NPPF. At Deadline 3, the Applicant intends to submit a document outlining the changes promoted by the draft revised NPPF and the impact that this has on the application documentation - although for ecology please note the responses here and below.
Natural England	Natural England Written Rep (TR030003-000655) 4.2g (page 17-18)	"We wish to highlight the following [quote from draft NPPF] paragraph 168 <i>'Planning policies and decisions should contribute to and enhance the natural and local environment by:</i> a) <i>Protecting and enhancing valued landscapes, sites of geological value and soils (in a manner commensurate with their statutory status or identified quality)</i> b) ... c) ... d) <i>Minimising impacts and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'</i> ... [Draft] paragraph 173 reinforces the avoid, mitigate, compensate hierarchy: <i>'When determining planning applications, local planning authorities should apply the following principles:</i> a) <i>If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then planning permission should be refused.</i> b) ... c) <i>Development resulting in the loss or deterioration of irreplaceable habitats should be refused, unless there are wholly exceptional reasons'</i> "	The quality of the ecological resources on the site is a matter of broad agreement between the Applicant and Natural England and is fully recognised and presented in the ES. The draft NPPF does not therefore change the weight to be attached to that quality in the planning balance. The emboldened text from draft paragraph 168 is a replication of text in the current NPPF. As is the quoted passage from draft paragraph 173 regarding 'irreplaceable habitats'. The Applicant agrees that the draft NPPF is a material consideration, but on the basis of the material before the ExA it is of the view that it does not introduce any new policy considerations as regards ecological matters.
Natural	Natural England Written Rep (TR030003-000655)	4.3. Conclusions "Natural England is not yet satisfied that a likely significant effect can be ruled out either alone or in	Natural England is requested to specify the areas where further mitigation measures are deemed as possibly needing to be required, having regard to the responses set out above.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
England	000655) 4.3 (page 19)	combination at this stage and advises that further mitigation measures may be required to ensure compliance with the Habitats Regulations”.	
Natural England	Natural England Written Rep (TR030003-000655) 4.3 (page 19)	Natural England “advise that the following impacts need to be considered in the HRA document. <ul style="list-style-type: none"> • Invasive Non-Native Species • Construction Waste and Pollutants • Operational Waste and Pollutants” 	Attention is drawn to the responses given to these points above. In essence, the HRA will be revisited to ensure that the full coverage of INNS, construction waste and pollutants, as already included in the ES, is carried across and clarified.
Natural England	Natural England Written Rep (TR030003-000655) 4.3 (page 19)	Natural England “also advise that the HRA requires further consideration of: <ul style="list-style-type: none"> • Impacts of dredging on the European site and functionally linked land • Impacts of increased shipping traffic and operational changes on the European site and functionally linked land • Impacts of noise, dust, pollutants and lighting on SPA birds using the European site and functionally linked land both during the construction and operational stage. • In combination effects with both the LTC and Tilbury Energy Centre”. 	Impacts of dredging on both the European Site and functionally linked habitat have been considered in detail within the HRA report (paragraphs 5.1.4, 5.1.5, 5.2.5, 5.2.6, 7.1.3, 7.1.4, 7.2.2, 7.2.3, and appended screening matrix), drawing upon the hydrodynamic sediment modelling study referenced within the HRA (<i>HR Wallingford (October 2017) Port of Tilbury Expansion: Hydrodynamic and sediment study</i> ; Document Reference 6.2, 10.D /APP-089). As the impacts of shipping traffic and related operational changes (see HRA Report Appendix 6 - <i>Air Quality Consultants Report: ‘Air Quality Impacts on Designated Ecological Sites, Tilbury2 Dock, Thurrock (October 2017)</i> ; Document Reference 6.2, 10.O /APP-060) on the European Site have been considered in the HRA (paragraphs 5.1.3, 5.1.6, 5.2.4, 5.2.7, 7.1.2, 7.3.1, and appended screening matrix), NE is requested to specify the areas of perceived shortfall in relation to this part of the assessment. The HRA considered impacts of noise, dust and lighting on functionally linked habitats (paragraphs 5.1.7, 5.2.8, 7.1.1, 7.1.2, 7.2.1, 7.2.5, and appended screening matrix) within a clearly defined and justified zone of influence (section 4.1) both during the construction and operational stage. Pollutants have been assessed in terms of mobilised contaminated sediments (paragraphs 5.1.5, 5.2.6, 7.1.4, 7.1.5, 7.2.3, 7.3.1, and appended screening matrix) and air quality effects (paragraphs 5.1.3, 5.2.4, 7.1.6, 7.2.4, and appended screening matrix), for both the European Site and functionally linked habitats. It is not clear where the perceived shortfall is. The approach to in-combination assessment is set out in the answer to 4.2c above.
Natural England	Natural England Written Rep (TR030003-000655) 4.3 (page 19)	Natural England’s “key concerns are that: <ul style="list-style-type: none"> • The application as proposed will lead to the loss of an almost unique priority habitat [open mosaic habitat on previously developed land] and a national significant invertebrate assemblage. • Natural England considers that the habitats present would be extremely difficult to recreate with confidence on a compensation site. • Natural England rejects the assertion that successional issues have lead to the terminal decline of the invertebrate interest. We consider the current population to be of extremely high conservational value and advise that basic management could improve it yet further. • We are concerned that insufficient consideration has been given to the mitigation hierarchy, particularly to the requirement to avoid in first instance • We remain unsighted on a version of the EMCP with confirmed locations for off-site compensation (notwithstanding our concerns that this could be effective) • We have concerns relating to what has been excluded from EIA cumulative assessment (see 3.2.d 	Natural England does not provide any evidence in support of the assertion that the representations of ‘priority’ habitat on the site are “almost unique”. Indeed the suggestion from NE’s response to FWQ 1.2.2 (Written Rep Annex F page 116) is that all brownfield sites are unique in the terms defined. No suggestion has been made by the Applicant that successional issues “have lead to the terminal decline of the invertebrate interest”. Indeed there is agreement with NE on the site’s present interest being of ‘national significance’ (i.e. in the current baseline state). What has been stated is that successional processes will inevitably lead to decline in the future in the absence of management. That is not disputed by NE, nor can it be. Indeed the premise is accepted in earlier comments in the WR, and in NE’s response to FWQ 1.2.2 (see Annex F of NE’s WR, and row immediately below). The question of adherence to the mitigation hierarchy is addressed in the Applicant’s response to FWQ 1.2.3. Since the meeting with Natural England referred to on 16 March, and on the basis of discussions with NE at that meeting, there has been further discussion and exploration of mitigation and compensation options and this

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		above)."	<p>process remains ongoing.</p> <p>The Ecological Mitigation and Compensation Plan (EMCP) requires the ongoing discussions requested by Natural England to be concluded before it can be fully completed. Nevertheless an emerging draft of this document is provided at Document Reference PoTLL/T2/EX61.</p> <p>The justifications for exclusion of certain nascent or early-stage projects from the EIA cumulative assessment (and the HRA in-combination effects assessment) are set out in detail in the "Response to Relevant Representations" (Document Reference POTLL/Tilbury2/EX/32) at paragraphs 2.35–2.42 and also in response to the FWQ 1.7.1 (Document Reference POTLL/T2/EX/49) and as set out in the response to 4.2c above.</p>
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.2.2</p>	<p><i>ExA FWQ 1.2.2: ... 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?</i></p> <p>NE Response: The above statement is partially true in the absence of management but it is hard to conclude either way.... The response of vegetation to these substrate mixes is thus varied ... So it is hard to call if the drop in assemblage species is a sampling artefact, or some sort of successional shift, and if it is a shift, what sort. ... From a lichen perspective the most important aspect of the 'open mosaic habitat' for the interest at Tilbury, is the open unshaded ground. Without management or grazing, the open habitat will in time become increasingly vegetated and the lichen interest of open ground will decline.</p>	<p>It is noted that Natural England's response to this question confirms that they agree with the general premise that unchecked succession poses a threat to the open mosaic habitats and associated interest features.</p>
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.2.3</p>	<p><i>ExA FWQ 1.2.3: 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?</i></p> <p>NE Response: Paragraph 5.1.8 of the National Policy Statement for Ports advises that compensation and mitigation measures should be sought where significant harm to biodiversity and geodiversity conservation interests cannot be avoided. Whilst Natural England acknowledges the argument put forward in paragraph 5.24 of ES Appendix 5.A: Masterplanning Statement. Document Ref: 6.2 5.A we are not yet satisfied that at least some areas of high conservational value could not be retained. ...</p> <p>However... it is NE's opinion that regarding marine matters the applicant has considered and demonstrated paragraph 5.1.8 of the NPS for Ports.</p>	<p>The question of adherence to the mitigation hierarchy is addressed in the Applicant's response to FWQ 1.2.3, as reproduced below.</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 guidance⁴) 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 7.1/APP-166) 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 Applicant's 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; Draft provided at

⁴ 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.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>Document Reference PoTLL/T2/EX61).</p> <ul style="list-style-type: none"> 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>Further details regarding marine matters (including mitigation for smelt) are set out in the Applicant's response to FWQ 1.2.30 (Document Reference POTLL/T2/EX/49).</p> <p>The Applicant would also highlight the CMAT Position Statement set out at Appendix B to its Response to First Written Questions (PoTLL/T2/EX/49). This document set out the legal, policy and operational justification for the CMAT (the aspect of the development which most affects biodiversity impacts) and its location at Tilbury2. The Masterplanning Statement referred to in NE's written representations explains the need for the RoRo terminal to be located closer to the river, and thus why the CMAT is located at the 'back' of the overall Tilbury2 site.</p>
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.2.6</p>	<p><i>ExA FWQ 1.2.3: Open Mosaic Habitat on Previously Developed Land</i></p> <p><i>a) Have there ever been any habitat translocation trials for Lytag habitat substrates (or similar)?</i> <i>b) If so, were they successful? Please provide summary details.</i> <i>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?</i> <i>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?</i> <i>e) How would this large scale habitat translocation project be funded and managed?</i></p> <p>In response, NE describe the success of precursor examples of similar habitat translocation trials elsewhere.</p>	<p>The Applicant notes Natural England's statement that "it seems highly likely that the Lytag habitat can be re-created elsewhere". Given comments elsewhere this needs qualification.</p> <p>The Applicant also notes that NE appear to place a relatively high degree of confidence on the prospects for successful translocation of certain lichen species and communities.</p>
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.2.11</p>	<p><i>ExA FWQ 1.2.11: 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?</i></p> <p>NE's response highlights a number of key drivers:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Proximity, given that parts of the fauna have low mobility <input type="checkbox"/> Point to achievement of resource provision <input type="checkbox"/> Maintenance of source populations <p><u>Proximity.</u> Clearly the closer any new site is to existing brownfield sites of quality, the greater the chance of faunal establishment. The nature and quality of intercepting barriers should be minimised. Otherwise this will involve stochastic expansions of low mobility taxa set against a diminishing resource of those same taxon donor pools. Ideally, a new site would sit adjacent, and work phased to allow colonisation of parts of the new site from the old.</p> <p><u>Resource provision.</u> We understand, from the analysis of associations, that key components need to be in place. Looking at Mark Telfer's Lytag site data from the 2016-17 dataset, shows a conservation status species dependency on a range of other animals groups (top weighting attached to aphids, bees, snails,</p>	<p>The question of phasing is addressed in the Applicant's response to FWQ 1.2.11, with further detail to be provided in the 'phasing plan' to be set out within the emerging Ecological Mitigation and Compensation Plan (EMCP; Document Reference PoTLL/T2/EX61).</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 '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 in situ 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</p>

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		<p>wasps) , and then to generic classes of flowers and grasses, and “trees”, with more precision with plant genera such as clovers or birds-foot trefoils or a wider groups of Brassica species. To support the full Lytag fauna one would thus have to have viable and large establishment of these supporting species resources before the ecosystem had achieved some conservation maturity. It is understood that topographic and substrate variation are key to building any new habitat.</p> <p><u>Maintenance of source populations.</u> We are hindered by the Tilbury data offering up no real abundance data (it presents species presence only) so we cannot establish how much of the conservation status rarity profile of the site is founded on just one example, or might better reflect local populations. Given that the taxa of particular interest are either Rare or Nationally Scarce, their founder populations can similarly be scarce. If the source populations are destroyed before the colonisation and maturity are established, there remains an uncertainty over how much faunal resource will be available. Historical colonisation will have heavily traded on current population presence, and whilst new sites, if demonstrably good, could feed newer sites, this does depend more on their proximity, and the resource provision. Clearly, if one was going to do this in a logical manner, one would create a new site with appropriate materials from lower grade interest areas of the donor site, let it mature a bit, and let animals close by colonise. The more population centres one has the more resilient the fauna, as each brownfield site will be different and ought to support variants of a brownfield fauna.</p>	resource.
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.2.18 and 1.2.22</p>	<p><i>ExA FWQ 1.2.18: Water Voles. Is NE satisfied that water voles from the Proposed Development areas could be 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?</i></p> <p>NE Response: A Letter of No Impediment was issued on the 20th of March 2018 and is attached.</p> <p><i>ExA FWQ 1.2.22: Bats. Is NE able to provide a Letter of No Impediment for the loss of the bat roost in building B7?</i></p> <p>NE Response: A Letter of No Impediment was issued on the 18th of March 2018 and is attached.</p>	An additional LoNI has been issued by NE in respect of badgers (dated 20 March 2018), which is provided at Appendix G of the Applicant's responses to the ExA's FWQs (Document Reference POTLL/T2/EX/49).
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.5.1</p>	<p><i>ExA FWQ 1.2.3: “1.5.1. Has the Applicant submitted a copy of the Construction Method Statement to the Examination? If not, why not?”</i></p> <p>NE Response: NE would welcome sight of the Construction Method Statement to fully understand each phase of works and the methods to be employed. It would also be useful to secure appropriate mitigation measures within the method statement, for example timing of the dredge activity both seasonal and tidal.</p>	<p>The Applicant's response to FWQ 1.5.1 is set out at (Document Reference POTLL/T2/EX/49). Assumptions regarding the construction methodology are included in sections 5.107 to 5.125 of the Environmental Statement (Document Reference AS-006). 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>The detailed construction methodology will be developed by the appointed Contractor, but once appointed the Contractor's methodology will need to take account of the CEMP (Document Reference PoTLL/T2/EX/38) and other controls set out within the DCO.</p>
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.5.2</p>	<p><i>ExA FWQ 1.5.2. 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?</i></p> <p>NE Response: Mitigation for the piling activity should be clearly identified, including type of piling, and seasonal restrictions.</p>	Details of timing of the proposed piling and associated mitigation are set out in the Applicant's response to FWQ 1.5.2 (Document Reference POTLL/T2/EX/49). It should be noted that the MMO will be able to impose further controls on piling through the operation of the conditions of the DML within the DCO (Document Reference PoTLL/T2/EX/38).
Natural	Natural England Written Rep (TR030003-	<i>ExA FWQ 1.5.3. Please provide details of the locations, size of areas that would be subject to the various</i>	Details of the locations and size of areas that would be subject to the various types of piling, are set out in the Applicant's response to FWQ 1.5.3 (Document Reference

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
England	000655) Annex G as cited / Annex F as titled NE response to FWQ 1.5.3	<i>types of piling, together with the duration of piling in each location.</i> NE Response: Natural England would welcome sight of this information.	POTLL/T2/EX/49).
Natural England	Natural England Written Rep (TR030003-000655) Annex G as cited / Annex F as titled NE response to FWQ 1.7.1	<i>ExA FWQ 1.7.1. ... 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. ...</i> NE Response: Natural England disagrees with the applicant's decision to exclude the proposed Lower Thames Crossing development from the list of in combination plans and projects within the HRA for the following reasons: The proposed Lower Thames Crossing has been published for consultation with an approved location and route corridor; crossing-type and development timetable. The information available to Natural England and PINS indicates that the LTC will have a potential impact on the intertidal area of the Thames Estuary at a location near (X km east) to the proposed Tilbury Port2 development). The intertidal area within the likely corridor of development is identified by Natural England and both Tilbury Port2 and LTC developments as containing habitats that are functionally-linked to the Thames Estuary and Marshes SPA and Ramsar site. Both LTC and Tilbury2 are large nationally significant projects and the timescales of potential impacts are likely to either overlap and/or occur in successive years with implications for the Thames & Estuary Marshes SPA and Ramsar site features including the capacity to achieve favourable condition status. Natural England also questions the applicant's decision to exclude RWE's proposed redevelopment of the Tilbury Power Station site from the EIA, and also the HRA. With reference to the intended timetables of the RWE application and the information available (within current and previous submissions) Natural England is concerned that these two proximal developments will have a significant impact (cumulative and in combination) on nationally important nature conservation assets (terrestrial and intertidal habitats) and, it is unclear how a suitable mitigation and compensation package will be achievable without both parties working together in a strategically appropriate way, guided by an overarching and/or linked EIA. This is particularly relevant to the notable assemblages of invertebrates and vascular plants, where matters important to delivering conservation solutions (ie, piecemeal loss of supporting habitat extent and quality; 'irreplaceability' of Lytag habitat and 'in situ' conservation) are likely to constrain the capacity of each developer to achieve adequate mitigation and compensation packages. For matters relevant to SPA and Ramsar site non-breeding bird features these should also be covered by the HRA for completeness in accordance with the principles set out in the HRA including Chapter 5, accounting for our additional advice relevant to this section.	Cumulative Impacts - LTC. PoTLL's position on this issue is set out in detail in the "Response to Relevant Representations" (Document Reference POTLL/Tilbury2/EX/32) at paragraphs 2.35–2.42 and also in response to the FWQ 1.7.1 (Document Reference POTLL/T2/EX/49). PoTLL remain of the view that it is not possible for a Cumulative Environmental Assessment (CEA) (including HRA) 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. In particular, the impact on the highway network from the implementation of the LTC is unknown as no data on this exists. 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. It is highlighted that Highways England agree with this position. 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. 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. Cumulative Impacts - TEC. PoTLL also remain of the view that it should not be for the Environmental Assessment of Tilbury2 to consider cumulative or 'in-combination' effects with TEC. However, PoTLL has prepared a 'high level' Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to this view. This is attached as Appendix C to PoTLL's response to the Examining Authority's First Written Questions (POTLL/T2/EX/49). 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. Paragraphs 3.28 – 3.33 discuss cumulative effects on terrestrial ecology.
Natural England	Natural England Written Rep (TR030003-000655) Annex G as cited / Annex F as titled NE response to FWQ	<i>ExA FWQ 1.9.23. 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 construction works (DML condition 6) and maintenance dredging (DML condition 14)? If not, how would this be secured?</i> NE Response: ... It was advised that appropriate mitigation to ensure that sediment smothering was reduced via dredging operation and therefore the dredge activity should be carried out on an ebb tide. We would recommend that this is secured within the method statement, but also as a condition on the DML/DCO.	Such mitigation will be secured through the operation of the DML. Details of mitigation for dredging are set out in the Applicant's response to FWQ 1.9.23 (Document Reference POTLL/T2/EX/49).

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
	1.9.23		
Natural England	Natural England Written Rep (TR030003-000655) Annex G as cited / Annex F as titled NE response to FWQ 1.11.5	<i>ExA FWQ 1.11.8. For the avoidance of doubt, please can NE confirm agreement that:</i> <i>a) The correct European sites and qualifying features have been identified in the Applicant's HRA report [APP-060]; and</i> <i>b) Section 5 of the HRA report has identified all relevant potential impacts from the Proposed Development upon these sites?</i> NE Response: ... Natural England confirms that, in our opinion, Thames Estuary and Marshes SPA and Ramsar are the only internationally designated sites that are likely to be affected by the proposal.... The Thames Estuary & Marshes SPA/Ramsar site features listed in the HRA are correct.	These comments relate to the Habitats Regulations Assessment (HRA) report (Document Reference 6.2, 10.O /APP-060). The confirmation and clarification provided by Natural England are welcomed.
Natural England	Natural England Written Rep (TR030003-000655) Annex G as cited / Annex F as titled NE response to FWQ 1.11.8	<i>ExA FWQ 1.11.8. Please can NE confirm whether they are in agreement with the Applicant's conclusion that the Proposed Development (alone) would not result in any Likely Significant Effects (LSE) on the Thames Estuary and Marshes SPA and Ramsar site?</i> NE Response: After consideration of the detailed submissions for this proposed development, Natural England cannot yet discount a likely significant effect alone. A few examples are provided for reference rather than a complete list of detailed points of disagreement. i) The ecological value/ importance of the 'functionally-linked' habitat has been undervalued within the HRA and EIA. This is mainly because the environmental baseline is based on a snapshot assessment during a sub-optimal period rather than the 'broader longer-term' context. Natural England raised this risk during initial consultation but the applicants have been working to a demanding timetable that restricted the duration of site-based surveys. The baseline should seek to define the potential value of this functionally-linked habitat, noting it as an intertidal habitat that is contiguous with, and proximal to the Thames Estuary and Marshes SPA and Ramsar site. For example, Natural England is aware of at least two surveys since 2007/08 (which are referenced within a Tilbury2 file note submitted to us by Bioscan on the 9th of February 2018) that indicate that the Bioscan survey area supports SPA bird features in numbers of national and international significance, well above the 'low numbers' referred to within the assessments. ii) The proposed zones of influence are not clearly set out within the HRA (or linked EIA) assessments to enable robust impact assessments to be made that adequately address reasonably precautionary concerns. For example, the necessary dredging activities are likely to mobilise and disperse sediment (including significant concentrations of environmental pollutants) to effect a considerable area (distance and extent) of functionally-linked habitat. Whilst noting comments about background levels and modelled outputs, the predicted deposition quantity and quality on the functionally-linked habitat (and potentially parts of the Mucking Flats & Marshes SSSI part of the Thames Estuary & Marshes SPA and Ramsar site) requires validation monitoring. In addition to this, we note further submissions about dredging are necessary, with requirements for approval. These will need to address concerns about the likely effects of dredging on the quality of intertidal habitats, the invertebrate prey they support and the SPA features that feed on them. iii) Natural England does not agree that all the 'zones of influence' are sufficiently precautionary. For example, the HRA and ES regards a 300m distance as adequate to avoid significant disturbance to birds of the SPA and Ramsar site assemblage. The referenced toolkit places the ES noise levels from piling at this distance in a category of 'moderate – high' rather than adopting a distance generally regarded as 'low' impact. In addition to this, this toolkit also advises that 'site-based' information is necessary to ensure distances applied are project specific for impact assessment. Recent experience of piling activity at the adjacent Gosham Farm Jetty and the resultant bird displacement suggests that birds of the SPA assemblage are displaced in significant numbers from a distance beyond 300 metres.	i) The applicant disputes the assertion that the foreshore habitat has been undervalued. A note drawing in additional contextual data has been sent to NE and discussions are ongoing to resolve this point as part of the Statement of Common Ground. ii) The MMO will be able to impose controls on dredging through the operation of the conditions of the DML within the DCO. Activity-specific requirements from NE such as additional validation monitoring, can be accommodated within the Construction Method Statement (CMS), which needs to be consulted upon with NE by PoTLL prior to the submission of it to the MMO under the terms of the DML iii) The Applicant would request to see the noise data and bird data from which this statement regarding Goshem's Farm is drawn. iv) See above. It is unclear on what evidential basis NE is asserting that bird disturbance from the Goshems Jetty piling works has been manifested at distances >300m from source. It is similarly unclear whether statements about a perceived risk of contamination from disturbed benthic sediments have been made with due regard to the HR Wallingford study at ES appendix 16.D and as referenced in the HRA – see earlier responses. The controls available to the MMO through the operation of the conditions of the DML are not insignificant.

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		<p>iv) The estimated scale of influence for the various potential impacts appear to be sequentially downgraded without transparently addressing uncertainties. For example, Noise is described at 7.1.1 as exceeding a 55dB level at 300m distance from the application site but this potential impact to the SPA and Ramsar site feature birds is dismissed as insignificant, possibly because of a combination of (i) and (iii) above. The mitigation measures presented within the ES are not regarded as adequate to address bird disturbance within the 300m zone or beyond it to a zone agreed as low impact. Similarly, the sediments in the intertidal area of the application site have been shown to contain significant elevated levels of contaminants but the likely impacts of dredging (pollution, disturbance etc) have been discounted without site-based validation (or adoption of a precautionary position with commitments to undertake follow-up ground truth monitoring) and an assumption that likely significant effects alone (and in combination) can be avoided by further permissions (currently not obtained) which require further information (see 7.15 of HRA).</p> <p>The development plans mainly within the terrestrial area, (but also including some intertidal areas) have the capacity to impact on habitats that support a number of Thames Estuary and Marshes Ramsar site listed invertebrates and plants. The mitigation plans are not currently regarded as adequate to address the predicted scale of loss in extent and quality of the habitat mosaic and no compensation plans have been submitted yet for our consideration.</p>	
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.11.10</p>	<p><i>ExA FWQ 1.11.10. Please can NE indicate whether additional mitigation measures (above and beyond those proposed in the HRA report) are likely to be required?</i></p> <p>NE Response: Additional Mitigation measures are likely to be required for the following operations to ensure this proposed development (alone) can avoid a likely significant effect on Thames Estuary & Marshes SPA and Ramsar site. Natural England provides the following advice towards this aim but cannot pre-judge the adequacy of these mitigation measures without all the relevant information being made available for our consideration.</p> <p>Noise generation by piling within the river is likely to significantly disturb birds of the SPA and Ramsar site assemblage without additional mitigation. For example, the design and methodology will require careful programme timing to avoid the sensitive September – end March period.</p> <p>Surface water pollution needs to be effectively managed to avoid impacting on intertidal habitats supporting SPA and Ramsar site features. This requires additional mitigation measures to comply with best practice, in accordance with advice from the Environment Agency within the written representations.</p> <p>Dredging operations are likely to significantly impact on birds of the SPA and Ramsar site assemblage without additional mitigation. For example, the design and methodology will require careful programme timing to avoid disturbing these birds during the sensitive September – end March period.</p> <p>Dredging operations are likely to significantly impact on the functionally-linked intertidal habitats that support birds of the SPA and Ramsar site assemblage without additional mitigation. For example, the appropriate design and methodology (yet to be defined, agreed and permitted) will require careful programme timing to avoid increasing the presence of contaminated sediments to invertebrate prey and birds foraging during the Autumn – end March period (includes ringed plover autumn passage). In addition to this, monitoring will be necessary to ensure compliance with an approved best-practice methodology; validate the predictions from modelling; assess the scale & extent of any additional mitigation that may be required by the applicants (to deliver via a robust permission-linked mechanism) that is related to unforeseen impacts on the functionally-linked and SPA habitats.</p> <p>The Port operations enabled have the capacity to increase and alter water discharges to the Thames which may potentially impact on the functionally-linked habitat. They also have the capacity to introduce or mobilise contaminants via a range of activities (eg, surface run-off from increased vehicle movement, operational spillages). Natural England acknowledges the information within the ES and the Operational</p>	<p>The MMO will be able to impose controls on dredging through the operation of the conditions of the DML within the DCO. Activity-specific requirements from NE such as additional validation monitoring, can be accommodated within the Construction Method Statement, which needs to be consulted upon with NE by PoTLL prior to the submission of it to the MMO under the terms of the DML.</p> <p>To mitigate against the increase in contaminated sediments PoTLL has committed to use backhoe dredging for those areas of the river bed where high levels contaminants were found. This has been agreed with the MMO and will form part of the approval of method statements under the DML. As such, timing of dredging operations in relation to contaminants and birds, is not deemed necessary.</p> <p>The details of measures to prevent the introduction and/or spread of INNS, as set out in the ES, and secured within the DCO via the CEMP (Document Reference PoTLL/T2/EX/38), LEMP (Document Reference PoTLL/T2/EX/42), and EMCP (Document Reference PoTLL/T2/EX/61) will be incorporated in the HRA submitted at Deadline 3 for avoidance of doubt.</p> <p>Compensation for loss of intertidal habitats remain matters under discussion with the Environment Agency via the Statement of Common Ground (SoCG) process, but will ultimately be approved by them through the operation of their protective provisions.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>Management Plan (OMP), however we advise the potential impacts to the SPA and Ramsar site features and proposed mitigation need to be separately addressed within the HRA to ensure the OMP has an appropriate framework of reference to demonstrate compliance with the Habitats Regulations.</p> <p>Construction Waste and Pollutants – The construction activities within the development footprint have the capacity to introduce or mobilise environmental contaminants via a range of activities (eg, elevated construction dust; increased quantity and affected quality of surface water run-off; use or application of non-biodegradable toxic chemicals, etc) to potentially impact on the Thames Estuary and Marshes SPA and Ramsar site. Natural England acknowledges the information within the ES and the Construction Environment Management Plan (CEMP), however we recommend the potential impacts to the SPA and Ramsar site features and proposed mitigation are separately addressed within the HRA to ensure the CEMP has an appropriate framework of reference to demonstrate compliance with the Habitats Regulations.</p> <p>Invasive Non-Native Species – Construction works and Port operations have the capacity to introduce invasive non-native species that could potentially impact on Thames Estuary and Marshes SPA and Ramsar site features and the habitats that support them. Natural England acknowledges there is information within the Environmental Statement but advises this should also be addressed within Section 5 of the HRA to specifically address the Habitats Regulations requirements.</p> <p>The development plans mainly within the terrestrial area, (but also including some intertidal areas) have the capacity to impact on functionally linked habitats that support a number of Thames Estuary and Marshes Ramsar site listed invertebrates and plants. The mitigation plans are not currently regarded as adequate to address the predicted scale of loss in extent and quality of the habitat mosaic and no compensation plans have been submitted yet for our consideration.</p>	
Natural England	<p>Natural England Written Rep (TR030003-000655)</p> <p>Annex G as cited / Annex F as titled</p> <p>NE response to FWQ 1.19.22</p>	<p><i>ExA FWQ 1.19.22. 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 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?</i></p> <p>NE Response: Natural England broadly align with the Environment Agency's advice in their January 2018 representations, subject to further information and assessment where necessary to ensure proposals comply with Habitats Regulations requirements for the proposed development alone and in combination. From a HRA perspective, Natural England's concerns focus on the quality and extent of functionally-linked and SPA, Ramsar site habitats (mainly but not exclusively intertidal).</p>	<p>Compensation for loss of intertidal habitats remain matters under discussion with the Environment Agency via the Statement of Common Ground (SoCG) process, but will ultimately be approved by them through the operation of their protective provisions.</p>
Environment Agency	<p>Tilbury Written Reps (AE/2018/1225585/01-L01)</p> <p>Para. 8.1</p>	<p>The size and scale of the development poses a number of challenges in ecological terms. The environmental statement covers the main ecological issues that we would expect to be addressed by the applicant. However in some specific areas we have some remaining concerns that will need to be considered before we can be certain that the development will not cause a negative environmental impact. It must be ensured that any negative impacts of development are addressed satisfactorily with avoidance, mitigation and compensation measures. This principle is agreed in the statement of common ground (section - 4).</p>	<p>The Applicant's response to FWQ 1.2.3 summarises the measures undertaken to address ecological impacts via avoidance, mitigation and compensation. The measures proposed are set out in the following documents, which will be secured via the DCO:</p> <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 an emerging document, at Document Reference PoTLL/T2/EX61. The EMCP will be secured within the dDCO as per the provisions of Schedule 2, Part 1, Section 5: 'Off-site mitigation'.
Environment Agency	<p>Tilbury Written Reps (AE/2018/1225585/01-L01)</p>	<p>The Ecological Mitigation and Compensation Plan (EMCP) needs further exploration to show how mitigation is to be achieved.</p>	<p>The EMCP is an emerging document, a draft of which is presented at Document Reference PoTLL/T2/EX61. Future iterations of the document, which will be prepared as greater detail becomes settled, will be presented to the Examination and</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response																																
	L01) Para. 8.2	<p>After considering Section 10.226: Impact on Priority (S41) Habitat, we believe there is a compensation short-fall leaving a residual net loss for certain habitat (e.g. open mosaic). We believe more compensation is required off site for certain habitats to address this issue. The examining authority's first written questions requests more information on this issue, which will be included in that response (Question – 1.2.6).</p> <p>Section 2.3 of the Landscape and Ecological Management Plan [LEMP] shows there should be offsite compensation for the 2.5 ha of coastal and floodplain grazing marsh to be permanently lost. Through the statement of common ground (section 5) it has been agreed the applicant will supply us with details of mitigation and compensation plans as part of the ecological mitigation and compensation plan.</p>	<p>consultees (including the Environment Agency).</p> <p>The Applicant's response to FWQ 1.2.7 gives detail regarding calculation of Open Mosaic Habitat. The Applicant's response to FWQ 1.2.10 included tabulated figures which were accidentally omitted from the final document, but which have subsequently been inserted directly below as the Tabulated Response to FWQ 1.2.10 (Table 1). These clarify that no shortfall is anticipated for Open Mosaic Habitat as the intention is for an equivalent quantum to be provided by way of compensation, including via translocation of substrates (for further detail on process/method, see the Applicant's response to FWQ 1.2.6).</p> <p>It should also be noted that during March 2018, the proposals for temporary use of the Coastal and Floodplain Grazing Marsh north of Fort Road were reviewed with a view to minimising any temporary landtake. The anticipated revisions to the extent of land required were presented in the Applicant's responses to FWQs 1.2.8, 1.2.9 and 1.2.10. Since then, a further review has been undertaken, the outcome of which has been to identify ways of working that confine construction processes to the west of Fort Road to the area of permanent landtake only, with temporary storage areas being sited elsewhere on the former power station land. Plot 03/05 is therefore proposed to be removed from the Scheme, and amended Land, Special Category Land and Crown Land Plans have been submitted at Deadline 2 (PoTLL/T2/EX/58). Temporary landtake is therefore restricted to the 0.1ha of Coastal and Floodplain Grazing Marsh within Plot 03/07 (east of Fort Road). The Tabulated Response to FWQ 1.2.10 (Table 1 below) clarifies that off-site compensation is proposed (at a site in Paglesham, South Essex) for the 3.4ha of Coastal and Floodplain Grazing Marsh to be permanently lost, with details provided within the EMCP.</p>																																
	Tabulated Response to ExA's FWQ 1.2.10 (accidental omission from POTLL/T2/EX/49, now provided here for reference)	<div>Tabulated Response to FWQ 1.2.10</div> <div>Table 1: Summary of quantum of all habitat types that would be lost to the development, and mitigational/compensatory habitat provision</div> <table><tr><th rowspan="2">Habitat types</th><th rowspan="2">Permanent loss to the development</th><th rowspan="2">Temporary loss during construction phase</th><th colspan="2">Locational details for the new mitigational/compensatory habitat to be provided</th></tr><tr><th>On-site provision • Location shown at LEMP Figure 1 • Secured by LEMP (PoTLL/T2/EX/42)</th><th>Off-site provision • Location to be shown in EMCP • Secured by EMCP (PoTLL/T2/EX/47)</th></tr><tr><td>S41 habitats (see ES Figure 10.2d)</td><td></td><td></td><td></td><td></td></tr><tr><td>Open Mosaic Habitat on Previously Developed Land</td><td>9 ha</td><td>n/a</td><td>Quantum to be confirmed in EMCP</td><td>Minimum 9.1 ha via a combination of translocation and new provision</td></tr><tr><td>Coastal and Floodplain Grazing Marsh Δ (For explanation of revised figures see Applicant's responses to FWQs 1.2.8 + 1.2.9 (Document Reference POTLL/T2/EX/49) and subsequent footnote below Δ)</td><td>3.4 ha</td><td>0.1 ha Δ On eastern flank of Fort Road. Restoration secured via EMCP as set out in responses to FWQs 1.2.8 + 1.2.9</td><td>None</td><td>Significantly >6.2 ha</td></tr><tr><td>Coastal Saltmarsh (For explanation of revised figures see Applicant's response to FWQ 1.11.7; Document Reference POTLL/T2/EX/49)</td><td>0.006 ha</td><td>0.004 ha</td><td>TBC Mitigation under discussion with EA</td><td>None anticipated</td></tr><tr><td>Intertidal Mudflats (For explanation of revised figures see Applicant's response to FWQ 1.11.7; Document Reference POTLL/T2/EX/49)</td><td>0.0255 ha i.e. 35m² + 28m² + 192m²</td><td>n/a</td><td>TBC Mitigation under discussion with EA</td><td>None anticipated</td></tr></table>		Habitat types	Permanent loss to the development	Temporary loss during construction phase	Locational details for the new mitigational/compensatory habitat to be provided		On-site provision • Location shown at LEMP Figure 1 • Secured by LEMP (PoTLL/T2/EX/42)	Off-site provision • Location to be shown in EMCP • Secured by EMCP (PoTLL/T2/EX/47)	S41 habitats (see ES Figure 10.2d)					Open Mosaic Habitat on Previously Developed Land	9 ha	n/a	Quantum to be confirmed in EMCP	Minimum 9.1 ha via a combination of translocation and new provision	Coastal and Floodplain Grazing Marsh Δ (For explanation of revised figures see Applicant's responses to FWQs 1.2.8 + 1.2.9 (Document Reference POTLL/T2/EX/49) and subsequent footnote below Δ)	3.4 ha	0.1 ha Δ On eastern flank of Fort Road. Restoration secured via EMCP as set out in responses to FWQs 1.2.8 + 1.2.9	None	Significantly >6.2 ha	Coastal Saltmarsh (For explanation of revised figures see Applicant's response to FWQ 1.11.7; Document Reference POTLL/T2/EX/49)	0.006 ha	0.004 ha	TBC Mitigation under discussion with EA	None anticipated	Intertidal Mudflats (For explanation of revised figures see Applicant's response to FWQ 1.11.7; Document Reference POTLL/T2/EX/49)	0.0255 ha i.e. 35m ² + 28m ² + 192m ²	n/a	TBC Mitigation under discussion with EA	None anticipated
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Interested Party	Source Reference	Interested Party Comment			PoTLL Response			
		Lowland Mixed Deciduous Woodland - mapped as plantation # = non-S41 but ecologically very similar habitats will be created through screen planting and other scrub creation on and off-site	2.2 ha	n/a	# 1.2 ha Also shown at Figure 10.16 (POTLL/T2/EX/49)	# Quantum to be confirmed in EMCP		
		Hedgerows # = non-S41 but ecologically very similar habitats will be created through screen planting and other scrub creation on and off-site	645 m	n/a	# 836 m Also shown at Figure 10.16 (POTLL/T2/EX/49)	# Quantum to be confirmed in EMCP		
		Ponds (mapped as standing water)	217 m ²	n/a	2817 m ² i.e. 2no. new ponds, 941+876m ²	None anticipated		
		Reedbed	0.6 ha	n/a	0.6 ha	None anticipated		
		Other habitats (see ES Figures 10.2a-b)						
		Buildings/tarmac/artificial surfaces/unvegetated hard-standing/demolition rubble mound	18.4 ha	n/a	Equivalent quantum delivered under DCO	None anticipated		
		Vegetated hard-standing	2.0 ha	n/a	None specifically delivered but expected to arise naturally	None anticipated		
		Recently disturbed ground + Spoil/PFA heap	4.8 ha	n/a	See Open Mosaic Habitat provision above	See Open Mosaic Habitat provision above		
		Ephemeral/short-perennial vegetation & skeletal grassland	5.1 ha	n/a	See Open Mosaic Habitat provision above	See Open Mosaic Habitat provision above		
		Mown grassland	3.4 ha	n/a	TBC	None anticipated		
		Grazed grassland	2.7 ha Includes 1.7ha within the on-site reptile receptor	0.1 ha Land adjacent A1089		See Coastal and Floodplain Grazing Marsh provision above		
		Coarse neutral grassland	5.7 ha	n/a	TBC Will include 1.7ha converted from grazed grassland within the on-site reptile receptor	Quantum to be confirmed in EMCP		
		Set-aside type habitats	2817 m ² lost to new ponds	Footprint of new ditches only; equivalent vegetation expected to colonise new banks	None	None		
		Tall ruderal vegetation	0.7 ha	n/a	None specifically delivered but expected to arise naturally	See Open Mosaic Habitat provision above		
		Scrub: immature scrub/dense bramble	4.4 ha	0.1 ha Land adjacent A1089; equivalent bramble vegetation expected to recolonise banks	1.8ha Also shown at Figure 10.16 (POTLL/T2/EX/49)	Quantum to be confirmed in EMCP		
		Scrub: mature scrub	3.2 ha	n/a		None anticipated		
		Trees (Defined by reference to the Tree Survey (Document Reference 6.2, 9K) where stem is >1500mm dbh).	715 individual trees + 10 tree groups	n/a	TBC	None anticipated		
		Drainage ditch / sewer (By reference to the WFD Assessment; Document Reference 6.2, 16C.)	4,657 m (3,015m wet + 1,642m 'dry'). Note that the quoted figure for 'permanent loss' of ditches includes temporary losses but WFD Assessment figures have been reproduced here for consistency.	Temporary losses include: re-profiling of ditches 13a, 13b, 14 and 17 (970m), and realignment of Pincocks Trough (190m). These are included in figure cited for permanent loss for consistency with WFD Assessment.	5614m (3,922m wet + 1,622m 'dry')	Quantum to be confirmed in EMCP		
		Tidal river No meaningful change: <i>de minimis</i> losses from piles and marine structures not presented here.	Negligible	Negligible	None	None		
		Δ During March 2018, the proposals for temporary use of the Coastal and Floodplain Grazing Marsh north of Fort Road were reviewed with a view to minimising any temporary landtake. The anticipated revisions to the extent of land required were presented in the Applicant's responses to FWQs 1.2.8, 1.2.9 and 1.2.10. Since then, a further review has been undertaken, the outcome of which has been to identify ways of						

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		working that confine construction processes to the area of permanent landtake only, with temporary storage areas being sited elsewhere on the former power station land. By reference to the amended Land, Special Category Land and Crown Land Plans (Document Reference PoTLL/T2/EX/58), Plots 03/4a and 03/05 will not be subject to any temporary construction use beyond the roadside bank. Temporary landtake is therefore restricted to the 0.1ha of Coastal and Floodplain Grazing Marsh within Plot 03/07 (east of Fort Road).	
Environment Agency	Tilbury Written Reps (AE/2018/1225585/01-L01) Para. 8.3	A phasing plan is key for the development so that new habitats on and off site are created well in advance of the destruction of the existing ones. This will ensure there is no loss of biodiversity at the site. Phasing of new habitats will give translocated species a chance to establish. This is particularly important when it comes to the open mosaic habitats. A phasing plan, as referenced above, could be included in the Ecological Mitigation and Compensation Plan. This approach has been agreed through the statement of common ground (section - 5).	A phasing plan is being developed within the EMCP (Document Reference PoTLL/T2/EX61). For further details see also the Applicant's response to FWQ 1.2.11 (PoTLL/T2/EX/49).
Environment Agency	Tilbury Written Reps (AE/2018/1225585/01-L01) Para. 8.4	We note that no eel survey has been undertaken because the suitability of the watercourses are judged to be low. It is hard to be certain of the absence of eels without a survey of the relevant watercourses to avoid a negative impact on them during construction and operation in accordance with the Eel (England and Wales) Regulations 2009. We believe a survey of suitable watercourses for eels should be completed and if appropriate, mitigation and compensation measures for habitats affected should be produced.	<p>The Applicant's response to FWQ 1.2.4 sets out that potential impacts on eels have been taken addressed via a suite of mitigation measures, and as such further survey work is considered to be of very limited value. The proposed mitigation is summarised below, with further detail provided in the Ecological Mitigation and Compensation Plan (EMCP; Document Reference PoTLL/T2/EX61):</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). • The Environment Agency will have the opportunity to approve the detailed design of the proposed Thames outfall, including incorporation of eel-friendly control structures ('eel flaps'), pursuant to their protective provisions and if deemed appropriate; • Provisions within chapter 6 of the CEMP (Document Reference PoTLL/T2/EX/38) will ensure that eels are protected during construction phase; and • 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 EMCP. <p>This remains a matter under discussion via the Statement of Common Ground (SoCG) process.</p>
Environment Agency	Tilbury Written Reps (AE/2018/1225585/01-L01) Para. 8.5	We welcome the intention to retain water voles on the site and to include mammal shelves within the proposed culverts of the re-routed rivers. Cross sections of watercourses and plans are needed to ensure that the biodiversity function of drainage ditches is maximised. The developer should produce detailed designs for the concentric rings of open ditches needed to provide enhanced water vole habitat. The phasing of habitat creation for water voles needs very careful consideration otherwise it may fail due to inadequately established vegetation around the new ponds. A phasing plan should be produced detailing how these concerns may be addressed. This approach has been agreed through the statement of common ground (section - 5.)	<p>A planning application has been submitted to Thurrock Council which deals specifically with advance habitat creation works, including the concentric rings of open ditches (further background information is provided in the Applicant's response to FWQ 1.2.17). Detailed plans and cross sections of the watercourses, showing how the biodiversity function of drainage ditches is maximised (albeit with a focus on optimisation of habitat for water voles) are provided within the submission documents. These are now available on the Thurrock Council website (Planning Reference 18/00448/FUL)⁵.</p> <p>Phasing of the habitat creation is proposed to allow planting to mature in advance of receiving translocated animals. Further information on phasing is set out in the Applicant's responses to FWQ 1.2.19, and a phasing plan is being developed within the EMCP (Document Reference PoTLL/T2/EX61 - see chapter 10).</p>
Environment Agency	Tilbury Written Reps (AE/2018/1225585/01-	Invasive species should be monitored as the establishment of any plants such as floating pennywort will threaten the success of the wetland habitats. There should be long term monitoring of invasive plant species post construction of compensatory habitats. This approached is agreed through the statement of	Monitoring and control of Invasive Non-Native Species (INNS) would be secured within the DCO via the CEMP (Document Reference PoTLL/T2/EX/38), LEMP (Document Reference PoTLL/T2/EX/42), and EMCP (Document Reference

⁵ <https://regs.thurrock.gov.uk/online-applications/applicationDetails.do?keyVal=P61IDKQGMML00&activeTab=summary>

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	L01) Para. 8.6	common ground (section – 4).	PoTLL/T2/EX61). Please refer to the Applicant's response to FWQ 1.2.5 for further details. Further information is provided in the response to Natural England's comments above.
Environment Agency	Tilbury Written Reps (AE/2018/1225585/01-L01) Para. 8.7	<p>We request the following points form part of a requirement appended to the DCO to address our concerns in relation to ecology. The applicant should provide us with information on how they would address our concerns prior to the commencement of construction. We would review and agree any measures related to the requirement.</p> <ul style="list-style-type: none"> The developer should undertake a survey to confirm that the development will not impact upon eels. If eels are found to be present at the site, they should produce a plan which we will need to agree showing how eels and their habitat will be protected during the development of the site. The applicant should clearly demonstrate how mitigation for any loss of habitat will be achieved both on and off site. This should include the phasing of new habitat creation to ensure there is no loss of habitat during development. The applicant should provide cross sections of watercourses to demonstrate that the biodiversity function of ditches is maximised. The applicant should produce a detailed plan showing how they will deal with invasive species at the site during development and following construction during the operational period. 	<p>The following points have already been dealt with via documents which are secured by the DCO, giving the Environment Agency the opportunity to review and agree any measures prior to construction:</p> <ul style="list-style-type: none"> The Applicant has prepared a plan showing how eels and their habitat will be protected during the development of the site (see response to para 8.4 above). This mitigation will be secured within the DCO via the CEMP (Document Reference PoTLL/T2/EX/38) and EMCP (Document Reference PoTLL/T2/EX61). The Applicant has set out how mitigation for any loss of habitat will be achieved both on and off site in the EMCP, which will be secured via the DCO. This includes information on the phasing of new habitat creation. Habitat losses and compensatory provision have been quantified in the Applicant's response to FWQ 1.2.10 (provided in the Tabulated Response to FWQ 1.2.10 five rows above). The Applicant has provided illustrative cross-sections of watercourses to demonstrate that the biodiversity function of ditches will be maximised within the on-site ecological mitigation area (see response to para 8.5 above). The planning application submission documents are available on the Thurrock Council website (Planning Reference: 18/00448/FUL). As set out in the Applicant's response to FWQ 1.2.20, additional ditches would be constructed within the infrastructure corridor to provide further water vole habitat, for which details will be developed during the detailed design phase. However, design profiles are anticipated to be broadly similar to those within the on-site ecological mitigation area, i.e. channel depth sufficient to hold water all year, and banks steep sided to deter terrestrial predators. (See also the response to EA WR para 9.7 in Table 1.19). The Applicant has produced a detailed plan showing how they will deal with Invasive Non-Native Species (INNS) at the site during development and following construction during the operational period (see response to para 8.6 above). This is secured within the DCO via the CEMP (Document Reference PoTLL/T2/EX/38), LEMP (Document Reference PoTLL/T2/EX/42), and EMCP (Document Reference PoTLL/T2/EX61).
Environment Agency	Tilbury Written Reps (AE/2018/1225585/01-L01) Para. 8.8	We received further information from the applicant in regards to ecology, within a week of the submission of this representation. The information concentrates on ecological issues in relation to eels and saltmarsh. We are currently in the process of reviewing the submitted information and will continue to work with the applicant's appointed ecologists to resolve outstanding concerns we have in these areas.	These remain matters under discussion with the Environment Agency via the Statement of Common Ground (SoCG) process.
Environment Agency	Tilbury Written Questions – EA Response to 1.2.2	<p>ExA FWQ 1.2.2: <i>ES paragraph 6.38 considers that, "...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> 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>EA response: Yes if left unmanaged, the process of succession will lead to a deterioration in the ecological value of the open mosaic habitats on site.</p>	The Environment Agency is in agreement with the Applicant on this point.
Environment	Tilbury Written	ExA FWQ 1.2.3: <i>Do you consider that the Applicant has addressed the need (within the NPS for Ports,</i>	The Applicant disputes the point that there is 'an absence of information on eels'. Eels

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Agency	Questions 1.2.2	<p><i>paragraph 5.1.8) to aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives?</i></p> <p>EA response: The Applicant has only partially considered the impacts of the development on biodiversity, with an absence of information on eels or how impacts on open mosaic habitats are to be successfully compensated for. The applicant needs to provide us with detailed mitigation and compensation plans in order to meet the requirement under 5.1.8 NPS for ports.</p> <p>We have recently received some further information from the applicant in regards to compensation for saltmarsh loss and feel these do not address the loss of this habitat caused by the proposed development. We are in the process of arranging further meetings with the applicant in order that this issue can be progressed. We have also been sent some further information regarding the impact the development will have on eels, we are currently assessing this and will respond to the applicant in due course.</p>	<p>are known to be present within the River Thames. A review was made of terrestrial habitats present, the potential suitability of the on-site watercourses and their accessibility to eels, and this information is reported at ES paragraphs 10.286-10.290 (Document Reference 6.1 /APP-031).</p> <p>The Applicant initially set out information on how impacts on Open Mosaic Habitats are to be compensated for in ES paras 10.316-10.318 and 10.326 (Document Reference 6.1/APP-031), with further information on the process provided in the Applicant's response to FWQ 1.2.6. Once details of the receptor site have been settled with the landowner, then detailed mitigation and compensation plans will be set out within the EMCP (Document Reference PoTLL/T2/EX61).</p> <p>Compensation for saltmarsh loss, and eels, remain matters under discussion with the Environment Agency via the Statement of Common Ground (SoCG) process.</p>
Marine Management Organisation	WR – Appendix II 1.2	<p><u>Benthic</u> Have the ecological features of the seawall been assessed for impacts as part of the EIA?</p>	<p>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. 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 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 'soft maritime cliff/slope' as presented at ES paragraph 11.37 refer to elements outside of the Order Limits).</p>
Marine Management Organisation	WR – Appendix II 1.3	<p>The spatial extent and magnitude of resuspension and sedimentation resulting from the dredging was ascertained subsequent to discussions regarding the appropriate scale for the baseline assessment. It is apparent that the spatial extent of this impact is far greater than the area encompassed by the intertidal and subtidal surveys. Is there any evidence to support that the notion that the habitats observed in the survey extend over the entire spatial area of impact resulting from the dredge? If not, it may be concluded that the baseline conditions of the full area of potential impact have not been adequately described.</p>	<p>Figure FWQ Q-1.2.29-A (Fig. A) and Figure FWQ Q-1.2.29-B (Fig. B) - [Appendix A - Document Reference: POTLL/T2/EX/49] - show the habitats over the spatial extent affected by the dredge. Figure A shows data from the Priority Habitat Inventory published by Natural England, 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 England.</p> <p>The habitats present in the area of dredge shown coloured red on Figure FWQ Q-1.2.29-A and Figure FWQ Q-1.2.29-B [Appendix A - Document Reference: POTLL/T2/EX/49] are very similar to the habitats observed in the rest of the area affected by the dredge plume. In addition, no particularly sensitive habitats are present, including mussel beds or subtidal kelp.</p>

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			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 significant impacts are expected.
Marine Management Organisation	WR – Appendix II 1.4	In section 11.151 it states that “levels of suspended sediments are within background concentrations, apart from within a localised area of water injection dredging (WID), changes in dissolved oxygen levels are mostly predicted to be within baseline conditions”. While increases resulting from the activity may be within background levels, the effects will be cumulative to background conditions, which raises the possibility for impacts. As such, this statement does not appear to be justified.	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. Water injection dredging is predicted from modelling to result in temporary elevations of suspended sediment levels to a maximum of 200mg/l above background concentrations in very localised areas in the immediate vicinity of the dredging area, which is not considered to be significant in relation to cumulative effects to marine receptors. This is discussed further in the Applicant's response to FWQ 1.9.25 (PoTLL/T2/EX/49)
Marine Management Organisation	WR – Appendix II 2.1	<u>Underwater noise</u> It was previously raised that the total number of piles to be installed / length of sheet pile wall and the method of installation for each should be clearly provided in the EIA. The MMO could not see where this has been addressed in the ES and could also not be expected to take place (specifically what months), this should be provided. 2.1 The errata chapter 5 of the ES outlines the number of piles and the length of these. The timings of the piling are still a concern, this is likely to be addressed through the submission of the method statement before commencement of this activity and the MMO will review the Applicants response to FWQ1.5.2 for an update.	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. 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): <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. The MMO will be able to impose any further controls on piling through the operation of the conditions of the DML within the dDCO (Document Reference PoTLL/T2/EX/38).
Marine Management Organisation	WR – Appendix II 2.2	Although the assessment refers to ‘fish and shellfish’, it appears that the potential impacts on marine invertebrates have not been considered. The MMO would expect conclusions to be drawn from the peer-reviewed literature.	This point was considered by the Applicant in its response to FWQ 1.2.31. That answer is set out below: <i>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</i>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>not undertaken.</p> <p>Most peer-reviewed literature examines the impacts to marine mammals and fish rather than on invertebrates (Williams et al, 2015⁶; Peng, Zhao & Liu, 2015⁷), and a few cases focus on individual marine invertebrate species (Hawkins & Popper, 2017⁸). The marine invertebrate community found at Tilbury2 is dominated by mud worms and small amphipod crustacean [Document Reference APP-031 paragraphs 11.45, 11.47, and 11.48].</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, 2016⁹).</p> <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, 2013¹⁰).</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, 1997¹¹).</p> <p>Vibration from marine piling could generate small changes in bed morphology perceptible by epibenthic fauna, however, the biotopes identified near Tiblury2 are known to have a low sensitivity to potential smothering (ES, Table 11.7, MarLIN database).</p> <p>The species composition within the site boundary is typical of the habitat and the location. The communities identified near Tilbury2 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. The effects from noise and vibrations to marine invertebrates is therefore expected to be negligible.</p>
Marine Management Organisation	WR – Appendix II 3.1	<p>Modelling report</p> <p>It is presumed that the source levels at 1 m (as shown on Figure 4-1) were calculated using measurements in the far field and back propagating, but this is not clear in the report.</p>	The source level at 1 m was back-calculated from far-field measurements undertaken by Subacoustech.
Marine Management Organisation	WR – Appendix II 3.2	Regarding the additional conversion factor used to determine the equivalent SEL for a pile strike, the report should explain this link. There is no general relationship between single-strike SEL and peak SPL, although some empirical approximations have been made based on measurements. Lippert et al. (2015), for example, makes an empirical conversion between the SEL and the peak-to-peak SPL for impact pile driving.	The statement in the report is possibly misleading (page 11). There was no conversion undertaken between peak SPL and SEL, the conversion is from a measured pile diameter to the proposed pile diameter and as such it is a scaling rather than a conversion. The SEL source level was scaled from measurement data in the same way as the peak SPL source level. In section 4.3 of the report (page 11), the sentence starting: “An additional conversion factor...” can be considered as meaning

⁶ Williams et al 2015. Impacts of anthropogenic noise on marine life: Publication patterns, new discoveries, and future decisions in research and management. *Ocean & Coastal Management*, Vol. 115, 17-24. <https://www.sciencedirect.com/science/article/pii/S096456911500160X#bib36>

⁷ Peng, C., Zhao, X., & Liu, G. 2015. Noise in the sea and its impacts on marine organisms. *Journal of Experimental Marine Biology and Ecology*, 12(10) 12304-12323. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4626970/>

⁸ Hawkins, A., & Popper, A. 2017. A sound approach to assessing the impact of underwater noise on marine fishes and invertebrates. *ICES Journal of Marine Science*. Vol. 74, 3, 635-651. <https://academic.oup.com/icesjms/article/74/3/635/2739034>

⁹ Roberts, L., Cheesman, S., & Elliott, M.T. 2016. Sensitivity of *Pagurus bernhardus* (L.) to substrate-borne vibration and anthropogenic noise. *Journal of Experimental Marine Biology and Ecology*, 474, 185-194. <https://www.sciencedirect.com/science/article/pii/S0022098115300277>

¹⁰ Wale et al. 2013. Noise negatively affects foraging and antipredator behaviour in shore crabs. *Animal Behaviour*. Vol. 86, 1, 111-118. <https://www.sciencedirect.com/science/article/pii/S0003347213001991>

¹¹ Dill, L. M., & Fraser A. H.G. 1997. The worm re-turns: hiding behaviour of a tube-dwelling marine polychaete, *Serpula vermicularis*. *Behavioural Ecology*, Vol. 8, 2, 186-193. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.451.8294&rep=rep1&type=pdf>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			"The same scaling approach..."
Marine Management Organisation	WR – Appendix II 6.1 and 6.3	<p><u>Plankton</u></p> <p>6.1 The MMO note that the report states zooplankton and ichthyoplankton surveys undertaken at the site in 2007 and 2008 are considered to be representative of the present-day community. However, as this data is approximately 10 years old, it is recommended that this data be supplemented with more up-to-date information to support this conclusion.</p> <p>6.3</p>	<p>This point was considered by the Applicant in its response to FWQ 1.2.33 and set out below:</p> <p><i>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 Eurytemora affinis, Temora longicornis, Acartia spp. and Centropages hamatus being most abundant. 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:</i></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.
Marine Management Organisation	WR – Appendix II 6.2	More information on the assigned "low" value/sensitivity of the plankton receptor is required. Although no protected zooplankton or phytoplankton species were identified, the larvae of two fish species of conservation concern were recorded in the area. These were smelt and European eel, a species that is currently in decline throughout Europe and has targets set by the EU relating to the return of adults to the catchment. Due to the conservation importance of these species, it is suggested that the value/sensitivity classification of plankton, or at least ichthyoplankton is increased or further justification provided for not increasing the value/sensitivity.	PoTLL recognises that ichthyoplankton should have the sensitivity value 'medium' as this receptor includes eggs from smelt and European eel which are classed as fish of national importance (Table 11.26 of the ES). However, even with this changed value, it is considered that the residual effects (that is, after applying bespoke mitigation measures) are not expected to be significant.
Marine Management Organisation	WR – Appendix II 6.4	As the plankton receptor is classified as "low" value/sensitivity, the significance of this impact from the release of heavy metal contaminants is considered "minor". In this case, the levels of these metals are below Cefas AL2 and therefore unlikely to cause a significant impact to the plankton community. However, it should be noted that even low concentrations of lead can be toxic to phytoplankton (Cordero et al., 2005), and that bacteria and phytoplankton have both been found to accumulate metals (Rossi and Jamet, 2008), which is detrimental to food-webs.	PoTLL has committed to undertake backhoe dredging (rather than WID) in the approach channel where the 2017 sampling found high concentration of metals and not to dispose of these sediments at sea. This will be able to be controlled through the operation of the DML. Furthermore, the contaminants in the sediments to be removed through WID are not considered to present a significant risk to phytoplankton because: WID makes bed sediments travel on a denser layer of water near the bottom of the river, while phytoplankton lives near the surface of the river to use the sunlight; and contaminants are likely to remain bound to the sediment.
Marine Management Organisation	WR – Appendix II 6.5	The report states that plankton in the Thames are resilient to change, and therefore classified as "low" sensitivity. However, no indication is made as to how that conclusion was formed.	Plankton is classified as 'low' sensitivity because of its high abundance and resilience (evidenced by the reoccurrence in surveys), as per Table 11.4 of the ES. The exception is ichthyoplankton which is discussed in previous comment above (6.2).
Marine Management Organisation	WR – Appendix II 7.1	Simultaneous piling has not been assessed and so the report should clarify whether simultaneous piling is likely to occur or include an assessment of simultaneous piling within the ES.	There will be no simultaneous piling anticipated as part of the marine works. This would be able to controlled through the operation of the DML.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Marine Management Organisation	WR – Appendix II 7.3	The underwater noise assessment modelling is based on fish that have a swim bladder which is involved in hearing (Popper et al., 2014) and in my opinion, this does constitute the worst-case and should be used for the EIA noise assessment. The width of the River Thames at the Tilbury2 site is approximately 900m and the predicted noise TTS impact ranges for a 3.5m mile extend for a maximum distance of 3330 m (east modelled position at Mean High Water Springs), which is beyond the width of the river channel. Therefore, potentially, for some of the underwater noise modelling scenarios presented in the ES an acoustic barrier may occur during piling activities and this could cause temporary and behavioural effects on fish receptors. As the TTS threshold is applicable to fish without a swim bladder and fish which have a swim bladder that is not involved in hearing, fish receptors present in the vicinity of the piling works may be impacted and affected during some piling operations. Consequently, the significance of the potential impact of underwater noise construction effects on fish receptors is unlikely to be negligible. This should be addressed.	PoTLL has reviewed the assessment in relation to underwater noise construction effects on fish receptors. After this review, the applicant acknowledges 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. 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. 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. 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 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. 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.
Buglife	Buglife Tilbury 2 representations 16th March 2018 TR030003-000602 Summary	In our view, the Environmental Statement fails to accurately assess the value of the complex mosaic of habitats on site. The ES underestimates the extent of Open Mosaic Habitat on Previously Developed Land and fails to adequately assess impacts on species or habitats of conservation concern. No detailed off-site compensation plans have been submitted, preventing a meaningful Environmental Impact Assessment from being undertaken, while initial outlined proposals are extremely unlikely to succeed. Buglife, the national experts in brownfield management and ecology, consider the application to be wholly unfit for purpose and lacking key information, and that the development would deliver unacceptable net losses of biodiversity at a nationally significant level.	Buglife's concern about the ES does not appear to be a position shared by NE who raise no substantive concerns about the evaluation methodology or results for the Tilbury 2 site and who agree with the evaluation conclusions as regards the importance levels placed on the invertebrate assemblage, lichens and other elements of the site's biodiversity resource.
Buglife	Buglife Tilbury 2 representations 16th March 2018 TR030003-000602 The presence of an outstanding invertebrate assemblage of SSSI	This outstanding assemblage [of invertebrates] is one of the most important in the Thames Estuary area. The Thames Estuary itself has been acknowledged as a national hotspot for invertebrate species diversity for a number of years and the survey data available suggests that the application site is one of the most valuable sites yet surveyed. This is supported by Natural England's opinion dated 8th January 2018, is that " <i>the overall assemblage could be considered to be of sufficient quality to meet the designation requirements of a Site of Special Scientific Interest (SSSI)</i> " and " <i>the overall invertebrate assemblage to be significant in a national context.</i> "	It is not clear on what basis the site is considered by Buglife to be "one of the most important in the Thames Estuary area" or "one of the most valuable sites yet surveyed". No statistical comparison with other Thames Estuary brownfields is offered. It is not clear whether any allowance is made for uneven recording effort in the context that the Tilbury 2 site has been subject to three rounds of intensive recording activity since 2007 while many other sites identified in the Thames Gateway area have had very little recording effort.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
	quality		
Buglife	Buglife Tilbury 2 representations 16th March 2018 TR030003-000602 Loss of Local Wildlife Sites and potential SSSI habitat	Indeed, the application site area crossing the Tilbury Marshes LoWS alone, identified as 'The Infrastructure Corridor' in the 2017 invertebrate report by Mark Telfer is referred to as " <i>probably of national importance in its own right</i> ", however, Buglife considers its contribution to the wider site as more important than its value in isolation. Of particular note is the Lytag Brownfield LoWS, which Natural England have noted as " <i>regarded as almost unique in England and, whilst a brownfield habitat is man-made, would be very difficult to re-create with confidence on a compensation site should it be lost to development.</i> " The unique site history and diversity of habitats makes the Lytag brownfield site one of the most important wildlife sites in Essex. Combined with its nationally important invertebrate assemblage, Buglife is of the view that the site should be designated as a SSSI to safeguard its long known brownfield interest. As a unique site of brownfield natural heritage, it should be considered a key asset in conserving the UK's biodiversity and therefore protected from any future developments.	If Buglife are putting forward the suggestion that the ecological status of the infrastructure corridor is of greater than national significance, that is not a position supported by NE and moreover it is offered without any evidential basis. It is not disputed that the Thames Gateway brownfield invertebrate assemblage is of national importance, nor that the invertebrate assemblage on the site is of national significance as defined by comparison with available datasets and evaluation tools. What is unclear is how the Tilbury 2 assemblage relates in qualitative terms to other brownfield sites in the Thames Gateway region, including those that have not been subject to equivalent levels of study.
Buglife	Buglife Tilbury 2 representations 16th March 2018 TR030003-000602 Loss of Open Mosaic Habitat on Previously Developed Land	Buglife considers the Environmental Statement (ES) to have significantly underestimated the OMHPDL resource, although acknowledges that the national importance of the habitat is reported. The whole Lytag Brownfield LoWS site itself is 12 hectares, in excess of the applicant's supposed figure of 9.3ha of OMHPDL across the entire application site and requiring compensation. It is essential that the ES accurately assesses the extent and value of the OMHPDL found on site as it is key to supporting the site's significant biological interest. Buglife considers that the ES's assessment fails to appropriately consider the wider mosaic of early successional habitats such as: Pulverised Fuel Ash (PFA), Lytag and other substrates, drought stressed grasslands and lichen heath, herb and lichen-rich grasslands as well as the scrub resource. The spirit of the OMHPDL criteria is that the wider site mosaic includes a diverse range of habitats in complex mosaics, but the ES appears to overlook habitat parcels and types which should be part of the calculation. The OMHPDL criteria provides significant scope for the variation of habitats which should be considered to be part of the site-wide mosaic, with the UK Biodiversity Action Plan Priority Habitat Descriptions (2008) going as far as stating that in addition to the detailed criteria for a site to qualify as OMHPDL based on early successional habitats, size, bare ground, a history of disturb and a mosaic of habitats, that " <i>Other communities or habitats might also be present (e.g. reed swamp, open water), but early successional communities should comprise the majority of the area.</i> " In stark contrast the submitted map of Section 41 habitats, used to calculate the area of OMHPDL to be compensated, appears to exclude extensive areas of neutral grassland which have developed over PFA that are identified in the 2017 invertebrate survey report by Mark Telfer. The apparent reason for this was the species-poor nature of the grassland flora, which completely overlooks their potential ecological value for invertebrates and their role within the site's habitat mosaics. Such extensive and unmanaged grasslands on low nutrient substrates can be a key feature within diverse mosaics and their oversight is a demonstration of inaccuracies in the ES. In addition, although individual components of the wider site such as relict grazing marsh, diverse grasslands, ditches, scrub and ruderal resources may not individually qualify as Section 41 habitats, the intricate mosaic of these habitats and their complimentary nature prevent them from being considered in isolation. The individual assessment of compartments falls short in recognising their contribution to the site's brownfield biodiversity and the diversity of the supported invertebrate community.	The Lytag Site LoWS includes significant areas of plantation woodland, relict coastal grazing marsh with ditches, expanses of closed-sward grassland and other habitats. These are not OMHPDL. Buglife do not identify any areas of early successional habitat, PFA, Lytag, drought stressed grassland, lichen heath or herb and lichen rich grassland that they believe to have been omitted from the calculations of OMHPDL. A significant element of scrub has already been included in the calculations of OMHPDL. What has been excluded is extensive closed-canopy scrub on non-previously developed land/substrates (such as former grazing marsh), areas of closed-canopy plantation woodland and expanses of wholly unvegetated hard-standing or essentially unvegetated sealed or bound surfaces. The variation inherent within OMHPDL is incorporated into the calculations for OMHPDL. The 'extensive area of neutral grassland' over PFA has been excluded because "early successional communities" do not comprise "the majority of" this area. It is more akin to a species-poor MG12 grassland community than OMHPDL and, being grass-dominated and herb poor, offers little in the way of supporting habitat. The applicant rejects the logical end-point to this approach which is that the entire site should be mapped as OMHPDL. Buglife's assertions in this regard appear to overlook the fundamental point that 'relict grazing marsh' (and associated ditches, scrub and ruderal resources) on this site are not 'previously developed',

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Buglife	<p>Buglife Tilbury 2 representations 16th March 2018</p> <p>TR030003-000602</p> <p>Incorrect assessment of current site status and quality</p>	<p>The high value of the overall application site is confirmed by the ES and the invertebrate survey reports which contributed to it. However, Buglife strongly disagrees with the assertion of the ES that the Lytag Brownfield LoWS is declining in quality and at risk of being lost to successional processes.</p> <p>Buglife's view is that the combined invertebrate survey reports of 2008, 2016 and 2017, with data collections and assessment from three respected entomologists, clearly describe a site that in its entirety is of outstanding value for invertebrates. And that the unique combination of conditions and habitats is the reason for the exceptional diversity of invertebrate wildlife. Invertebrates, particularly those associated with brownfields, often require diverse habitat features in an intricate mosaic to complete their lifecycle including features such as unmanaged extensive grasslands (often species poor), seasonally wet features, bare ground and scrub.</p> <p>The suggestion of underlying changes in soil chemistry and pH in the application site is also not supported by sufficient evidence, but observations from a single part of the site, that was created for research a number of years ago. Paragraph 10.307 of the ES suggests that outputs from the adjacent treatment works may be leading to increased nitrogen deposition and changes in substrate chemistry that may lead to losses of open habitats across the site. However, this assumption appeared to be based on samples taken very close to the source, from the TEEC areas of the site, and is a very broad assessment which is not supported by significant analysis, nor has any attempt been made to correlate soil chemistry with overlying habitat types. Considering the size of the application site, much of the interest lies at a considerably greater distance, up to 700m away from the source, and it is simply not possible for any assessment of the potential input of the treatment works to the site to be made without dedicated analysis. Crucially, should there be evidence of changes in soil chemistry, the extensive habitat resource and likely depth of aggregates on site (including Lytag and PFA), means that simple inversion of some areas of aggregate could mitigate this impact. Inversion of aggregates exposes fresh underlying low nutrient substrates for colonisation by pioneer species and specialists associated with early successional habitats. Again, a 'do nothing scenario' or absence of management has been incorrectly applied to a nationally important site.</p> <p>It is also Buglife's view that the site should be designated a SSSI, supported by the invertebrate assemblage assessments undertaken by Natural England. Should the site be designated as a SSSI, a statutory responsibility to maintain the site in a favourable condition would then require that the management actions described above around scrub and substrate inversions be considered, removing any suggested risk of the loss of species associated with the site's open habitats.</p>	<p>This position appears to contrast with Natural England's acceptance of slight decline in the Lytag Site assemblage (agreeing with the ES), and their acceptance that successional processes will result in decline unless management intervention is secured. Indeed this appears to be accepted by Buglife elsewhere in their written representation.</p> <p>The suggestion of underlying changes in soil chemistry and pH is not just based on soil samples but also in large part evidenced by vegetation changes on the site and the acceleration of colonisation by species such as bramble. The soil samples from the area in question merely serve as corroborating/supporting evidence that unusual processes are at play as compared with the expected trajectory of soil development and vegetation succession on PFA.</p> <p>It is agreed that measures such as inversion of aggregate could be valuable management interventions. However it is relevant to highlight that there is currently no statutory mechanism for such management intervention to occur, and it follows that in its absence, greater or lesser measures of decline are unavoidable, regardless of any debate over their speed or magnitude. The Applicant notes that disturbance of the substrates on the site is suggested as a management tool by Buglife here, yet elsewhere it is suggested that translocation of the same substrates (an analogous activity) even a short distance is unlikely to be successful. A position that we do not accept as set out in our response to Buglife below.</p> <p>It is not disputed that were the site to be designated as a SSSI, management could in theory be enforced through statutory powers, however this merely underlines the point that has been made by the Applicant that there is currently, in the absence of a SSSI designation, no mechanism to secure or enforce the management interventions that Buglife see as appropriate in order to slow or reverse successional processes and any related decline.</p>
Buglife	<p>Buglife Tilbury 2 representations 16th March 2018</p> <p>TR030003-000602</p> <p>Unclear and untested mitigation plans and unacceptable net losses of biodiversity and habitats</p>	<p>At the time of Buglife's comments, there remain three significant issues around mitigation which remain unaddressed, including (i) a disregard for the mitigation hierarchy, (ii) absence of a meaningful off-site mitigation plan to inform an Environmental Impact Assessment (EIA) and (iii) inappropriate proposed mitigation plans.</p> <p>Firstly, despite the site including three Local Wildlife Sites of known interest and the presence of detailed invertebrate surveys prior to the application, it appears that no effort was made to follow the mitigation hierarchy. No effort has been demonstrated by the applicant to retain the key areas of Section 41 habitats on site, with wholesale losses of the areas identified as being of national importance for invertebrates. By the time that Buglife were engaged to consult on the application and the results of the 2016-17 invertebrate surveys which were commissioned, the design and layout had been determined by the applicant. Best practice for ecological issues should always be to undertake surveys first, and use these findings to inform the design of a scheme which avoids or minimises the potential net losses of biodiversity. In this case, the key planning principle that developments should seek to avoid or minimise impacts on biodiversity appears to have been overlooked. It would appear that the mitigation hierarchy, a key planning principle of sustainable development, has been entirely overlooked, with no attempt to 'Avoid' or 'Mitigate' but only consider a 'Compensate' approach once a design had already been agreed.</p>	<p>The Applicant's explanation for the design process and the justifications for the extent of development on the site, having regard to the mitigation hierarchy and incumbent policy as set out in the NPS and NPPF, are set out in its response to FWQ 1.2.3.</p> <p>Details of the off-site compensation proposals are provided in the EMCP (Document Reference PoTLL/T2/EX61). A draft of this document is submitted at Deadline 2.</p> <p>It is acknowledged in the ES that there are some uncertainties around the success that can be expected from translocation of substrates, but the Applicant notes and welcomes Buglife's agreement that attempting this is preferable to use of virgin substrates.</p> <p>It is noted that Buglife continue to dispute that brownfield sites with significant invertebrate interest can ever be recreated. The Applicant's position is that this is not a logical construct having regard to the anthropogenic processes that cause such sites to come about, and the restricted timescales over which such interest develops in the wake of cessation of industrial use. The Lytag Site itself is an example of fairly</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>Secondly, it is notable that due to a Non-Disclosure Agreement (NDA) with the landowner, no detailed information whatsoever has been provided on what the off-site mitigation scheme includes. Port of Tilbury London Limited has only provided vague information around location and a commitment to recreating certain habitats. However, without any detailed mitigation plan it is simply impossible to state whether the off-site compensation is capable of delivering 'no net loss' of biodiversity as is claimed. A complete absence of habitat creation detail, location, size, scale, of habitat or proposed creation or management methods at such a late stage is naive and prevents any meaningful EIA from being produced. This position has been noted by Natural England in their representations dated 8th January 2018, where it confirms that without such information, <i>"The ES should be regarded as incomplete"</i>. The applicant proposes that <i>"Details of the construction of created habitats will be set out in the Ecological Mitigation and Compensation Plan (EMCP)"</i> and made an enforceable part of a Development Consent Order. It is entirely unacceptable to permit the loss of a nationally important wildlife site without a fit-for-purpose EIA being submitted and available for scrutiny by stakeholders and experts. Of additional concern is the attempt of the ES to undertake a Residual Effect Summary (Paragraph 10.386 and Table 10.52) without any information on off-site compensation to inform the assessment. This approach renders the EIA process completely inappropriate and raises the risk of significant long-term negative impacts.</p> <p>At present the only mitigation measures in the public domain are a very limited amount of on-site habitat retention, largely ditches and boundary features, while the vast majority of the brownfield invertebrate interest will be lost. The applicant's primary off-site compensation proposal is to recreate brownfield habitats on a former arable field. Such an approach is entirely unacceptable as there is no evidence of the successful creation of brownfield habitats for invertebrates, representing a significant risk of long-term biodiversity losses linked to the application. Paragraph 10.326 of the ES states that <i>"proposals centre on translocation of substrate from the most important areas of these LoWS to an ecologically appropriate location, to attempt to rescue at least a proportion of the plant, lichen and invertebrate interests and to kick-start their recreation elsewhere."</i> This statement acknowledges that the poorly planned strategy is an <i>"attempt to rescue"</i> at least <i>"a portion"</i> of the current biodiversity interest, an acknowledgement that biodiversity losses are expected. The re-use of materials from the application site is clearly preferable to the use of virgin aggregates, but the methodologies remain untested on any large scale and should not be used as the main mitigation or compensatory measure for a nationally important site with a SSSI-quality assemblage. Crucially the habitats at Tilbury Power Station have developed over a number of decades and over a site featuring a fine-scale mosaic of substrates, including Lytag and Pulverised Fuel Ash (PFA), but also hardcore and hardstanding, with a diverse range of activities over time leading to spatial variation in hydrology, aspect and drainage. Brownfield sites such as the Tilbury 2 application site take many years to reach their peak value for biodiversity, often due to the need for repeated processes and activities rather than a single creation period, which do not create successional mosaics. There remains a complete knowledge gap around the ability to recreate brownfield and to mimic the complicated processes which have created the highest quality brownfield sites in terms of their substrate diversity, topography, hydrology and structural vegetation mosaics. The Port of Tilbury London Limited has suggested that <i>"successful brownfield habitat creation/re-creation is achievable in principle on the basis that brownfield sites are themselves habitats of anthropogenic origin, developed over comparatively short timescales (decades) as opposed to irreplaceable habitats such as ancient woodlands which have developed over centuries"</i>. Buglife strongly disputes this statement. Comparison to ancient woodlands is inappropriate and irrelevant in this instance and demonstrates a lack of ecological understanding. Natural England's representations mirror Buglife's position, stating that <i>"whilst as a brownfield habitat it is man-made, [it] would be very difficult to re-create with confidence on a compensation site should it be lost to development."</i></p> <p>Regardless of the difficulty in re-creating brownfield habitat features, it is also important to note that the proposed site (s), despite the NDA, have been confirmed as arable. Such a site would be a wholly inappropriate starting point for brownfield habitat creation. High quality brownfield habitats tend to develop on low-nutrient soils and substrates, whilst arable fields will have been subject to fertilisers, manures, pesticides, fungicides, etc over a great many years, and would support a seed bank of competitive arable weeds. Many brownfield species plants require a low nutrient substrate to compete</p>	<p>rapid development of invertebrate interest, given that the Lytag manufacturing plant was only decommissioned and demolished in the 1980's.</p> <p>The site that was proposed for receipt of translocated Lytag substrates was indeed a current arable field. It was selected for reasons of ecological context (adjoining known sites of brownfield invertebrate interest) amongst other things. That site is not now being pursued due to it not being possible to conclude a deal with the landowner, but as to its inherent suitability (or otherwise) for the purpose, it is noted that Buglife are on record as having described the same piece of land as suitable for invertebrate habitat creation (in: "Greater Thames Marshes Nature Improvement Area Objective 2.1.1 – Thames Terrace Invertebrates: A Masterplan for Landscape Scale Conservation in the Greater Thames Marshes"). This suggests that Buglife recognise that provided the issues of soil fertility are addressed there is no inherent unsuitability in the use of arable land for invertebrate habitat creation. Indeed some brownfield sites have developed from appropriation of former arable land for industrial purposes. In any event, alternative (and closer) sites for receipt of translocated substrates are still being looked at and these include both arable land and non-arable land options.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		and would be potentially swamped by agricultural weeds and plant species more suited to high input environments. Buglife are national experts in brownfield ecology and management, and consider this approach to be unproven and extremely unlikely to produce habitat of any comparative value to the potential losses of the application site. As such, the reliance on off-site compensation represents a very high risk of permanent, significant net losses of biodiversity, with national impacts that remain unaddressed by the application.	
Buglife	Buglife Tilbury 2 representations 16th March 2018 TR030003-000602 Cumulative impacts of the proposals on invertebrate metapopulations and habitat connectivity	<p>As discussed, the application site represents one of the finest invertebrate habitat resources in the Thames Gateway, and was originally identified as being of high potential (for rare and scarce invertebrates) in Buglife's 'All of a Buzz in the Thames Gateway' project (2005-7). Following the initial 'The State of Brownfields in the Thames Gateway' report of 2013, Buglife went on to revisit the identified sites and found that over 50% of these sites had been lost in the six years since mapping. The development at Tilbury would add to the progressive loss of wildlife-rich brownfields and threaten the integrity and long-term future of the nationally important invertebrate assemblages in the region.</p> <p>The application fails to undertake a suitable Cumulative Impact Assessment, looking at the impact of the development alongside the impacts of expected major developments nearby, such as the Lower Thames Crossing and the Tilbury Energy Centre. Many invertebrate species exist in metapopulations, notably the Brown-banded carder bee and the Shrilk carder bee - which has arguably its most important metapopulation along the Thames Estuary, including the application site. To maintain the nationally important populations of rare and scarce invertebrates in the Thames Estuary, it is essential that a wider assessment of the impacts of developments is undertaken and a more coordinated approach taken to mitigation and compensation schemes. This view is shared by Natural England. It is acknowledged that publicly available information on the proposals for both the Lower Thames Crossing and Tilbury Energy Centre are currently limited, however, some consideration of their potential impact is considered necessary due to the considerable scale of landscape change likely to result from a series of such large Nationally Significant Infrastructure Projects (NSIPs). The potential of the scale of loss is only briefly touched on within the assessment of cumulative impacts. In Table 20.1 showing the assessment of cumulative impacts on terrestrial invertebrates, it is stated that "<i>Regionally or even nationally significant cumulative effects are possible, but are not likely to modify the assessment of significant adverse, regional level impacts applying to the Tilbury2 project alone.</i>" It is more appropriate for the impacts to be set as national for both the development itself and the cumulative impacts in the region of the progressive loss of OMHPDL sites along the coastal areas of Thurrock that run east from Tilbury.</p> <p>The Thurrock area once featured extensive areas of Thames Terrace Grassland, where flower-rich and drought-stressed grasslands developed over free-draining sands, supporting a distinctive invertebrate fauna. However, only a tiny resource of unimproved Thames Terrace Grasslands now remain as a result of agriculture, industry and urban expansion, with the region's important brownfield sites providing surrogate habitat features for those lost in the wider landscape. Recent development policies have led to this resource of brownfield sites being progressively lost to development, with many further valuable sites due to be lost and with active planning applications. Remnant sites such as the Tilbury Power Station and West Thurrock Marshes (SSSI/LoWS) to the West and Canvey Wick SSSI to the East are essential to the conservation of the invertebrate metapopulations that make the region a national hotspot for invertebrates. A number of species are either found solely in the Thames Estuary or have their strongholds here, and the loss of further sites threatens their long-term future.</p>	<p>Cumulative Impacts - LTC. PoTLL's position on this issue is set out in detail in the "Response to Relevant Representations" (Document Reference POTLL/Tilbury2/EX/32) at paragraphs 2.35–2.42 and also in response to the FWQ 1.7.1 (Document Reference POTLL/T2/EX/49). PoTLL remain of the view that it is not possible for a Cumulative Environmental Assessment (CEA) (including HRA) 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. In particular, the impact on the highway network from the implementation of the LTC is unknown as no data on this exists. 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. It is highlighted that Highways England agree with this position.</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. 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>Cumulative Impacts - TEC. PoTLL also remain of the view that it should not be for the Environmental Assessment of Tilbury2 to consider cumulative or 'in-combination' effects with TEC. However, PoTLL has prepared a 'high level' Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to this view. This is attached as Appendix C to PoTLL's response to the Examining Authority's First Written Questions (POTLL/T2/EX/49). 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. Paragraphs 3.28 – 3.33 discuss cumulative effects on terrestrial ecology.</p>
Buglife	Buglife Tilbury 2 representations 16th March 2018 TR030003-000602 Additional support for Buglife's stance	<p>The value of the Tilbury Power Station site has been known for a number of years and the lack of value put on the ecological value of the site has been noted by both the wider community and key strategic partners.</p> <p>Confirmed supporters of Buglife's submissions to the Planning Inspectorate include the Bumblebee Conservation Trust, Essex Wildlife Trust and Essex Field Club. Concern has been expressed over the impact on invertebrates as well as other species groups, notably reptiles with the site identified as one of the best in Essex in the Lytag Brownfield LoWS citation.</p>	The existence of the petition is noted.

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		<p>This support is in addition to a 74,300 strong petition with our partners 38 Degrees, with comments in support such as: “We need our wildlife more than we need piecemeal development”, “Save special places and wildlife for future generations”, “This is such an important site and must be saved from destruction”, “Brownfield sites are sometimes more important than the greenbelt by its side. Protect this site” and “Protecting high biodiversity sites with nationally important populations of rare species is one the most basic and elementary actions for nature conservation and protecting the environment”. These 74,300 signatures have been included as Annexes A-H for consideration and demonstrate the strength of feeling that such a valuable and high quality invertebrate site be safeguarded from inappropriate development.</p>	
Buglife	<p>Buglife Tilbury 2 representations 16th March 2018</p> <p>TR030003-000602</p> <p>Planning policy position</p>	<p>Buglife acknowledges that the National Policy Strategy (NPS) over rides the National Planning Policy Framework (NPPF) where NSIP applications are concerned. However, Buglife consider the application to fail to meet the guidance laid out in both the NPS and the NPPF.</p> <p>Buglife have outlined the inaccuracies in both assessing the value and impacts of the application on Priority habitats and species. This goes against Paragraph 5.1.4 of the NPS for Ports (2012) that states that “the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity”. At present the significant gaps in knowledge and available information prevent a suitable assessment of long-term effects from being undertaken. In addition, Paragraph 5.1.5 states that “The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.” The current proposals would lead to significant net losses of biodiversity and the loss of irreplaceable habitats, which clearly goes against the recommendations of the NPS.</p> <p>Notably, Paragraph 5.1.12 states that “Where a proposed development on land within or outside a SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted”. Buglife notes that the application site does not contain a current designated SSSI nor is it afforded any other statutory protection, however, Natural England have identified the site as being of SSSI quality, raising the question of whether it should be treated as such.</p> <p>Although the NPPF is subordinate to the NPS, it may still be considered as a material consideration. Buglife consider the application to fail to meet the biodiversity requirements of the NPPF. Paragraph 109 of the National Planning Policy Framework (NPPF) states that “the planning system should contribute to and enhance the natural and local environment by...minimising impacts on biodiversity and providing net gains in biodiversity where possible”. The proposed development does little to attempt to minimise its significant impacts and biodiversity losses, while clearly having negative impacts on a nationally important invertebrate assemblage and a unique and irreplaceable series of habitats. The current proposals would lead to significant permanent net losses in biodiversity.</p> <p>In addition, Paragraph 118 of the NPPF states that when considering conserving and enhancing biodiversity, that if “significant harm resulting from a development cannot be avoided, mitigated, or, as a last resort, compensated for, then planning permission should be refused”. At present this application does not meet the requirements of the NPPF due to a significant loss of nationally important OMHPDL and its associated invertebrate assemblage, including 15 Section 41 species, with an off-site compensation package that is both lacking detail but also fundamentally flawed in its approach and unlikely to offer sufficient opportunities for the site’s biodiversity.</p> <p>Buglife urges The Planning Inspectorate to refuse the granting of consent for Tilbury 2 due to the irreversible impacts on a site and invertebrate assemblage of national importance and of SSSI quality.</p>	<p>The Applicant’s explanation for the design process and the justifications for the extent of development on the site having regard to the mitigation hierarchy are set out in its response to FWQ 1.2.3. The applicant maintains that the short-term losses of open mosaic habitat and nationally significant invertebrate assemblage are justified by the national importance of the project, and that every effort will be made to fully compensate for those losses in the medium to long term through a combination of on and off-site mitigation and compensation. Having regard to the national interest of the project, this is an approach that is fully in accordance with both the NPS and the NPPF,</p>
Thurrock Borough	Local Impact Report	<p>7.6.1 The draft SOCG confirms TC’s agreement that the ecological value of the site is understood and that the ES contains an appropriate body of survey data to enable an assessment of the impacts of the</p>	PoTLL notes that Thurrock Council’s comments are in agreement with information

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Council	20.03.2018 TR030003-000615 7.6 Terrestrial Ecology	proposals on terrestrial ecology. 7.6.2 In summary, the surveys within the ES conclude that the site currently supports a range of important habitats, plants and animals. Habitats within the non-statutory Lytag Brownfield and Tilbury Centre Local Wildlife Sites (LoWS), located within the Main Site and mapped within document ref. 10.B, support biodiversity resources up to National levels of importance. In addition, a number of rare and important plants, lichens and invertebrates have been recorded on-site, as well as protected and other notable species. 7.6.3 Potential impacts on terrestrial ecology are addressed from paragraph 10.328 of the ES.	provided by the Applicant in the ES (Document Reference 6.1 /APP-031).
	Local Impact Report 20.03.2018 TR030003-000615 Statutory Nature Conservation Designations	7.6.4 With regard to the impact of the proposals on statutory nature conservation designations, Table 10.46 of the ES lists several nearby Thurrock SSSIs (Lion Pit, Grays Thurrock Chalk Pit, Hangman's Wood & Deneholes and Globe Pit as 'scoped out' of further assessment on the basis that there would be no potential impact vector. TC agrees with this conclusion. 7.6.5 The Thames Estuary and Marshes SPA / Ramsar site is located on the northern side of the River Thames within Thurrock and some 2.4km to the east of the Main Site. A Habitat Regulations Assessment Report (ref. 6.2 10.O) considers whether the proposals would have any likely significant effects on this statutory designation with reference to (inter-alia) habitat loss, air quality and disturbance from shipping, noise, lighting or human activity. The conclusions of the HRA report that the development will not have any likely significant impacts on features of qualifying interest, are noted.	PoTLL notes that Thurrock Council's comments are in agreement with information provided by the Applicant in the ES (Document Reference 6.1 /APP-031) and the Habitats Regulations Assessment (HRA) Report (Document Reference 6.2, 10.O /APP-060).
	Local Impact Report 20.03.2018 TR030003-000615 Non-Statutory Nature Conservation Designations	7.6.6 The ES confirms that the construction of the development on the Main Site will result in the almost complete removal of existing habitats. The Tilbury Centre LoWS extending to 2.6 hectares in area would be lost to development along with 11.7 hectares of the Lytag Brownfield LoWS (leaving a 0.7 hectare area retained). The construction of rail and road infrastructure within the Infrastructure Corridor would also result in the loss of part of the Tilbury Marshes LoWS. An area of 2.5 hectares from the total Tilbury Marshes LoWS designation of 39.8 hectares would be lost. The loss and partial loss of these LoWS is considered to be a negative impact. In particular, the Lytag Brownfield and Tilbury Centre LoWS support important biodiversity resources. Paragraph 10.342 of the ES notes that these two LoWS are arguably of National and Regional value respectively for their invertebrate, lichen and plant assemblages and that unmitigated losses of these two LoWS would be a significant adverse impact. 7.6.7 During the operation of the development the effects on air quality and the impacts of overspill lighting from the infrastructure corridor on the remainder of the Tilbury Marshes LoWS are assessed. The ES concludes that no significant impacts would occur and TC concurs with this assessment. The operational impact of the development on the adjoining non-statutory nature conservation designation is therefore neutral.	PoTLL notes that Thurrock Council's comments are generally in agreement with information provided by the Applicant in the ES (Document Reference 6.1 /APP-031), although since the text of Thurrock's LIR was prepared, the quantified losses of habitat within the Tilbury Marshes LoWS have been revised by the Applicant. (The Tilbury Marshes LoWS within the Order Limits comprises S41 Coastal and Floodplain Grazing Marsh and thus the extent of the LoWS and the S41 habitat can be considered interchangeably in terms of quantum.) Further details are given in the response to Environment Agency Para. 8.2 above, and in the Tabulated Response to FWQ 1.2.10 above.
	Local Impact Report 20.03.2018 TR030003-000615 Protected Species	7.6.8 The ecological surveys [including those] forming appendices to the ES and summarised within the ES itself reveal the presence of water voles, badgers, bats, reptiles and nesting birds. TC is pleased to note that measures to avoid, mitigate and compensate impacts on these ecological receptors are described in the Construction Environmental Management Plan [CEMP] and the Landscape and Ecological Management Plan [LEMP]. 7.6.9 TC has not yet been provided with any details of the proposed off-site compensation site; although it is understood that the process of securing a site is well-advanced. It is further understood that the site currently being considered is within the Borough which is welcomed. However, until details of this site are provided and its suitability is assessed it is not possible to determine whether the sum of the on-site mitigation and off-site compensation measures will result in no net loss of biodiversity in the longer term. 7.6.10 TC notes the intention to capture and relocate water voles to new habitat on land north-east of the CMAT and to create an artificial badger sett in this location. The applicant recognises the need to ensure that the new receptors are suitable prior to construction commencing and TC welcomes plans to	7.6.8 Measures to avoid, mitigate and compensate impacts are also provided in the emerging Ecological Mitigation and Compensation Plan (EMCP) document (Document Reference PoTLL/T2/EX61). 7.6.9, 7.6.12 The EMCP includes initial details of an off-site compensation area at Paglesham, South Essex, which will be used to deliver compensatory provision for reptiles and for Coastal and Floodplain Grazing Marsh (with greater detail to follow in the next iteration of the EMCP). A further receptor is required to deliver compensation for Open Mosaic Habitat and associated brownfield invertebrate communities, and for this, landowner negotiations are still in progress and details will be made available in further iterations of the EMCP. Thurrock Council has not been advised that the site(s) currently under consideration are within the Borough; The ES described the off-site receptor at para 10.326 as being an 'ecologically appropriate location'; and recent discussions have referred to 'South Essex, coastal Thames Estuary and Thames Terrace Gravels area as a landscape frame of reference' for PoTLL's preferred site.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>commence constructing the new mitigation features this year. The residual impact of the proposals on water voles is assessed in the ES as neutral and TC agrees with this conclusion. As there would be some loss of badger foraging habitat TC agrees with the conclusions of the ES that the impact of the proposals on the badger population is a neutral to minor negative impact, but only of local-level significance.</p> <p>7.6.11 The ES notes that the loss of the bat roost (Building B7) would be compensated by the provision of bat boxes. TC agrees that the loss of this roost population is a neutral to minor negative impact, but only of local-level significance.</p> <p>7.6.12 Reptile populations (common lizard, slow worm, grass snake and adder) on the site will need to be trapped and translocated to on-site and off-site receptor habitats. The ES concedes that land to the north-east of the CMAT will not have capacity to accommodate all of the potential reptile specimens and the Ecological Mitigation and Compensation Plan (EMCP) will need to fully detail the location, current condition, proposed enhancements and management arrangements for off-site habitats. TC agrees with the analysis of the ES that the impacts on reptiles is likely to be net negative and significant at Borough / District level without comprehensive off-site mitigation that will be brought forward in the EMCP.</p>	<p>Once details of the receptor sites are provided in full, an assessment can be made as to the sum of the on-site mitigation and off-site compensation measures, and PoTLL will provide biodiversity metric figures (chapter 9 of the EMCP) to help demonstrate how no net loss of biodiversity in the longer term can be achieved.</p> <p>7.6.10 A planning application has now been submitted to Thurrock Council for advance habitat creation works for water voles and badger on land north-east of the proposed CMAT, and TC's early engagement in reviewing the application is encouraged. The submission documents are now available on the Thurrock Council website (Planning Reference 1800448/FUL).</p> <p>7.6.11 PoTLL notes that Thurrock Council's comments in relation to the bat roost are in agreement with information provided by the Applicant in the ES (Document Reference 6.1 /APP-031).</p>
	<p>Local Impact Report 20.03.2018</p> <p>TR030003-000615</p> <p>Section 41 Habitats</p>	<p>7.6.13 The construction of the development would, if unmitigated, have a significant adverse impact on the priority open mosaic habitat on previously developed land. The proposals therefore rely on avoiding a net loss of biodiversity through the creation of compensatory habitat. The applicant commits to the production of the EMCP during the examination and it is understood that the applicant is currently in negotiation with relevant interests prior to the completion and submission of the document. The EMCP will be an important document in mitigating the impacts of the proposals on terrestrial ecology. The ES (paragraph 10.318) notes an expectation that the EMCP will form an enforceable part of any DCO and TC notes that off-site ecological mitigation is referred to at Schedule 2, Part 1(5) of the draft DCO. TC looks forward to receiving and assessing the draft EMCP as soon as it becomes available.</p>	<p>The Tabulated Response to FWQ 1.2.10 above clarifies that no shortfall is anticipated for Open Mosaic Habitat (or other S41 habitats) as the intention is for an equivalent quantum to be provided by way of compensation, including via translocation of brownfield substrates for Open Mosaic Habitat (for further detail on process/method, see the Applicant's response to FWQ 1.2.6). High-level information on creation of compensatory S41 habitats is provided within the emerging EMCP (Document Reference PoTLL/T2/EX61), with greater detail to follow in the next iteration of the EMCP.</p>
Gravesham Borough Council	<p>Gravesham BC Local Impact Report for Tilbury2</p> <p>TR030003-000643</p>	<p>Terrestrial and Marine Ecology</p> <p>Gravesham BC does not have the expertise to comment on this ES Chapter and therefore has looked at the views of the Marine Management Organisation (MMO) and Natural England. The MMO has an interest in this project because the development contains the improvement and extensions to the existing river jetty and dredging of the River Thames within the tidal extent.</p> <p>ES chapter 10 on terrestrial ecology concludes, in paragraph 10.374, that during construction there is likely to be a net 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. The ES then states, during operation, it anticipates that the magnitude and significance of residual adverse effects (including those deriving from construction related habitat lost) will gradually diminish as the on and off-site compensation measures mature and become of enhanced value for target species. It then concludes that, in an optimistic scenario, this could lead to an approximate net neutral effect on Local, Regional and National biodiversity in perhaps ten or fifteen years from the commencement of construction. Obviously up to that point, the impact is negative.</p> <p>Gravesham BC notes that Natural England in their relevant representation dated 8 January 2018, state that, as it stands, Natural England does not consider that the project represents sustainable development with respect to terrestrial ecology, the principle interest of which is the invertebrate assemblage of national importance. In their opinion, the ES should be regarded as incomplete.</p> <p>ES chapter 11 on marine ecology concludes, in paragraph 11.444, that subject to the embedded mitigation and further mitigation being implemented, it is considered that the construction and operation of Tilbury2 will not result in any significant effects on marine ecology.</p> <p>Gravesham BC notes that Natural England in their relevant representation states that Natural England is</p>	<p>Gravesham Borough Council acknowledges that it does not have the expertise to comment on ecological matters and has therefore looked at the views of Natural England and the Marine Management Organisation (MMO).</p> <p>The comments made by Gravesham Borough Council therefore replicate matters dealt with above, and have been addressed in the responses to written representations from Natural England and the MMO, respectively.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>satisfied that the project is unlikely to have a significant impact on either the Medway Estuary Marine Conservation Zone or the Upper Thames recommended Marine Conservation Zone.</p> <p>Gravesham BC notes that the Environment Agency (EA) in their relevant representation dated 8 January 2018, state that the size and scale of the development poses a number of challenges in ecological terms. They state that the ES covers the main ecological issues that they would expect to be addressed by the developer but highlight that there are some specific areas where concerns remain that will need to be considered before the EA can be certain that the development will not cause a negative environmental impact. They are clear that the PoTLL must ensure that any negative impacts of development are addressed satisfactorily with avoidance, mitigation and compensation measures. The EA believes that the Ecological Mitigation and Compensation Plan (EMCP) needs further exploration to show how mitigation is to be achieved.</p> <p>Habitats Regulations Assessment</p> <p>The application boundary lies within the zone of influence of habitats providing a supporting function to wintering and passage birds using the Thames Estuary and Marshes Special Protection Area (SPA).</p> <p>As part of their ES, the PoTLL has submitted a Habitat Regulations Assessment (HRA) report (document reference 6.2 10.O¹²). This document was produced to provide technical information to enable competent authorities to discharge their functions under Regulations 7 (competent authorities) and 61 (requirement to carry out an appropriate assessment) of the Conservation of Habitats and Species Regulations 2010 (as amended) (The Habitats Regulations) in connection with the consenting process for the Tilbury2 project. As the Tilbury 2 project is a Nationally Significant Infrastructure Project (NSIP), the competent authority is the Secretary of State for Transport.</p> <p>In paragraph 5.1.2, the PoTLL lists the potential impact sources considered to be of most relevance to the HRA process in respect of the Tilbury2 project:</p> <ul style="list-style-type: none"> • Air quality • Sediment circulation and deposition patterns • Water and/or sediment quality • Disturbance – shipping • Disturbance - noise and lighting <p>The conclusion of the Stage 1 assessment is that there are no likely significant effects on the SPA or Ramsar Site arising as a consequence of the project, either independently, or considered cumulatively with effects arising from other known or planned projects.</p> <p>Gravesham BC notes that Natural England, in their relevant representation dated 8 January 2018 have concerns regarding the Habitats Regulations Assessment in combination conclusion of “no likely significant effect”, as its screening conclusion. Natural England do not consider that this conclusion is sufficiently precautionary. Natural England do advise that, in their view, the project in combination with other Plans and projects, may be able to avoid an adverse effect on the integrity of the European site with appropriate mitigation and monitoring measures deployed consistent with best practise.</p>	
Essex County Council	Tilbury 2 ECC Schedule of responses to FWQ_2032018	<p>1.15.1 ECC's position ... has been updated since the submission of ECC's Relevant Representation, and wish to draw the Examining Authority's attention to SoCG version 3, between ECC and POTLL (SOCG003), as submitted by POTLL on the 14th February. Below is the relevant extract of ECC's revised position:</p> <p><i>“3.2 Other matters are outside of ECC's statutory function but are matters on which ECC, as a</i></p>	PoTLL acknowledges Essex County Council's changed position, i.e. that ECC supports Thurrock Council's approach; and PoTLL extends thanks for ECC's contribution on ecology matters to date.

¹² [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000242-ES%20Appendix%2010.O%20Habitat%20Regulations%20Assessment%20\(HRA\)%20Report.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000242-ES%20Appendix%2010.O%20Habitat%20Regulations%20Assessment%20(HRA)%20Report.pdf)

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
	TR030003-000649	<i>neighbouring authority has an interest in, concerning Landscape and visual impact and Ecology. ECC is minded that Thurrock Council has also raised these issues and is pursuing these matters as the host authority. ECC supports the approach being developed by Thurrock Council and the inclusion of these matters within their SoCG, therefore ECC has no further comments to make on these matters."</i>	
Kent County Council	Tilbury 2 Written Representation Final TR030003-000626 Resilience	KCC is satisfied that a native planting scheme, supported by the provided Landscape Ecological Management Plan [LEMP], can achieve the desired outcome of optimum resilience from biosecurity risks posed by accidental or deliberate introduction of exotic pests, pathogens and invasive species.	Further information on the proposed native planting scheme has been provided by the Applicant in the Technical Note on Tilbury2 Landscape Mitigation Proposals, as at Appendix E of the response to the First Written Questions (Document Reference POTLL/T2/EX/49).
Kent County Council	Tilbury 2 Written Representation Final TR030003-000626 Biodiversity	As the development is located within Essex, KCC would expect the relevant consultees in Essex to advise and agree on matters relating to ecological mitigation, onsite and offsite. KCC seeks assurance from the applicant that the proposed mitigation and avoidance measures for the possible effects on the Thames Estuary & Marshes SPA will be fully outlined within the site plans in order to be satisfied that the measures are deliverable. KCC looks forward to working with the applicant and Planning Inspectorate as the project progresses through the Examination process. We will welcome the opportunity to comment on matters of detail further as may be required throughout the Examination.	The Applicant confirms that measures proposed to avoid and mitigate potential effects on the Thames Estuary & Marshes SPA have been fully outlined within the tabulated response to FWQ 1.11.1, including cross-referencing to where measures are secured in the DCO or Deemed Marine Licence (DML). The key enforceable documents secured by the DCO 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 PoTLL/T2/EX40).

1.3. COMPULSORY ACQUISITION, 1.8 DRAFT DEVELOPMENT CONSENT ORDER MATTERS AND 1.10 ENGINEERING AND DESIGN

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Highways England	WR A3.1, A3.2 and A.3.3	<p>A3.1. Substantial alterations are needed to the draft DCO to protect the reasonable interests of Highways England. These extend to the body of the DCO as well as to the Protective Provisions proposed specifically for the benefit of Thurrock Council and Highways England. We are in ongoing discussions with the Applicant in respect of the principles of how and by whom Work No 11 and any other mitigation works to the SRN should be implemented. Further discussion is also required to protect Highways England's interests during construction. The Explanatory Memorandum to the draft DCO states that a broad scope is "considered necessary in light of the early design stage the Scheme is at as maximum construction flexibility is required" (paragraphs 5.34 and paragraph 5.48). As discussions have not yet been commenced, it would be premature to propose specific alterations to the draft DCO at this stage. It is hoped however that substantial alterations can be agreed with the Applicant.</p> <p>A3.2. If we are unable to reach agreement with the Applicant Highways England will submit proposed alterations to the draft DCO and ask that the Examining Authority consider them for inclusion in place of those currently in the draft DCO. Broadly we anticipate these alterations would follow the model in The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 with additional provisions to take into account the special circumstances of the DBFO contract that applies to this part of the SRN. The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 provides for the undertaker to carry out the works to the SRN but affords Highways England the control necessary to discharge our responsibilities.</p> <p>A3.3. We acknowledge that the scale of works to the SRN permitted by the East Midlands DCO is much greater than that proposed in the draft DCO. However many of the provisions are required irrespective of the scale of works, for example the provision of 'as built' drawings and information.</p>	It is not accepted that substantial alterations to the draft DCO are required for the protection of Highways England in addition to the protection included in Part 7 of Schedule 10. The Applicant is in discussion with Highways England about the inclusion of some of the protective provisions contained in the East Midlands Gateway Rail Freight Interchange and Highway Order 2016.
Highways England	WR B.1.1	B1.1. The draft DCO should provide that all aspects of the Construction (Design and Management) Regulations 2015 or any statutory amendment or variation of the same are adhered to. In particular the Applicant must ensure that all client duties (as defined in the said Regulations) are satisfied and must indemnify Highways England against all claims, damages, costs, losses, liabilities and actions arising out of a failure to do so.	There is no need for the DCO to apply the Construction (Design and Management) Regulations 2015. The regulations will apply automatically. The particular concern about an indemnity which Highways England mentions is covered in the protective provisions for Highways England in paragraph 84 of Part 7 of Schedule 10.
Highways England	WR B2.1	B2.1. Paragraph 11 of Department for Transport Circular 02/2013 requires developers' proposal on or affecting the Strategic Road Network to conform to the Design Manual for Roads and Bridges (DMRB). It is expected that detailed design of mitigation works to the Strategic Road Network will continue after any Development Consent Order is made. Therefore the draft Development Consent Order should be amended to require works on or affecting the Strategic Road Network to conform to the Design Manual for Roads and Bridges (DMRB).	Paragraph 11 of the Department of Transport Circular 02/2013 applies to a developer exercising powers under a development consent order in just the same way as it applies to other developers. There is no case for this particular order - uniquely - to require on its face conformity with the Design Manual for Roads and Bridges. Highways England will be able to ensure conformity with the DMRB principles under the protective provisions drafted for Highways England's benefit.
Highways England	WR A2.5 and B3.2	<p>A2.5 The draft DCO should be amended to ensure that the relevant highway, street or traffic authority has adequate access to the street or highway and control over Work No 11 to discharge its responsibilities, where necessary balancing the Applicant's interests against those who also have a right to carry out works on the SRN.</p> <p>B3.2. The word 'maintain' needs clarity to ensure that routine maintenance of the highway is clearly the responsibility of Highways England after completion. The draft DCO should be amended as set out in A2.5 above to ensure that Highways England has the necessary access and control to fulfil its routine maintenance and other duties during the maintenance period.</p>	<p>The powers in the dDCO do not come at the expense of Highway England's powers over the SRN. Furthermore, the protective provisions contain provision in paragraph 86 to give Highways England the means to impose conditions on the Applicant's exercise of powers in the interests of safety.</p> <p>Article 10(2) makes it clear that the obligation to maintain rests with the Applicant in the first 12 months after construction, but then that responsibility shifts to Highways England.</p>
Highways England	WR B3.3	B3.3. Also 12 months is an insufficient maintenance period for elements such as planting.	No planting is proposed in relation to the Asda roundabout works so this comment is not applicable to this situation.

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Highways England	WR B3.4	B3.4. Also DMRB requires a Stage 4 Road Safety Audits to be carried out 12 and 36 months after completion. Taking into account the need to identify and implement any remedial measures arising from the Stage 4 Audit, the Applicant's liability for the works is likely to extend well beyond 36 months. The draft DCO should be amended to reflect this liability and ensure that the necessary safety works are carried out at the Applicant's expense.	Highways England may use its powers under the protective provisions to address matters which it believes to be essential for the execution of the works. There is no need for the dDCO to be amended to make specific provision for this.
Highways England	WR B4.2	B4.2. The draft DCO should be amended to further require the Applicant to indemnify Highways England against all claims, costs etc. arising out of or in connection with the carrying out or use of Work No 11, including claims made by third parties under the Land Compensation Act and Noise Insulation Regulations.	<p>Paragraph 85 of Part 7 of Schedule 10 affords Highways England a general and broad indemnity against claims. It is assumed that the reference to the Land Compensation Act is to Part 1 of the Land Compensation Act 1973 (rather than to the Land Compensation Act 1961). The Applicant will give consideration to how best to ensure that Highways England is indemnified against third party claims.</p> <p>In the case of noise, the Applicant will be under a duty to obtain consent under the Control of Pollution Act 1974 for the carrying out of the construction works. Consent may be subject to conditions requiring mitigation to be put in place. This may include a requirement to insulate.</p> <p>The Noise Insulation Regulations 1975 only require a highway authority to carry out insulation work (or make grants for this purpose) in respect of certain properties where the use of a highway is expected to exceed specified levels. Paragraphs 17.191 – 17.194 of the Environmental Statement show that the increase in road traffic is either negligible or moderate and will certainly not justify Highways England in taking action under the regulations.</p>
Highways England	WR B4.3	B4.3. Similarly the draft DCO should require the Applicant to take out and maintain public liability insurance at an appropriate level to cover claims arising out of or in connection with Work No 11.	The Applicant, should it be granted the powers sought in the dDCO, will be a statutory undertaker in relation to Tilbury 2 (as it already is re Tilbury 1) and will be regarded by the Secretary of State as a fit and proper person to exercise the powers it is seeking. There is neither a need nor a justification for imposing a requirement on the Applicant to obtain public liability insurance.
Highways England	WR B5.1 and 5.2	<p>B5.1. Article 10(1) of the draft DCO requires any street constructed under this Order must be completed to the reasonable satisfaction of the street authority but makes no provision for the inspection of Work No 11 by Highways England during construction. Section 70 of the 1991 Act contains a duty to reinstate and Section 75 of the 1991 Act provides for inspection fees. However these provisions are inappropriate for Work No 11 which is a highway improvement and which requires a higher standard of inspection than would be the case for a streetwork.</p> <p>B5.2. The draft DCO should be amended to afford Highways England the right to inspect Work No 11 at any time during its construction and for all reasonable costs incurred by Highways England to be reimbursed by the Applicant.</p>	Any rights of inspection which Highways England feels necessary can be imposed by way of condition of any approval given by Highways England under the protective provisions.
Highways England	WR B5.3	B5.3. Paragraph 78 of Schedule 10 Part 7 of the draft DCO requires the Company to submit proper and sufficient plans to the appropriate authority for its approval, but does not contain any provision for the reimbursement to the authority of its costs in considering those plans and responding to the Company. The draft DCO should be amended to require the Applicant to reimburse Highways England for all reasonable costs incurred by Highways England. The draft DCO should require the Applicant to provide funds in advance to cover Highways England's reasonable costs and the time limit contained in paragraph 79 should cease to have effect when the funds held by Highways England are insufficient to cover Highways England's costs in considering the plans submitted.	The Applicant acknowledges that Highways England's costs in plan approval under paragraph 77 of Part 7 of Schedule 10 should be reimbursed and is prepared to amend the protective provisions at Deadline 3 to accommodate this.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Highways England	WR A2.6 and B5.4	<p>A2.6 The draft DCO should be altered to allow Highways England to take over Work No 11 from the Applicant and complete it at the Applicant's expense, in the event that the Applicant fails to progress the Work safely and with reasonable speed. The public should not be subject to danger and avoidable delay and inconvenience.</p> <p>B5.4. The draft DCO should also require the Applicant to provide a bond or cash security at an appropriate level to ensure Highways England (and therefore the public purse) are covered against the possibility of the Company failing to properly complete Work No 11 or meet the costs of Highways England.</p>	<p>This is not considered to be required due to the drafting of Requirement 7 of the DCO, which provides that the RoRo and CMAT terminals cannot be opened for use until the Asda Roundabout works have been completed. As such, PoTLL is essentially required to complete the works, and so a bond/deposit would serve no purpose.</p>
Highways England	WR B6.1	B6.1. The Applicant should provide evidence that the police have been specifically consulted on any difficulties in enforcing the proposed Traffic Regulation Orders (TROs) and their response.	<p>The Police and Crime Commissioner for Essex was consulted during the statutory consultation period and was notified of the acceptance of the Tilbury2 application under section 56 of the Planning Act. The latter notification included a copy of the application documentation, including the DCO and TRM plans. PoTLL has received no comments to date on the proposed measures from the Police and Crime Commissioner for Essex.</p>
Highways England	WR B6.2	B6.2. The proposals in draft DCO Art 51 (3) and-(4) are unacceptable to Highways England as they would result in interested parties having fewer opportunities to be aware of and object to modifications to the proposed TROs than would be the case if those TROs were proposed under the Road Traffic Regulation Act. It is incumbent on the Applicant to include in the draft DCO all TROs that are foreseeable, so that third parties have the opportunity to make representations against the draft DCO. If the Applicant fails to foresee the need for TROs or if those TROs are deficient, then the process for making, revoking or revising TROs contained in The Secretary of State's Traffic Orders (Procedure) (England and Wales) Regulations 1990 should be followed.	<p>The reference to article 51 should now be to article 52 in the updated dDCO. The Applicant has identified circumstances where it will be necessary to bring into force revised traffic regulation measures and these are specified in Schedule 8. Not all circumstances can, however, be predicted at this stage. Article 51(3) and (4) are well precedented provisions which give developers of infrastructure the flexibility to adapt to the circumstances they encounter as a project develops. The exercise of these powers is conditional on the traffic authority's consent – such consent could come after the consultation by that authority with relevant consultees.</p>
Highways England	WR B6.3	B6.3. Schedule 19 paragraph 3 of The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 provides that temporary Traffic Regulation Orders will be made by Highways England rather than the undertaker. Schedule 19 paragraph 5(3) of the same Order, whilst referring to payments, demonstrates that Order envisages that any Traffic Regulation Orders other those specifically in the Order will be made by Highways England rather than the undertaker.	<p>The provision for Highways England to make temporary Traffic Regulation Orders in the East Midlands Gateway Rail Freight Interchange and Highway Order 2016 is exceptional.</p> <p>The scheme envisaged under article 52 (in the latest version of the dDCO) affording the Applicant the right to make traffic regulation orders is well precedented (e.g. the A14 Cambridge to Huntingdon Improvement Scheme Order 2016) and is justified in the context of a project for which statutory approval will have been obtained. The Applicant needs to be armed with the powers it requires in order for the project to be constructed and operate efficiently. The Applicant also notes that no <u>temporary</u> traffic regulation measures are currently proposed for Tilbury2, so the proposals are not comparable.</p>
Highways England	WR B6.4	B6.4. The draft DCO should also contain provisions for a traffic authority to notify the Applicant, for a period of two years after the Proposed Development first comes into operation, that the authority proposes to promote new or to alter existing TROs on a street affected by traffic from the Proposed Development in order to mitigate the impact of the Proposed Development on that street. The cost of promoting and implementing such new or altered TROs should be met by the Applicant.	<p>As is noted in the Applicant's responses to FWQs under the 'Traffic and Transportation' heading, and also in response to Highways England, Thurrock Council and Essex County Council in part 1.18 of this document, no impact on local or strategic roads which would require mitigation is predicted to occur as a result of the construction or operation of the Tilbury2 proposals.</p> <p>As such, a provision such as proposed by Highways England is unnecessary and unjustified. In the event that there is an unexpected impact, the Applicant may, within a period of 24 months from the opening of the project, use its powers under article 52 to suspend, vary or revoke any traffic regulation order made under the powers of the Order. That is the appropriate way to deal with</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			any such impact.
Highways England	WR B6.5	B6.5. Article 51(2) of the draft DCO provides an exclusion from speed limits but no exclusions are provided for clearways and other restrictions. The Applicant should amend the draft DCO to provide suitable exclusions in consultation with the police and street authorities. Article 19 of The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 provides a good starting point	What is now article 52(2) operates so that emergency vehicles are not obliged to adhere to any speed limits imposed by or under the Order. The Applicant does not believe there is any requirement to make specific provision for clearways, but is willing to discuss this issue further with Highways England.
Highways England	WR B7.1	B7.1. There is a contractual requirement for the DBFO contractor to respond to a request from Highways England in 28 days. All 'guillotine' clauses in the draft DCO relating to the SRN should be increased to 56 days in order that Highways England has adequate time to consider the response from the DBFO contractor before replying to the Applicant.	The Applicant considers the obligation for Highways England to respond within 28 days to be reasonable. It is included on the basis that the Applicant will have informally consulted Highways England on the plans before they are formally submitted for approval. The Applicant will continue to discuss this matter with Highways England.
Highways England	WR B7.2	B7.2. The draft DCO should make explicit that the Applicant will compensate Highways England for any sums that are properly claimed by the DBFO contractor arising as a result of or in connection with Work No 11 and should acknowledge that the provisions of the third party additional works provisions of the DBFO contract must be complied with.	The Applicant acknowledges that Highways England's costs in plan approval under paragraph 77 of Part 7 of Schedule 10 should be reimbursed and is prepared to amend the protective provisions at Deadline 3 to accommodate this.
Highways England	WR B8.1	B8.1. The proposed works to Asda roundabout and any other mitigation to the Strategic Road Network will result in Highways England incurring additional maintenance costs in the future. In line with normal practice and to avoid this additional cost falling on the public purse, the draft DCO should require the Applicant to provide a commuted lump sum to Highways England. This lump sum should reflect the additional sums that become due under the DBFO contract in the period up to the end of that contract and typical values thereafter, including administrative costs in all cases	The scale of the highways works to be undertaken is modest and the Applicant does not consider it necessary or justified to make provision for a commuted sum to cover future maintenance.
Highways England	WR B9.1	B9.1. In order to maintain a safe and efficient network and make best use of public money, Highways England operates a rigorous system of Asset Management which includes the collection and storage of data to fixed formats. The draft DCO should require the Applicant to collect data in the required format and transfer it promptly to Highways England. The nature of the data to be collected and transferred will depend upon how and by whom works to the SRN are delivered.	Highways England can use the protective provisions to address specific matters of concern in the execution of the works. There is no need for the dDCO to be amended for this purpose.
Highways England	WR A2.5 and B9.2	A2.5 The draft DCO should be amended to ensure that the relevant highway, street or traffic authority has adequate access to the street or highway and control over Work No 11 to discharge its responsibilities, where necessary balancing the Applicant's interests against those who also have a right to carry out works on the SRN. B9.2. The draft DCO should also allow Highways England access to the area covered by work 11 to inspect the SRN and collect data.	Highways England will need to be afforded access in order to make the assessment required of it under article 10(1) that the works have been undertaken to its reasonable satisfaction. As regards wider access, this is something that Highways England can address under its powers in the protective provisions.
Highways England	WR B10.1	B10.1. Article 19(7) of The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 provides helpful wording.	Highways England has raised a concern that specific provision should be made to make it explicit that subsequent modifications to a traffic regulation measure made under the DCO are permissible. The Applicant is satisfied that because any traffic regulation measure made under the DCO is deemed to be made as a traffic regulation order under the Road Traffic Regulation Act 1984 (article 52(6)(a)), that all of the powers that apply to road traffic regulation orders made under that Act equally apply to traffic regulation measures made under the Order. No amendments are therefore required.
Highways England	WR B11	B11. There is lack of certainty as to whether highway Works permitted by a DCO can subsequently be modified by the procedures in the 1980 Act. The draft DCO should be amended for the avoidance of doubt in this case.	The Applicant does not accept that there is any uncertainty. Once the works have transferred to Highways England they are Highways England's responsibility. Applications to modify the works would need to proceed under the Highways Act.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Highways England	WR B12.1 and 12.2	<p>B12.1. Article 41(2)(b) of the draft DCO allows the Company from time to time within the Order limits construct, carry out and maintain such other works as may be necessary or convenient for the purposes of, or in connection with or in consequence of, the construction, maintenance, operation or use of the authorised development,</p> <p>B12.2. The Asda Roundabout is within the Order limits so that as written the Company may in perpetuity carry outworks to Asda roundabout. As drafted the DCO is unacceptable. The SRN, like the River Thames, should be excluded from the provisions for ongoing construction, maintenance and operation.</p>	It is not the case that the draft DCO allows the Applicant to carry out works to the Asda roundabout in perpetuity. Article 41(2)(b) is subject to article 10 which makes provision for the maintenance obligation to be transferred to Highways England. In these circumstances, it would not be reasonable for the Applicant to rely on the general power afforded in article 41(2)(b).
Highways England	WR B13	Protective Provisions needed to protect the interests of respectively Thurrock Council and Highways England are likely to differ and should be separated in the draft DCO.	It is acknowledged that the protective provisions afforded to Highways England and Thurrock might need to be separated out. This will depend on the conclusion of negotiations with both authorities.
Thurrock Council	LIR 8.1 - 8.4	<p>8.2 TC welcomes the requirement set out at Schedule 2, Part 1 (3) (1) of the draft Order requiring details of external materials to be submitted to and approved by the relevant planning authority prior to construction. The Council assumes that Schedule 2, Part 1 (3) (1) (b) is meant to apply to Work No. 8D (iii) rather than Work No. 8C (iii), i.e. details of the external materials of the aggregate processing facilities are required rather than details of the railway line.</p> <p>8.3 In addition, given the proximity of the Main Site to Tilbury Fort and the emphasis on good design promoted by the NPPF, NPS for Ports and the Thurrock Design Guide – Design Strategy SPD (2017), the TC requests that consideration could given to extending the requirement to submit details of external materials to include the proposed warehouse to be constructed by Work No. 7 (b) and the buildings constructed as part of Work No. 3 (d) and Work No. 5 (c).</p> <p>8.4 TC also suggests that consideration could be given to the inclusion of the term ‘external appearance’ or ‘design’ as well as ‘external materials’. Such that the relevant planning authority and relevant consultees may give consideration to the general form of the external building envelope, as well as the specification for finishing materials.</p>	<p>This is correct, and the relevant change was made to the dDCO at Deadline 1 (Document Reference PoTLL/T2/EX/36).</p> <p>This is agreed and the dDCO will be amended at Deadline 3 to reflect this. As discussed in chapter 1.13 below, it is proposed that the external materials will be required to be in accordance with a General Specification for Finishes and Materials to ensure all structures within the Rochdale envelope will comply with principles of good design.</p> <p>This is not agreed as the design of the buildings on site will predominantly be dictated by functional operation (for instance a concrete manufacturing plant needs to have specific features to operate). The LVIA for the proposals has already assessed a worst case of a solid block across the site, and so the detailed design will be an improvement on this.</p>
	LIR 8.5	TC suggest, in the interests of clarity, that consideration could be given to adding a maximum height restriction (AOD) in the table to include reference to any buildings constructed as part of Work No. 5 (c). TC suggests that any such height restriction for Work No. 5 (c) buildings should match the maximum height for similar Work No. 3 (d) buildings, i.e. a maximum 12 metres AOD	This is agreed and the dDCO will be amended at Deadline 3 to reflect this.
	LIR 8.7	[Requirement 9] TC query whether this requirement should be re-worded to refer to the noise barrier as Work No. 4 (d), not Work No. 4 (c).	This is agreed and the dDCO will be amended at Deadline 3 to reflect this.
	LIR 8.8	<p>TC has no objection to the proposed procedure for the discharge of requirements set out by Part 2 (13) to (18). However, in the interests of clarity and consistency with the provisions of Town and Country Planning legislation (referring to applications for the approval of details reserved by planning conditions) TC suggest that consideration could be given to adding the following wording:</p> <p><i>‘The requirements of Schedule 2, Part 1 shall be deemed to be conditions subject to which a planning permission was granted under section 70 of the 1990 Act and, accordingly, they shall be subject to the provisions of that Act and all associated legislation.’</i></p> <p>This suggested addition would have the benefit of allowing the applicant to use existing convenient on-line systems for the submission and approval of details reserved by planning conditions.</p>	<p>Paragraphs (13) and (18), well precedented provisions, have been included in the dDCO to create a bespoke mechanism for DCO requirements given their context within a nationally significant infrastructure project.</p> <p>As such, the provisions are specifically different from the 1990 Act process, and the Applicant could not agree to the inclusion of this wording in the dDCO.</p> <p>However, the Applicant would be willing to discuss with the Council the use of existing online systems in respect of requirement discharges.</p>
	SISH Q71	In respect of section 61 consents:	Chapter 10 of the CEMP (Document Reference PoTLL/T2/EX/38) provides that the contractor must obtain a section 61 consent from Thurrock for its

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>The Council representative referred to a written answer prepared by the Council's Environmental Health Officer. This written answer was forwarded to PINS on 23.02.18 and is reproduced below:</p> <p>'Ultimately we are seeking to protect the amenity of the local residents affected by construction noise. Provided the same (or better) protection can be afforded by effectively writing the construction noise control into another legally binding document, such as the CEMP in the DCO, then I would not object if it was decided to go this route. The applicant would obviously need to rewrite section 10 of the CEMP in this case. As you are probably aware, a Section 61 Notice is a negotiated prior consent that construction companies may apply for, and is not mandatory unless required e.g. by planning condition etc. Where there is no Section 61 in place, and construction noise becomes an issue, the Local Authority can impose a section 60 notice on the construction company. Unlike a Section 61 it is not a negotiated agreement. In my view the Section 61 procedure would be the preferred option for reasons of transparency, control and flexibility'.</p>	<p>works.</p> <p>The use of the appeal mechanisms in part 2 of Schedule 2 in relation to such consents is purely to form an expedited appeal process rather than take away Thurrock's ability to control the noise impacts of the works through section 61 consents.</p>
Historic England	WR Appendix 2 Response to FWQ 1.13.4 para 2.3	<p>Permitted Development Rights: The Panel should consider whether and how the permitted development rights which would subsequently arise, should be qualified and/or restricted. The Applicant has used the 'Rochdale Envelope' as a means of assessing the worst case scenario in terms of impacts and this would form the basis for PD rights. However, as an example, were the container storage area to be replaced by buildings, of the same height and area as consented in the DCO, the impact of subsequent development on the significance of the Fort would not in our view, have been properly assessed. Future development proposals should be considered by the relevant planning authority.</p>	<p>The concerns expressed by Historic England here are considered to be ultimately how the permitted development rights regime would apply at Tilbury2 as it does anywhere else - the extent of PD rights themselves is not dictated by the Applicant. As such, nothing which has a 'significant effect' above and beyond that which is reported in the ES for Tilbury2 would be permitted without the need for a new planning application.</p> <p>The Applicant would also refer Historic England to its response to Question 39 (Art.41) for the Issue Specific Hearing on the DCO found in its summary of case for that hearing (Document Reference PoTLL/T2/EX/48).</p>
Gravesham Borough Council	WR Page 5 - top of page 6	<p>Gravesham BC has concerns about the permitted development rights that will be in place and the development that will be allowable beyond that covered by this project's DCO. Chapter 5 of the ES, explains that the Port is a statutory undertaker and benefits from Permitted Development rights under Part 8 Class B of the Town and Country Planning (Permitted Development) Order 2015.</p> <p>This allows development on operational land by the Port and its lessees in respect of dock, pier, harbour, water transport, required: (a) for the purposes of shipping, or (b) in connection with the embarking, disembarking, loading, discharging or transport of passengers, livestock or goods at a dock, pier or harbour, or with the movement of traffic by canal or inland navigation or by any railway forming part of the undertaking.</p> <p>As part of the DCO, PoTLL seek to ensure that such rights will apply equally to Tilbury2 when that land becomes operational port land. The PoTLL explains that the exact nature of uses on the site may change over time, and it is through the usage of PD rights that the PoTLL expects to use that flexibility to change.</p> <p>As Gravesham BC explained in its response to the PEIR, these permitted development rights are wide and it is likely that the need for EIA would only be triggered where a high threshold is met. This means that any subsequent requirement for EIA in connection with further development at the site would only be triggered where any such development in itself has a significant adverse effect on the environment (Schedule 2, 13(a) to the Regulations).</p> <p>As such, there is potential for development to take place under permitted development rights that would not in itself require EIA but could have a greater impact than that considered by the EIA relevant to the current DCO process. This is a particular concern given the sensitivity of the Tilbury Fort site adjacent and the potential of further development or intensification in use to impact adversely on the southern</p>	<p>The Applicant considers that such restrictive wording is not required in the DCO as this is essentially how the PD rights regime would work.</p> <p>The Applicant (or its tenants) would not be able to develop anything outwith the worst case parameters of the Tilbury2 ES under PD rights as to do so would create a new 'significant effect', which would take such development outside the scope of PD rights.</p> <p>As noted in the Applicant's response to Question 39 (Art.41) for the Issue Specific Hearing on the DCO found in its summary of case for that hearing (Document Reference PoTLL/T2/EX/48), new developments at the Port would be considered for new significant effects as part of the screening opinion/lawful development certificate process with Thurrock Council.</p> <p>This is all the consequence of article 3(10) and (11) of the Town and Country Planning (General Permitted Development) Order 2015, and so additional provision does not need to be made within the DCO.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>shore.</p> <p>The Rochdale Envelope allows the Applicant to set out the broad range of options under consideration and then carry out an ES based on the realistic worst-case scenario for each of those options. Gravesham BC's view is that Rochdale Envelope principles should apply to the grant of any DCO for this project, so that any subsequent development normally allowed under permitted development rights is constrained so as not to breach the worst-case scenario assessed within the ES. Following our submission in the PEIR, Gravesham BC has discussed this with the PoTLL and they are not willing to consider limitations being imposed on their permitted development rights.</p> <p>Paragraph 5.27 of the "Explanatory Memorandum to Draft DCO" explains that Article 6(2) provides that any development carried out by PoTLL within the Order limits in accordance with a planning permission granted under the Town and Country Planning Act 1990, including under its permitted development rights, is not a breach of the Order.</p> <p>Paragraph 5.28 then explains that, without this provision, the PoTLL would not be able to build out port related development within the Order limits as a matter of course, except in accordance with the Order. The PoTLL then makes the point that, in their view, that this "could be overly constraining".</p>	
Gravesham Borough Council	RFWQ 1.13.3 final bullet point (c)	<p>The lighting impact assessment is presumably based on the proposed outline lighting scheme provided as part of the application. Would permitted development rights for ports in general or as set out in the draft DCO allow for a different or modified scheme of lighting that could result in different impacts? If so, because the application is subject to EIA based on Rochdale envelope principles, should such permitted development rights be reviewed to ensure the impact of any scheme remains within acceptable limits?</p>	<p>The lighting impact assessment in ES Appendix 9.J (Document Reference APP-44) is based on the preliminary lighting strategy in the same document.</p> <p>As per Requirement 12 of the DCO, the final scheme of lighting must be approved by Thurrock Council in consultation with Gravesham, and so its ultimate design would be able to be considered by both parties.</p> <p>Paragraph (2) requires that the final scheme must be in general accordance with the preliminary lighting strategy and impact assessment - i.e. the whole document. As such, to comply with this paragraph, the final lighting strategy could not result in significantly different impacts, as it would not be in general accordance with the preliminary lighting strategy and impact assessment.</p>
Gravesham Borough Council	WR Pages 2-3 and 7	<p>Statutory nuisance</p> <p>The explanatory memorandum for the draft DCO explains the inclusion of "Article 48 - Defence to proceedings in respect of statutory nuisance"</p> <p>7.17 This article provides a defence to statutory nuisance proceedings brought under the Environmental Protection Act 1990 in respect of noise emitted from premises. The defence is only available if:</p> <p>7.17.1 the noise is created in the course of carrying out or maintenance of the works authorised by the Order in accordance with a notice given under section 60 or 61 of the Control of Pollution Act 1974; or</p> <p>7.17.2 is a consequence of the construction, maintenance or use of the authorised development and that it cannot be reasonably be avoided.</p> <p>7.18 Section 61(9) of the Control of Pollution Act 1974 does not apply if the consent relates to the use of premises by PoTLL for the purposes of or in connection with the construction or maintenance of the authorised development.</p> <p>As part of its application, the PoTLL submitted in October 2017 a "Statement in respect of Statutory Nuisance" with the document reference 6.5. The statement advises that the provisions of section 79(1) of</p>	<p>There is no inconsistency between the provision for statutory nuisance in the Order and the Applicant's statement that construction activities that have the potential to create a nuisance will be controlled through the CEMP. The controls should mean that the works carried out by the Applicant will not give rise to a nuisance, but, in common with all legislation authorising infrastructure, the Applicant must be granted protection against the risk that because of circumstances which are currently not foreseen a statutory nuisance will arise. A defence against claims in nuisance which are made against promoters of development consent orders is enshrined in section 158 of the Planning Act 2008. Article 49 is therefore consistent with the policy which underpins the development consent order regime. It is also very well precedented.</p>

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		<p>EPA that could potentially be engaged are:</p> <p>(b) smoke emitted from premises so as to be prejudicial to health or a nuisance;</p> <p>(d) any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance;</p> <p>(e) any accumulation or deposit which is prejudicial to health or a nuisance;</p> <p>(fb) artificial light emitted from premises so as to be prejudicial to health or a nuisance;</p> <p>(g) noise emitted from premises so as to be prejudicial to health or a nuisance;</p> <p>(ga) noise that is prejudicial to health or a nuisance and is emitted from or caused by a vehicle, machinery or equipment in a street; and</p> <p>(h) any other matter declared by any enactment to be a statutory nuisance.</p> <p>Each is then looked at in turn for both construction and operation</p> <p>Paragraph 3.3 then explains that Section 79 of the EPA contains other exceptions and definitions in respect of statutory nuisance. The particular exceptions of relevance to the proposals are:</p> <ul style="list-style-type: none"> subsection 79(l)(c) (fumes or gases emitted from premises) does not apply in relation to premises other than private dwellings (s.79(4)); subsection 79(l)(fb) (artificial light emitted from premises) does not apply to artificial light emitted from...harbour premises (s.79(5B)), which the proposals would be during operation; and subsection (l)(ga) above does not apply to noise made...by traffic. <p>For lighting; the statement advises under paragraph 4.14, for construction, that the majority of construction work in relation to the authorised development will be undertaken during daylight hours as secured in the CEMP (compliance with which is secured byway of a DCO requirement). During those working hours there will be no need for artificial lighting of construction areas. Night time working will be kept to a minimum. Mitigation measures, designed to avoid or reduce the effects during construction of artificial lighting would be implemented in accordance with the CEMP. In respect to operation, it says in paragraph 4.16 that "as the proposals would constitute harbour premises, this 'head' of nuisance would not be engaged during operation". Therefore once it is built, the development's lighting operations will fall outside stat nuisance action and so it is essential that its design to meets best practice.</p> <p>Justification</p> <p>It appears to be the norm that NSIP projects request a defence to proceedings in respect of statutory nuisance.</p> <p>However Gravesham BC notes that the National Policy Statement for National Networks includes this:</p> <p>5.88 If development consent is granted for a project, the Secretary of State should consider whether there is a justification for all of the authorised project (including any associated development) being covered by a defence of statutory authority against nuisance claims. If the Secretary of State cannot conclude that this is justified, then the defence should be disappplied, in whole or in part, through a provision in the Development Consent Order.</p>	

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		The PoTLL statement says "The construction activities that have the potential to create a nuisance will be controlled through the CEMP which accompanies the application and compliance with which would be secured by the DCO" and yet the PoTLL still requests the defence in the draft DCO.	
National Grid	WR 4.1 and 4.4	<p>4.1 National Grid seeks to protect its statutory undertaking, and insists that in respect of connections and work in close proximity to their Apparatus as part of the authorised development the following procedures are complied with by the Applicant:</p> <p>(a) : National Grid is in control of the plans, methodology and specification for works within 15 metres of any Apparatus or that would otherwise adversely affect any Apparatus or work that comes within specified distances in respect of relevant types of work as outlined in key guidance to which see paragraph 4 above,</p> <p>(b) DCO works in the vicinity of NGET's apparatus are not authorised or commenced unless protective provisions are in place preventing compulsory acquisition of National Grid's land or rights and including appropriate insurance and indemnity provisions to protect National Grid.</p> <p>4.4 The proposed Order does not yet contain fully agreed protective provisions expressed to be for the protection of National Grid to National Grids satisfaction, making it currently deficient from National Grid's perspective. National Grid contend that it is essential that these provisions are addressed to their satisfaction to ensure adequate protection for their Apparatus and that protective provisions on their standard terms are provided. These are attached as Appendix 4. Furthermore National Grid requires confirmation that appropriate access to their sub station and apparatus including for Abnormal Indivisible Loads can be made available and that access can be maintained at all times as explained in paragraph 1.</p>	<p>It is acknowledged that National Grid must be afforded appropriate protective provision for its apparatus. General provision was made for electricity undertakers in Part 1 of Schedule 10 to the dDCO. National Grid shared its preferred protective provisions with the Applicant on 22nd March. There is much in their draft which the Applicant can accept. There are some areas of concern and these will be addressed in discussion with National Grid.</p> <p>Paragraph 8(2) of the protective provisions submitted as part of the dDCO (which would apply in the absence of agreement on an alternative set of provisions) requires the works to be carried out in accordance with any of National Grid's reasonable requirements.</p>
National Grid	WR 1.3 – 1.8	<p>1.3 NGET require access for Abnormal Indivisible Loads to transport transformers to their substations as well as general access for a wide range of vehicle types. The transporters would normally travel from Tilbury Docks then utilise a route shown on the plan in Appendix 1 to access NGET's substations. The location of the NGET assets is shown on the plan in Appendix 2. The transformers would be transported on either Flat Top Trailers or Girder Frame Trailers. A clearance of 6m, rather than the 5.3m currently proposed for the new Infrastructure route passing under Fort Road is required. Existing access arrangements are not impacted by such height restrictions. If access is limited to 5.3m access by Abnormal Indivisible Load vehicles will be restricted to Girder Frame Trailers, which are onerous in terms of negotiability.</p> <p>1.4 Turning radii for a 20 axel Girder Frame Trailers (used to transport 220te Nett transformers) would need to be included in the road design. Designs are not yet worked up sufficiently to undertake swept path analysis but typical transport arrangements for a 20 axle Girder Frame Trailer is provided as Appendix 3, along with details for Flat Top Trailers, which require height access of 6m. Trailer oversail may be required and if this is the case any street furniture on the inside of turns for example is either made to be demountable or set back from the path of the proposed loads.</p> <p>1.5 The new public highway proposed to be constructed under Work 9A could provide access, likely to be preferable to routing via Fort Road. However in order for this to be an option firstly, the overall road would need to be constructed to be considerate of National Grid heavy load requirements in terms of both physical negotiability and also structural capacity if any new bridges, culverts etc are proposed on the new road. Secondly at the point at which the new road becomes a private means of access NGET would need new property rights granting to allow access to NGET. We will need to understand if this is the intention of the Promoter and obtain sufficient assurances to this effect from the Promoter. It should also be noted that Abnormal Indivisible Load access will be required both during and post construction and as such retaining existing access and not stopping up the private means of access from the adopted public highway, at least until the alternative is provided, need to be considered to ensure continuity of</p>	<p>It is considered that all of these issues will be able to be resolved through discussion between the parties, taking account of existing property rights and through the drafting of the protective provisions for NGET's benefit in the dDCO.</p> <p>In respect of clearances PoTLL can confirm that increasing the clearance to 6m (through lowering the road) could be achieved within the parameters of its assessment and without exceeding the limits of deviation. The Applicant also notes that no compulsory acquisition proposals have been made in relation to the actual Tilbury2 site (save for an Anglian Water pipe), as such NGET's existing property access rights through the site are unaffected.</p>

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		<p>access for NGET.</p> <p>1.6 In summary NGET would like an explanation from the Promoter as to how Abnormal Indivisible Loads will be able to access their substations and other Apparatus. Without such reassurances being forthcoming this is unacceptable to NGET as it would prevent them accessing their Sub Stations and Apparatus in the manner necessary to maintain and improve their Sub Stations and Apparatus in line with their property rights and in order to enable them to fulfill their statutory obligations. As such NGET wish to understand from the Promoter how the new road layout will accommodate NGET abnormal loads both during and post construction.</p> <p>1.7 Furthermore NGET can currently access their Sub Stations and other Apparatus 24 hours a day. Access is required for staff access, day to day maintenance and operation, security and emergency access. Access is via Fort Road than then east across the Order Land on the route of Works No. 4, 8C and in close proximity to Work 8B. Access will need to be maintained both during and after construction in accordance with NGET's property rights, which will need to subsist irrespective of compulsory acquisition powers in the Order. The promoter has not yet explained to NGET how access can be secured both during the construction and operational stages of the Project.</p> <p>1.8 NGET wish to understand from the Promoter how they will work to construct Works 4 and 8C in a way that will allow NGET maintain 24-hour access during construction? They will also wish to understand access during the operational phases of the project given the interactions with the Authorised Development being constructed adjoining the existing access route.</p>	
National Grid	WR 1.9	<p>1.9 NGET are also concerned about proposals for dredging in close proximity to the Tilbury 400kV Tunnel Cable from Kingsnorth to Tilbury Substation which supplies the surrounding area and it's infrastructure needs We note that ExA have asked question 1.9.11 about restrictions on the location of proposed dredging activity. It will be helpful to understand the Promoters response to this question. Limitations on the location and depth of dredging in combination with approval by NGET of a suitable method statement prior to dredging in the vicinity of NGET's cable tunnel along with appropriate indemnity and insurance provisions being contained in the Protective Provisions may mean that NGET's concerns about this work can be alleviated. At this stage these concerns remain to be satisfactorily resolved.</p>	<p>The proposals show that the eastern extent of the CMAT approach dredge oversails the position of the NGET tunnel. However, owing to the dredging requirements only being in the region of approximately 0.7m at this location PoTLL understands that NGET are now content that this will not be an issue.</p>
Cadent	WR 4.1—4.6	<p>4.1 Cadent seeks to protect its statutory undertaking, and insists that in respect of connections and work in close proximity to their Apparatus as part of the authorised development the following procedures are complied with by the Applicant;</p> <p>(a) Cadent is in control of the plans, methodology and specification for works within 15 metres of any Apparatus, works which will adversely affect their Apparatus or otherwise breach distances/guidance set out in paragraph 3 above;</p> <p>(b) DCO works in the vicinity of Cadent's's apparatus are not authorised or commenced unless protective provisions are in place preventing compulsory acquisition of Cadent's's land or rights or overriding or interference with the same, such protective provisions to include appropriate insurance and indemnity provisions to protection of Cadent.</p> <p>4.2 Cadent maintain that without an agreement or qualification on the exercise of unfettered compulsory powers or connection to its Apparatus the following consequences will arise:</p> <ul style="list-style-type: none"> • Failure to comply with industry safety standards, legal requirements and Health and Safety 'Executive standards create a health and safety risk; • Any damage to Apparatus has potentially serious hazardous consequences for 	<p>It is acknowledged that Cadent needs to be afforded appropriate protective provision and the Applicant is working with Cadent to resolve outstanding matters on the protective provisions they are seeking. The protective provisions will address the matters raised in the written representations made on Cadent's behalf.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>individuals/property located in the vicinity of the pipeline/apparatus if it were to fail;</p> <ul style="list-style-type: none"> • Potentially significant consequences arising from lack of continuity of supply; <p>4.3 Insufficient property rights have the following safety implications:</p> <ul style="list-style-type: none"> • Inability for qualified personnel to access apparatus for its maintenance, repair and inspection. • Risk of strike to pipeline if development occurs within the easement zone which seeks to protect the pipeline from development. • Risk of inappropriate development within the vicinity of the pipeline increasing the risk of the above. <p>4.4 The proposed Order does not yet contain fully agreed protective provisions expressed to be for the protection of Cadent to Cadent's satisfaction, making it currently deficient from Cadent's perspective.</p> <p>4.5 Cadent contend that it is essential that these provisions are addressed to their satisfaction to ensure adequate protection for their Apparatus and that protective provisions on their standard terms are provided. These are attached as Appendix 2. The parties are continuing negotiations and seek to reach agreement on the terms of protective provisions and the interactions between the Authorised Development and Cadent's Apparatus, as set out in paragraph 2.</p> <p>4.6 Should this not be possible and attendance at a Compulsory Acquisition Hearing or Issue Specific Hearing is necessary then Cadent reserve the right to provide further written information in advance in support of any detailed issues remaining in dispute between the parties at that stage.</p>	
Anglian Water	WR 3.3- - 3.8	<p>3.3 The current outstanding actions between Anglian Water and the Applicant include:</p> <ul style="list-style-type: none"> • Discussions and agreement upon the Protective provisions proposed by Anglian Water. • Applicant is to submit a Trade effluent discharge consent application, pursuant to section 118 WIA 1991, to Anglian Water for any trade effluent it wishes to discharge into Anglian Water foul sewer network. • Applicant may also apply to utilise Anglian Water waste water reuse options during the construction period, if appropriate <p>3.4 It is understood that there will be now surface water discharges from the Development into any asset owned or operated by Anglian Water. Separate surface water treatment has been accounted for with Greenfield run off and discharge to water courses. In the event that this projection changes, the Applicant will notify Anglian Water immediately and enter into discussions regarding the discharge to any waste water network</p> <p>3.5 There are two areas within the Development that affect Anglian Water assets and will require diversions pursuant to section 185 of WIA or the appropriate build over or near to agreements with Anglian water. These are located as follows:</p> <p>3.6 Assets numbered 2701, 3801 and 8900, 9003. Anglian Water are discussing with the Applicant how these assets can be retained within the Development site design to continue to allow access to them at all times.</p> <p>3.7 Within the Northern boundary of the site there are 3 strategic rising mains that, in discussions with the Applicant, it has become clear will require diversion. These mains are between 6 - 20 inches in diameter and take all flows from the catchment of Tilbury. Agreement with the Applicant is required to determine how and where these rising mains can be relocated to ensure the required easement protection widths, access and continued supply for Anglian Water customers. These discussions and</p>	<p>PoTLL is in ongoing discussions with Anglian Water and is currently developing proposals for diversion of apparatus, with the aim of reaching an agreed set of protective provisions.</p> <p>PoTLL considers that item 3.4 should read "It is understood that there will be no surface water discharges....."</p>

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		<p>design work are on going. No overall solution or location has yet been reached with the Applicant. Cross sections and depth analysis of these mains is currently being undertaken.</p> <p>3.8 The Anglian Water diversions will be included within the Applicants construction contracts, subject to Anglian Water agreement on the protective provisions which will govern the contracts</p>	
The Environment Agency	WR 12.2	<p>12.2 The applicant is seeking disapplication of Regulation 12 of the Environmental Permitting (England and Wales) Regulations 2016 in relation to the need for flood risk activity permits. Disapplication of this legislation can only take place with consent from the EA under s150 Planning Act 2008. We are content in principle to agree to disapplication but we would only give such agreement conditionally on the basis that the DCO includes a form of protective provisions to which we have agreed. Also we see no justification for the disapplication to continue beyond the period of construction of the proposed development. We have provided the applicant with our preferred form of protective provisions which they are considering and we hope to agree a form of protective provisions with the applicant soon.</p>	<p>It is acknowledged that the Environment Agency needs to be afforded appropriate protective provision. The Environment Agency shared its preferred protective provisions with the Applicant in early March. They are in a similar form to the protective provisions included in the draft Order. Discussions will continue with the Environment Agency about the final form of the protective provisions.</p>
The Environment Agency	WR 12.4	<p>12.4 The applicant also seeks to disapply the Thames Barrier and Flood Prevention Act 1972. This legislation relates mainly to the construction of the existing Thames Barrier. We have requested an explanation as to why disapplication of this Act is necessary.</p>	<p>The Thames Barrier Flood Prevention Act 1972 gives powers to undertake various kinds of infrastructure work relating to the Thames Barrier. In particular this article disapplies the EA's powers under section 67 of that Act, to undertake works in relation to flood control, and section 70, which imposes a penalty on obstructing the execution of the Act. The controls contained in the protective provisions for the benefit of the Environment Agency ensure that the underlying purposes of the Act will be safeguarded.</p>
Network Rail	WR 1.7	<p>1.7 The parties have agreed that the protective provisions currently attached to Proposed DCO for the protection of railway interests are not in an appropriate final form. Negotiations are progressing well on the final form of the protective provisions but these are yet to be agreed. Network Rail would like to see the protective provisions attached to this Written Representation at Annex 1 included in the Proposed DCO.</p>	<p>As Network Rail acknowledge, discussions between Network Rail and the Applicant have resulted in a very narrow set of matters between the parties. These matters remain under consideration. The Applicant does not accept that Network Rail should be required to consent to the operation and maintenance of the development. This would place an unreasonable constraint on works which are authorised by this Order. Under elements of the protective provisions which are agreed, Network Rail will have had ample opportunity under the protective provisions to approve the plans for construction and the works must be constructed to the reasonable satisfaction of Network Rail's engineer.</p> <p>The Applicant does not believe that Network Rail's consent for the Applicant's power to appropriate is justified. The purpose of the power to appropriate is to allow berths at the harbour to be allocated for the use of particular companies. It is intended to counter what would otherwise be the commercially limiting effect of the open port duty. It is an absolutely standard provision in harbours legislation and does not impact on railway land.</p> <p>The Applicant does not accept that it should be liable for foreseeable indirect losses. It cannot be made responsible for losses it cannot control or quantify. The text to which Network Rail objects is in the protective provisions made for Network Rail's benefit in the M4, Hinkley Point Connection and Richborough Connection DCOs, for example.</p>
Network Rail	WR 3.1-3.3	<p>3.1 Network Rail considers that there is no compelling case in the public interest for the compulsory</p>	<p>The table below sets out the plots in which Network Rail have an interest that</p>

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		<p>acquisition of freehold interests in, and rights over, the plots.</p> <p>3.2 Network Rail also considers that the Secretary of State, in applying section 127 of the Planning Act 2008, cannot conclude that new rights and restrictions over railway land can be created without serious detriment to Network Rail's undertaking; and no other land is available to Network Rail which would allow the detriment to be made good by them.</p> <p>3.3 Network Rail and the Applicant have begun discussions about the grant to the Applicant of the necessary rights over relevant, affected, Plots to enable the Proposed Development to proceed while safeguarding Network Rail's interests. The discussions are progressing well and Network Rail can see no reason why compulsory powers should be necessary to give effect to the Proposed Development.</p>	<p>are included within the Book of Reference for Tilbury2, and explains why they are necessary for the Scheme and why the section 127 test is not relevant to the plots.</p> <table><tr><th>Plot</th><th>Rationale</th></tr><tr><td>Compulsory acquisition of rights over plot 02/03</td><td><p>This plot has been included within the Tilbury2 proposals to ensure that the rail sidings which form part of the infrastructure corridor are able to connect to the national network. The land included in this plot is currently the connection point from the existing Maritime sidings to the national network, and is subject to a Connection Agreement between Network Rail and Maritime. The Applicant is in discussions with Maritime and Network Rail to ensure that this Connection Agreement can be 'passed across' to the Applicant in respect of Tilbury2. However, in the absence of this agreement having been concluded, this plot is included to ensure that Tilbury2 trains will be able to pass over the connection, which would only ever be used by PoTLL related trains.</p><p>However, such trains would not be able to pass onto the national network until they had consent to do so from Network Rail and ORR under the rail regulatory regimes.</p><p>As such there is no detriment to the operation of Network Rail's undertaking through the inclusion of this plot within the Tilbury2 proposals. As such, the section 127 test will not be relevant to this plot.</p></td></tr><tr><td>Temporary Possession of Plot 02/04</td><td><p>This plot is included for the purposes of closing a level crossing over the railway, and the paths leading up to that crossing. Network Rail have indicated that they agree to the removal of this level crossing. Network Rail's protective provisions will ensure access for these works is undertaken in such a way that does not impact Network Rail's operations.</p></td></tr><tr><td>Compulsory acquisition of plots 03/01, 03/02, 03/03, 03/12, and 03/16</td><td><p>These plots are required for the construction and operation of the infrastructure corridor. These plots have deliberately been drawn so that they fall outside of the Network Rail 'operational fence', and thus would not have an impact</p></td></tr></table>	Plot	Rationale	Compulsory acquisition of rights over plot 02/03	<p>This plot has been included within the Tilbury2 proposals to ensure that the rail sidings which form part of the infrastructure corridor are able to connect to the national network. The land included in this plot is currently the connection point from the existing Maritime sidings to the national network, and is subject to a Connection Agreement between Network Rail and Maritime. The Applicant is in discussions with Maritime and Network Rail to ensure that this Connection Agreement can be 'passed across' to the Applicant in respect of Tilbury2. However, in the absence of this agreement having been concluded, this plot is included to ensure that Tilbury2 trains will be able to pass over the connection, which would only ever be used by PoTLL related trains.</p> <p>However, such trains would not be able to pass onto the national network until they had consent to do so from Network Rail and ORR under the rail regulatory regimes.</p> <p>As such there is no detriment to the operation of Network Rail's undertaking through the inclusion of this plot within the Tilbury2 proposals. As such, the section 127 test will not be relevant to this plot.</p>	Temporary Possession of Plot 02/04	<p>This plot is included for the purposes of closing a level crossing over the railway, and the paths leading up to that crossing. Network Rail have indicated that they agree to the removal of this level crossing. Network Rail's protective provisions will ensure access for these works is undertaken in such a way that does not impact Network Rail's operations.</p>	Compulsory acquisition of plots 03/01, 03/02, 03/03, 03/12, and 03/16	<p>These plots are required for the construction and operation of the infrastructure corridor. These plots have deliberately been drawn so that they fall outside of the Network Rail 'operational fence', and thus would not have an impact</p>
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			<div>on Network Rail's undertaking. As such, it is not considered that the section 127 would apply to these plots.</div> <p>The Applicant and Network Rail are in on-going discussions about all issues relevant to the interaction of Tilbury2 and Network Rail's assets and operations. A SoCG updating on these discussions will be submitted at Deadline 3.</p>
Port of London Authority	WR 4.1 - 4.4 and SISH Page 3	<p>4.1 Because the Port of Tilbury was transferred out of the PLA, in relation to its undertaking PoTLL has some, but not all, of the functions in the 1968 Act. In framing the 1991 Transfer Scheme care was taken to ensure that this should not give rise to conflict and that the PLA would take precedence. This was easier to achieve when the two undertakings were physically separate. By authorising the Scheme in the River the dDCO would create not only a physical overlap but, unusually in such cases, overlapping/duplicate legislative provision. The dDCO does not deal with this adequately and it is essential that it should.</p> <p>4.2 In the 1968 Act the inserted section 5AA provides that the exercise of PoTLL's functions will be "subject to any enactment [...] relating to or made by the PLA". This formula has worked while the Port and the River are physically separate. Now that the expanded Port will be in the River, however, problems that have been immediately identified include:</p> <ul style="list-style-type: none"> the meaning of "subject to" is unclear; the "subject to" formula does not work if PoTLL exercises its functions first; section 5AA only captures the PLA's exercise of functions under PLA its own Act and Orders, but needs to cover all the PLA's functions, including under public Acts; section 5AA does not apply to legislation passed after the 1968 Act. <p>4.3 Section 5AA does not provide a means of the PLA's continued operation and enforcement of its regulatory powers (in particular its licensing regime) within the extended port limits.</p> <p>4.4 The PLA has proposed to PoTLL amendments addressing some of these issues but the provisions required are complex and further time is needed to identify what savings the PLA needs for the various powers PoTLL is extending to the River.</p>	<p>The Applicant acknowledges that the issue of overlapping jurisdiction is complex and is the subject of ongoing discussions with the PLA.</p>
Port of London Authority	WR 5.3, RFWQ 1.3.1 and SISH Page 4	<p>5.3 PoTLL and the PLA have agreed in principle that the PLA will grant PoTLL a lease of the riverbed, on terms that would enable the Scheme to be constructed and operated without compromising the PLA's ownership of the riverbed. The PLA would adopt this approach on the basis that the PLA's land within the Order land would not be acquired and the dDCO would be amended to omit compulsory purchase powers in respect of it. A draft lease and dDCO amendments are under discussion which, if agreed, should result in this head of objection being disposed of.</p>	<p>The Applicant would only wish to retain its ability to use compulsory acquisition powers in respect of any third party interests in and rights over the PLA's river bed that might come to light. With that caveat, the Applicant acknowledges that its powers of compulsory purchase in the dDCO over property which is the subject of a grant of lease should not apply. Discussions continue with the PLA in this regard.</p>
Port of London Authority	WR 6.1	<p>6.1 In addition to the existing jetty the Scheme will make use of a jetty associated with the Tilbury Sewage Treatment Works ("the Anglian Water jetty"), which is licensed by the PLA under the 1968 Act. Article 3(2) of the dDCO would extinguish this licence on the date on which the DCO comes into force. Temporary possession of most of the area occupied by the Anglian Water jetty is to be taken for construction purposes and the jetty is to be demolished. The whole jetty is within the limits of deviation of</p>	<p>The Applicant's intention is to acquire the Anglian jetty before the Order is made and comes into force. The Applicant will be seeking an assignment of the licence in the event of early acquisition. We believe the PLA now accepts that this is the intention. The default position is enshrined in the dDCO. Schedule 1 provides for the demolition of the jetty. Article 3 disapplies the</p>

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		<p>Work No. 1. The PLA has no objection to this in principle subject to any issue Anglian Water may have (which the PLA does not know) and agreement of the PLA PPs. In addition, the PLA understands Anglian Water and PoTLL to have agreed in principle that in advance of the DCO being made PoTLL will acquire the Anglian Water jetty so that it can carry out the works and demolition it needs as an advance work. This would call for the PLA to grant PoTLL a works licence in respect of the Anglian Water jetty and license its removal. If PoTLL agrees this approach with Anglian Water the PLA will have no in principle difficulty with it subject to the necessary licences being subject to appropriate conditions</p>	<p>requirement in section 66 of the Port of London Act 1968 for a works licence to be obtained in connection with the carrying out of the works authorised by the Order.</p>
Port of London Authority	WR 6.2 - 6.4	<p>6.2 Article 32 of the dDCO would authorise PoTLL to take temporary possession of, and use, land in connection with carrying out the Scheme. Article 33 would also authorise temporary possession and use, in this case for the purposes of maintenance of the Scheme after construction. The areas of land taken under these powers would be limited to what is required for constructing the Scheme or for maintenance but could potentially be, in relation to construction, all the land within the Order land and, in the case of maintenance, all the land within the Order limits.</p> <p>6.3 The powers would be time limited but would nonetheless be exercisable over a long period. Applying the envisaged construction programme in paragraphs 5.115 and</p> <p>5.116 of the ES to the timetable provided for in articles 32 and 33, article 32 notice might be served at any time after the start of construction in early 2019 and possession could continue until 2024 i.e. one year after completion of the last elements of the Scheme, potentially a total of up to six years. After that, possession for maintenance might be taken at any time up to 2028.</p> <p>6.4 The water area that is potentially subject to temporary possession is an area surrounding the proposed extended port limits. It would extend into the approaches to the existing jetty and, for a length of the order of 220m, it would include water areas in close proximity to the main navigation channel. Articles 32 and 33 would therefore potentially enable activity associated with construction to take place in close proximity to traffic in the River. This is a concern to the PLA in the context, in particular, of navigational safety. In order to safeguard the navigable River for public use the PLA Harbour Master must have power to control vessel movements, lights and other matters that would or might have an impact on the use of the River. This has yet to be covered in the PLA PPs.</p>	<p>The powers available to the PLA to issue general and special directions to vessels in the Thames and to issue directions to vessels in the docks are not being disapplied in the dDCO. The PLA have proposed an amendment to paragraph 31 of the Protective Provisions which are included in the dDCO for the PLA's benefit that would preclude the Applicant from giving a special direction to a vessel that is in conflict with a special direction given to the same vessel. The Applicant acknowledges the undesirability of special directions being in conflict and is considering how best to address this issue.</p> <p>The PLA specifically refers to the need to control lights. There is nothing in the dDCO to prevent it from giving directions as to lights. Moreover, paragraph 24 of the Protective Provisions requires the Applicant to comply with PLA directions as to lighting. A suggested amendment to the Protective Provisions is being considered by the Applicant.</p>
Port of London Authority	WR 7.1-7.5	<p>7.1 There are licensed works within the Order limits and/or the proposed harbour limits which are owned by third parties whose ownership and use of the works will continue. These works consist of intake pipes and associated apparatus connected with the former Tilbury B power station and belong to RWE Generation UK PLC ("RWE"), which holds the licence and plans to provide a new power station on the site. These works extend from the former power station site, across the foreshore into the River and terminate in or under the existing jetty, all within the proposed harbour limits.</p> <p>7.2 Article 3(1)(a) of the dDCO would disapply the works licensing regime in the 1968 Act in relation to the construction, operation and maintenance of the authorised development. Article 3(2)) provides that any works licences granted by the PLA to PoTLL, RWE and Anglian Water in relation to the existing structures within the extended port limits would cease to have effect on the day the DCO comes into force and with effect from that day article 3(3) would remove the requirement under the 1968 for a works licence for those existing structures. Article 3(3) would provide the statutory authority for them to remain in the River. The dDCO does not include any means of removing that authority.</p> <p>7.3 Construction of the Scheme will mean that the part of the RWE licensed works that is within the footprint of the existing jetty will be within the new CMAT berth (Work No. 2). Subject to any issue RWE may have (which the PLA does not know), in principle the PLA is not concerned with the removal of the present requirement for a works licence in relation to the part of the RWE works that will be physically within, attached to or beneath the berth structure, although there will need to be precise definition of which elements of the RWE works are within this category. However, the remaining RWE works within the extended port limits ("the remaining RWE works") will be in the River and on the foreshore and must</p>	<p>The Applicant has proposed amendments to address the PLA's concern about the licensing of existing structures in the Thames which are within the extended port limits, but are not owned by the Applicant. These are under further consideration and discussion with the PLA.</p>

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		<p>be regulated in the same way as any other work in the River. PoTLL does not have works licensing powers and (as is entirely appropriate given the purely commercial nature of its undertaking)) does not seek such powers in the dDCO. As the dDCO stands, therefore, the extinguishment of the existing RWE licence relating to the remaining RWE works would remove the 1968 Act licensing regime in respect of them, which would leave these works completely unregulated, without any means of control by either the PLA or PoTLL. The effect of this would also remove RWE's only means of securing legal authority for any substantial change to these works in the River.</p> <p>7.4 That is not a satisfactory outcome for the PLA, RWE or PoTLL and PoTLL has asked the PLA to propose an appropriate amendment of article 3 to preserve the 1968 Act licensing regime as regards the remaining RWE works. (It is assumed that the arrangements described in section 6.1 mean that a similar question will not arise in respect of Anglian Water's existing structures within the extended port limits.) Article 3 amendments are under discussion with PoTLL.</p> <p>7.5 Additional provision must be made in the dDCO to enable the PLA to operate and enforce its licensing regime within the extended port limits in relation to the remaining RWE works.</p>	
Port of London Authority	WR 7.6	<p>7.6 The PLA notes that as regards new structures, and also dredging, within the extended port limits the effect of article 3(4) of the dDCO would be to make its grant of works and dredging licences under the 1968 Act subject to PoTLL's consent, with no indication of the basis on which consent might reasonably be refused. In the absence of savings in the dDCO it would also remove effective means of controlling third party works and dredging that might in future be wanted within the River (including the foreshore) within the extended port limits. These constraints on the exercise of the PLA's statutory functions go beyond PoTLL's commercial need as operator of the expanded port and are opposed by the PLA. This issue and appropriate amendments in the dDCO have yet to be addressed by the PLA and PoTLL.</p>	<p>The aim of article 3(4) is to ensure that the efficient construction and operation of the works and the ongoing management of the harbour undertaking are not compromised by other works undertaken in the Thames. Article 3(4) spells out that the Applicant may not unreasonably withhold its consent. The PLA has not indicated what further constraints it wishes to see in the dDCO.</p> <p>The PLA is wrong to characterise the Applicant merely as a commercial operator. In accordance with the provisions of the 1991 transfer scheme and as is proposed under the terms of the dDCO, the Applicant is already and (in relation to Tilbury2 will become) a statutory harbour authority with all the public law/regulatory duties that come with that status. The Applicant's actions are therefore governed by public law even though it is a private body. This is the position with many UK port and harbour authorities.</p>
Port of London Authority	WR 8.1-8.5	<p>8.1 Article 22(1) of the dDCO would operate during the construction of the Scheme to authorise the temporary suspension of the public right of navigation over any part of the River within the Order limits. This could only be done with the PLA's written approval, and the rest of article 22 provides a procedure for securing such approval and the giving of notice to mariners. With two exceptions the provisions are similar to precedent in the Thames Water Utilities Limited (Thames Tideway Tunnel) Order 20141 ("the Thames Tideway Order").</p> <p>8.2 Article 22(6) would require the PLA to issue notice to mariners within 10 business days of an approval to suspend navigation rights. The period is impracticably short. It should be 15 business days, as in the precedent provision.</p> <p>8.3 In the absence of a decision within 28 business days article 22(7) would provide for deemed approval. The comparable precedent provision is for deemed refusal.</p> <p>8.4 The PLA will always deal with matters as expeditiously as possible. It would expect to be able to decide an article 22 application within 28 business days and would endeavour to do so. PoTLL's anxiety to prevent delays in its construction programme is entirely understood. However, the PLA has a wide range of statutory duties that it must perform in the public interest and its priorities and PoTLL's may therefore not always coincide. There may anyway be good reasons why a decision cannot be made within the desired period. For these reasons the PLA cannot be placed under an absolute obligation to meet PoTLL's desired end date.</p>	<p>The issue of deemed consent/refusal is under continuing discussion between the parties. As the PLA acknowledges, the Applicant considers it important that its programme is not compromised by a lengthy delay in granting consent for the temporary suspension of navigation rights. The Applicant is also concerned that the PLA considers 10 working days "impracticability short" to issue a notice notifying mariners of a temporary suspension. Article 22 must be read in the context of the fact that the Applicant will have discussed its aspirations for temporary suspensions with the PLA in advance of a formal request. This will allow the PLA sufficient time to make all necessary preparations for giving consent and then issuing the notice to mariners within 10 working days thereafter.</p>

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		<p>8.5 The article 22(7) proposal to force suspension without the approval of the PLA, as the statutory authority responsible for navigation in the River, raises immediate safety risks. The PLA has proposed its omission. If article 22(7) were to be retained it should follow the precedent and provide for deemed refusal, thereby maintaining the status quo.</p>	
Port of London Authority	WR 8.6-8.7	<p>8.6 At the end of Schedule 1 to the dDCO there is an exhaustive list of ancillary or related development which would be authorised in connection with construction. The items relating to the River are paragraphs (e) to (l). These are very wide powers, including dredging and constructing works and other structures in the River. The application does not identify the ancillary works that are contemplated and it is not clear to what extent they are addressed in the ES. The PLA appreciates that to an extent this is the nature of ancillary works. However, given such wide powers, PoTLL could interfere with the River in ways that are not ascertainable but which could have a significant impact and which are not apparent from the ES.</p> <p>8.7 The PLA notes that apart from the catch-all ancillary works on paragraph (z) of Schedule 1, the Schedule 1 description of the authorised development is not expressly linked to what has been assessed in the ES. In the PLA's submission this is not an acceptable situation and could well be ultra vires. At least part of the solution will be for the restriction on construction to what has been assessed in the ES to apply to the whole of Schedule 1, not just paragraph (z).</p>	The PLA's concerns have been addressed in an amendment to the dDCO made at Deadline 1 which makes clear that, to be authorised under the Order, all ancillary works must not give rise to any significant adverse effects that have not been assessed in the environmental statement.
Port of London Authority	WR 9.4-9.8, RFWQ 1.9.15 and SISH Page 2 and Page 4	<p>9.4 The disapplication of the 1968 Act in article 3 of the dDCO would apply to maintenance dredging so that this too would be regulated by the PLA PPs rather than the 1968 Act. The PLA objects to this proposal, which would reduce the PLA's ability fully to assess any planned maintenance dredging. That position was recognised in the two cases where this has been an issue, London Gateway and Thames Tideway. In both cases the PLA's licensing jurisdiction was preserved in relation to maintenance dredging.</p> <p>9.5 The capital dredge is a single exercise relating to construction which, if authorised, will have been the subject of rigorous assessment and evaluation by both PoTLL and the Secretary of State. Maintenance dredging, which will take place for the life of the Scheme, must be subject to comparably thorough scrutiny. The PLA, as the only relevant regulator with direct responsibility for the navigation of the River, will be the 'front line' regulator. The application of the PLA PPs to maintenance dredging would restrict the practical scope of the PLA's regulatory powers.</p> <p>9.6 Maintenance dredging is a routine matter carried out along the length of the River and should in all cases be subject to the PLA's normal, routine controls. There is no reason for Tilbury 2 to be treated differently from other statutory facilities along the River.</p> <p>9.7 In any case, PoTLL is required to obtain a licence for maintenance dredging in respect of its existing operation. This reflects the policy of the 1991 Transfer Scheme, which is that the commercial port should not have any of the regulatory functions that go with the PLA's separate status as a trust port, explained in sections 2.1 and 2.4 of these Written Representations. There is no justification for changing that existing position.</p> <p>9.8 The PLA therefore invites the ExA to agree that the dDCO should be amended in line with established precedent to secure that maintenance dredging is regulated via the 1968 Act.</p>	The Applicant is in discussions with the PLA about the appropriate regime for the regulation of maintenance dredging by PoTLL. The Applicant accepts that controls should be placed on the carrying out of maintenance dredging, but considers these are most appropriately imposed under the protective provisions rather than under the PLA's own licensing regime.
Port of London Authority	WR 10.1-10.4, SISH Page 5	<p>10.1 Article 45 of the dDCO provides for the byelaws set out in Schedule 7 to the dDCO to apply within the extended port limits. The PLA understands the Schedule 7 byelaws to be in the same terms as the byelaws that apply in the existing Port. Byelaws that are appropriate in the enclosed dock are not necessarily suitable for facilities in the River. The following issues must be addressed.,</p> <p>4 The London Gateway Port Harbour Empowerment Order 2008, Schedule 8, paragraph 1 (the definition of "tidal work" (the works requiring approval under the protective provisions) expressly does not include</p>	The Applicant is in discussions with the PLA about the operation of the byelaws in the extended port limits.

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		<p>maintenance dredging) and paragraph 21, expressly preserving the 1968 Act jurisdiction; and the same provision in the Thames Water Utilities Limited (Thames Tideway Tunnel) Order 2014, Schedule 16, Part 2, paragraphs 3 and 22.</p> <p>10.2 Vessel movements between the River and the area within the extended port limits must be coordinated with the PLA and be subject to the PLA's overall control of vessels in the River. The proposed byelaws do not secure this as between PoTLL and users of the new facilities and the dDCO does not address the position as between PoTLL and the PLA.</p> <p>10.3 The dDCO must provide for consultation regarding the operation of the byelaws, in particular byelaws 29 and 32.</p> <p>10.4 The dDCO should be amended to provide that before any byelaw is amended or revoked under article 45(2) PoTLL will consult the PLA and in framing the changes will give effect to the PLA's reasonable requirements.</p>	
Port of London Authority	WR 11.1, SISH Page 5	11.1 Article 50 provides for the transfer of the benefit of the DCO, subject to the Secretary of State's written consent. Article 50(6) would give the Secretary of State unfettered discretion as to who might be appropriate parties to consult before giving consent. Consultation with the PLA will be a necessity, and PoTLL is understood to accept this. As the PLA must be a consultee, in accordance with standard legislative practice the obligation to consult the PLA should not be left as a matter of discretion but should be specified in the DCO.	The Applicant accepts that the PLA should be a statutory consultee when there is a proposed transfer of the benefit of the Order. This will be addressed in the next version of the dDCO at Deadline 3.
Port of London Authority	WR 12.1 and 12.2, SISH Page 3-4, and 10	<p>12.1 Article 56 sets out a procedure for dealing with the giving of consents, agreements and approvals in relation to particular types of "applications" as defined in article 56(6). The PLA could potentially be affected by applications under article 18 (discharge of water) and article 20 (authority to survey and investigate land). In the absence of a decision within 28 (calendar) days of application being made article 56(2) provides for deemed consent/agreement/approval.</p> <p>12.2 To the extent that this provision may be applicable to the PLA it ought not to be inconsistent with the PLA PPs. In particular, deemed consent is not acceptable or appropriate for applications made under or in connection with the PLA PPs. The principle of consistency has been accepted by PoTLL but the amendment proposed to the PLA does not achieve its purpose and the PLA is discussing a revised amendment in article 53 to address this.</p>	The Applicant is in discussions with the PLA about the issue of deemed consent/refusal.
Port of London Authority	WR 13.1-13.4	<p>13.1 PoTLL seeks, through article 3(1)(a) of the dDCO, to disapply sections 66 to 75 of the 1968 Act in relation to any work or operation connected with the construction, operation or maintenance of the Scheme. That follows the formula in the draft Silvertown Tunnel Order, which is with the Secretary of State for decision. Unlike the equivalent provision in the Thames Tideway Order, the disapplication operates whether or not there is an equivalent provision in the dDCO. This is an incorrect approach as it results in a legal void in the case of control and change of the remaining RWE works (see section 7.3 above).</p> <p>13.2 Silvertown is not the right precedent. The nature of the Silvertown works is such that they would not have a continuing effect on the exercise of the disapplied powers except in relation to the authorised development itself, which is to be legislated for in the Silvertown dDCO. The dDCO is quite different. It would establish a harbour within the PLA's jurisdiction and would affect third party and regulatory matters quite apart from the authorised development. These matters are not dealt with in the dDCO – and for the reasons explained below that is as it should be – but it means that the outright disapplication in article 3(1)(a) leaves no regulation when it is needed and there is nothing in the dDCO to replace it.</p> <p>13.3 The Port of Tilbury is a purely commercial port which is why, when it was separated from the PLA, it inherited via the 1991 Transfer Scheme only the 1968 Act provisions that are relevant to an</p>	<p>The Applicant and the PLA are in discussions about the provision made in the dDCO for the disapplication of legislation.</p> <p>As stated in response to points made by the PLA at paragraph 7.6 above, it is wrong to characterise the Applicant as merely a commercial operator. In accordance with the provisions of the 1991 transfer scheme and as is proposed under the terms of the dDCO, the Applicant is already and (in relation to Tilbury2 will become) a statutory harbour authority with all the public law/regulatory duties that come with that status. The Applicant's actions are therefore governed by public law even though it is a private body. This is the position with many UK port and harbour authorities.</p>

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		<p>operator as distinct from a regulator. The absence of powers in the dDCO for PoTLL to license works and dredging within its extended port limits is consistent with this policy. It follows that where, as here, there will a continuing need for the regulation provided by sections 66 to 75, the answer is to follow the Thames Tideway formula by disapplying the powers only so far as they are inconsistent with the dDCO and making any necessary provision in the dDCO for their continued operation and enforcement.</p> <p>13.4 The PLA has no in principle objection to replacing these provisions of the 1968 Act with the PLA PPs where they relate to the authorised development, and so are provided for in the dDCO. This approach has been successfully applied in other comparable schemes and the PLA is in discussions with PoTLL regarding the specific wording of the PLA PPs. Although some progress has been made, the PLA PPs are not yet adequate. The PLA would expect the protective provisions within the Thames Tideway Order to represent an appropriate starting point for the protective provisions in this DCO.</p>	
Port of London Authority	WR 14.1-14.5, SISH page 5-7	<p>14.1 In view of the discussions that are taking place and the progress made so far these Written Representations do not set out all the detailed objections. Details will be provided in the event that agreement with PoTLL cannot be reached. For the moment, these Written Representations flag up some issues that the PLA believes the ExA will find it helpful to know at this stage.</p> <p>14.2 The scope of the PLA PPs as proposed in paragraph 17 is novel. The PLA PPs are necessary and relevant for operation and maintenance throughout the life of the extended port, but as currently worded they appear only to apply to construction and the subsequent 5 year maintenance periods. PoTLL has confirmed that this is not the intention and the PLA has proposed an amendment. There is the same point regarding references to “construction” as defined in paragraph 18.</p> <p>14.3 The PLA PPs provide for the PLA to approve details of the exercise of “specified functions”, defined in paragraph 18 by reference only to functions under the Order (other than compulsory purchase). There are some functions for which the approach of including them in the definition of “specified functions” will be an adequate way of dealing with them, i.e. where they relate to “works” or comparable operations e.g. dredging. However this formula does not work for operational functions, where even the extended definition of “plans” would not be relevant. In these cases, approval of detailed design under para 19 would not work e.g. in relation to the removal of wrecks. The PLA PPs need to provide specific savings in relation to various functions. We have identified some of these already (see next paragraph). Further thought needs to be given to other provisions of the 1968 Act, including whether they have been transferred to PoTLL (which is not always clear).</p> <p>14.4 Missing protective provisions for addition to the PLA PPs that have been identified so far to deal with cases where plan approval under paragraph 19 will not work are:</p> <ul style="list-style-type: none"> • provision for PoTLL to pay for, or carry out, remedial action to make good sedimentation, scouring or other changes in flow or river regime occurring within six years after completion of the works where wholly or partly attributable to the works or the exercise of a function under the DCO; • provision expressly excluding maintenance dredging from the scope of the PLA PPs (most recent precedent Thames Tideway Order Sch. 16 para. 22) (see section 9.3 to 9.8 above); • a requirement for PoTLL to pay the PLA compensation in respect of any dredged material that is sold, so that the PLA shares the profit being made from the sale of material dredged from the riverbed owned by the PLA (most recent precedent London Gateway Order Sch. 8 para, 22); • provision requiring PoTLL to give the PLA Harbour Master advance notice of intention to raise a wreck or obstruction, to comply with the Harbour Master’s directions and not to exercise the power at 	The Applicant and the PLA are continuing to discuss the detail of the Protective Provisions.

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		<p>all unless the PLA consents;</p> <ul style="list-style-type: none"> savings to ensure that PoTLL cannot use its powers to give a vessel special directions so as to conflict with a special direction to the same vessel given by the PLA Harbour Master; savings to secure that vessel movements and byelaw 29, vessel mooring and byelaw 32 and any changes to the proposed byelaws are coordinated and consulted upon with the PLA as outlined in section 10 above. <p>14.5 The PLA PPs also provide for PLA approval of details of “specified works” defined in paragraph 18 by reference to the authorised development. It is not clear how this might capture significant alterations to the Scheme that do not require additional statutory powers.</p>	
RWE	Written Representation (generally and paragraph 9.1)	As confirmed at the Issue Specific Hearing on the dDCO, and within the summary of the oral case put forward at that Hearing, RWE Generation is working with the Applicant outside of the Examination process towards concluding an agreement to satisfactorily address its concerns. Heads of Terms in respect of this agreement have been circulated and are being discussed.	The Applicant agrees that substantive discussions with RWE on all of the matters raised in its written representation have been undertaken with the aim of reaching a legal agreement between the parties. However, in the absence of such an agreement, it must respond to the points raised by RWE, as set out below.
	WR 4.6	The plan attached at Appendix 2 to this Representation is an indication of the land rights required for the delivery of the TEC project. The Tilbury 2 DCO must operate to preserve these rights to avoid preventing the delivery of the TEC.	<p>The Applicant would highlight that no compulsory acquisition proposals have been made in relation to land on the actual Tilbury2 site (save for rights in relation to an Anglian Water pipe). This includes RWE's reserved rights.</p> <p>In respect of any proposed powers of compulsory acquisition above and beyond RWE's existing rights over the Tilbury2 site, part of which, from Appendix 2 to RWE's Written Representation, appear to overlap with the Tilbury2 DCO Order limits, it is for RWE to propose these as part of their later DCO (and PoTLL to then object if the Tilbury2 DCO has been made, at which point it will itself be a statutory undertaker).</p> <p>It would not be appropriate for the Tilbury2 DCO to be amended now to protect the rights of land for a project that has no certainty as to its design or compulsory acquisition proposals.</p>
	WR 4.6.1 – 4.6.3	<p>RWE Generation enjoys a right of way to the Tilbury B site (and proposed TEC site) via Fort Road at all times and for all purposes. The means of access from the site onto the public highway is identified by black shading on the Applicant's Rights of Way and Access Plans, and referred to in the key as 'area of private means of access to be stopped up'.</p> <p>In the event of the access being relocated, RWE Generation enjoys existing rights protecting it from any interruption to the rights of way reserved for its benefit. Preservation of a suitable and continuous means of access (including with or without abnormal loads) for the purposes of maintenance, construction and operation on the Tilbury B (and proposed TEC site) is essential.</p> <p>The Applicant intends to provide a revised access to the TEC site passing under a new overbridge at Fort Road and forming part of Work No. 10 to be provided as shown on the Applicant's Rights of Way and Access Plans. As RWE Generation currently has no certainty that its rights to access the TEC site will be maintained and / or diverted to its satisfaction by the Applicant, RWE Generation has identified on a plan the area over which rights will be required for the access if it is to follow this alignment (see Appendix 2). RWE Generation notes that the height of the new bridge is, however, unacceptable as it will not accommodate the abnormal loads necessary in connection with construction, operation and maintenance of the proposed TEC thus preventing unfettered access.</p>	<p>As noted above, there are no proposals to compulsorily acquire RWE's rights in the Tilbury2 site land, and so their access rights along Substation Road will be maintained.</p> <p>The Applicant notes article 12(2)(a) of the DCO which provides that no private means of access can be stopped up until the new one has been opened for use. As such, access will be maintained.</p> <p>As the Applicant has noted in its response to National Grid above, if it was required that the road under Fort Road Bridge needed to be lowered to enable abnormal loads, this could be done within the parameters of the ES.</p>
	WR 4.6.4	RWE Generation is also concerned with the implications of the proposed Rail Spur forming part of Work	This access to the Tilbury B site forms part of RWE's existing rights which are

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		No. 8C to be provided as shown on the Applicant's Rights of Way and Access Plans, which will cross its access to the Tilbury B site.	not proposed to be altered by the Tilbury2 DCO. The operation of this rail siding within the context of those rights would be dealt with through the mechanisms of those existing agreements.
	WR 4.6.6 – 4.6.7	<p>RWE Generation has reserved rights to connect into existing conduits including sewers, drains, watercourses, pipes, cables, wires and other channels or conduits for the passage of services onto the Tilbury B site (and proposed TEC site) for the purposes of the supply or removal of electricity, gas, water, sewerage, energy, telecommunications, data and all other services and utilities (and in respect of all structures, machinery and equipment ancillary to those media). These rights extend to the right to install and use new conduits.</p> <p>Specifically, these rights extend to laying a new foul drainage connection from the Tilbury B site across the Tilbury 2 site. Again, as RWE Generation has no certainty that its rights relating to services will be retained in situ / or diverted it has identified on the plan appended to this Representation at Appendix 2 the area of land over which rights would be required to facilitate this drainage connection, within the Tilbury 2 Order Limits.</p>	<p>As noted above, the Tilbury2 DCO does not propose to remove these existing rights held by RWE Generation.</p> <p>The Drainage Strategy for Tilbury2 (Document Reference APP-090), with which the Applicant must comply under Requirement 11 of the dDCO, includes specific provision for a foul water connection to the RWE site with a rising main (see page 35 and Appendix 5).</p> <p>As such, RWE has certainty that their existing rights are not affected and that appropriate provision has been made for drainage.</p>
	WR 4.6.8 – 4.6.11, 4.7-4.8	<p>RWE Generation has reserved rights relating to existing cooling water intake structures and associated main and ancillary transfer pipework between the cooling water intake structures and the Tilbury B site (and proposed TEC site). These rights extend to rights of access to the Jetty for the purposes of maintaining or replacing the infrastructure referred to. RWE Generation also has an Option with the Port of Tilbury which will enable it to acquire rights to go on to and take possession of one end of the Jetty temporarily, to carry out refurbishment works and to keep equipment installed thereafter.</p> <p>RWE Generation will also have the benefit of a River Works Licence pursuant to the Port of London Act 1968 authorising the existing cold water intake infrastructure under the Jetty (within the Tilbury 2 and TEC's proposed Order limits) serving the Tilbury B power station. Suitable protection must be afforded within the Tilbury 2 DCO to ensure that the intake for the proposed TEC can encompass and make use of the existing infrastructure if required.</p> <p>It is also essential that RWE Generation is not prevented from obtaining a further River Works Licence for new intake infrastructure within the Applicant's proposed extended harbour limits, if required. Again, in the absence of certainty, the plan appended at Appendix 2 to this Representation identifies the land over which rights would be required to facilitate the construction, operation and maintenance of new intake infrastructure within the Tilbury 2 Order Limits, if needed.</p> <p>The River Works Licence will also authorise the associated outfall, but which lies outwith the extended harbour limits. The outfall is shown on the Applicant's land, special category land and crown land plans; a diagonal 'T' positioned directly adjacent to the north east tip of the Order limits surrounding the Jetty. RWE is concerned with the implications of the dredging and construction activity in this area in the absence of any buffer zone between the Order limits and the outfall.</p>	<p>These rights are not proposed to be compulsorily acquired pursuant to the Tilbury2 DCO (noting that they are not referred to in the Book of Reference for these plots).</p> <p>As a consequence of articles 3(2)-(4) of the dDCO, this River Works Licence would be extinguished, and the structures would be able to exist in the river pursuant to that article. RWE would be able to use that existing infrastructure.</p> <p>Nothing in the DCO prevents RWE from obtaining further RWLs – article 3(5) adds the procedural step that the Applicant must also consent to it being granted by the PLA.</p> <p>This outfall is not included within the Order limits, limits of dredging, or harbour limits; as such, the outfall will not be affected by the construction activities.</p>
	WR 4.7-4.8	<p>In the context of the reserved rights as set out in this section 4, and the dDCO, RWE Generation has significant concerns that the development of Tilbury 2 could frustrate the TEC project and prevent it from coming forward.</p> <p>RWE's existing rights of access and its rights in respect of and cooling water intake / outfall and services to the proposed TEC site are essential and were secured in contemplation of the TEC project. If the rights outlined above are not adequately preserved, then the grant of the Tilbury 2 Order could have a direct consequence of preventing this nationally significant infrastructure project from coming forward on a site which is prime for its type of development.</p>	As set out above, the Applicant does not believe that this is the case.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
	WR 5.4-5.8	<p>The effect of Article 3 (2) would be to revoke, as at the date on which the Order comes into force (irrespective of the scheme progressing), existing River Works Licences in respect of the cold water intake infrastructure under the Jetty serving the existing Tilbury B power station site.</p> <p>The RWE Generation River Works Licence, for the existing infrastructure, will also cover the outfall, which lies outside the extended port limits. The terms of Article 3(2) would purport to operate as a variation of the licence. No provision is made within the terms of the licence for an alienation of part of the works licensed, nor are there any provisions within the licence allowing RWE Generation to terminate it in the absence of a transfer of ownership or removal of the works. RWE Generation would have to rely on the good will of the Port of London Authority to regularise the position.</p> <p>Article 3 (3) means that RWE Generation would not require a new River Works Licence for the existing structures (within the extended port limits), however, this provision does not replicate existing River Works Licences and is stated to be subject to the terms of the dDCO, as detailed below.</p> <p>Article 3 (4) has the effect of potentially giving the Applicant a right of veto over the grant of any future licences which would be required from the Port of London Authority to bring forward RWE Generation's TEC project where new infrastructure in the river is required. When coupled with the powers that would then benefit the Applicant within the extended harbour limits by virtue of the operation of Article 4 under the 1991 Transfer Scheme, the Applicant would potentially be able to frustrate the ability for the TEC project to come forward.</p>	<p>The Applicant is considering the wording of article 3 in respect of this point.</p> <p>Yes, this is what is proposed.</p> <p>PoTLL would be the statutory harbour authority for the extended port limits, and so would need to consent to any future RWE works pursuant to PoTLL's regulatory duties as such an authority.</p>
	WR 6.1 – 6.2	<p>The Applicant's compulsory acquisition powers which would result from the dDCO could potentially be used to override certain RWE Generation rights, to the extent they are within the Tilbury 2 Order Land / Order Limits as appropriate. These rights are set out at section 4 above and summarised here:</p> <p>6.1.1 access along the alignment of the new Fort Road overbridge to the Tilbury B site (proposed TEC site); 6.1.2 connecting services; and 6.1.3 retained infrastructure located under the Jetty, and the potential for replacement infrastructure.</p> <p>The implications of the compulsory acquisition powers afforded to the Applicant in the dDCO could compromise the delivery of the TEC.</p>	<p>As noted above, no such compulsory acquisition proposals have been brought forward by the Applicant.</p>
	WR 6.3 - 6.9	<p>With regard to the rights relating to access and services, which are derived from land transfers from RWE Generation to the Applicant, RWE Generation is a Statutory Undertaker and it holds these rights for the purposes of its undertaking. These rights cannot be acquired compulsorily without determinant to RWE Generation's undertaking. Section 127 of the Planning Act applies. Further protection must be afforded to these rights to ensure there is no detriment to the carrying on of RWE Generation's undertaking in this capacity.</p> <p>Furthermore, the existence of these rights is omitted from the Applicant's Book of Reference. Annex D to the Planning Act 2008 guidance (related to procedures for compulsory acquisition of land (September 2013)) is clear that Part 3 of the Book of Reference should note details of all those with rights that are to be extinguished, suspended or interfered with as a result of the provisions of a DCO. Amended plans and an amended Book of Reference should be submitted to the ExA noting RWE Generation's rights and interests so as to ensure that such interests and any resulting prejudice to them are properly taken into account as part of the Examination process.</p> <p>Such rights are third party rights which may be capable of being overridden pursuant to the Applicant's powers in Articles 27 and 28 of the dDCO (private rights over land / power to override easements and other rights) and interfered with pursuant to Articles 32 and 33 (authorising temporary possession).</p>	<p>Such compulsory acquisition is not proposed in the Tilbury2 Order.</p> <p>This is not necessary as no compulsory acquisition or temporary possession is proposed for RWE's interests or rights within the Tilbury 2 site.</p> <p>Article 27 only applies to land subject to compulsory acquisition under this Order, so would not apply to the Tilbury2 site. Articles 28 and 33 are in error and should refer to 'Order Land' (a term whose definition would exclude the Tilbury2 site) rather than land within the Order limits. This will be amended at Deadline 3. Article 32 (temporary possession for construction) only applies to</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>Articles 34 and 35 of the dDCO authorising compulsory acquisition of statutory undertakers' land and the removal of statutory apparatus may also affect RWE Generation's rights of way and rights to services, and Article 41 granting wide ranging powers for construction and maintenance authorises potential interference with RWE Generation's rights.</p> <p>Articles 23 and 25 would also be relevant powers in respect of the rights relating to access and services if the Book of Reference was to be updated.</p> <p>The Applicant's power to exercise these rights is unacceptable to RWE in the absence of a side agreement protecting its interests (as referred to in section 8) or suitable protective provisions on the basis such interference would frustrate the delivery of the TEC project.</p> <p>Articles 7, 8, 12, 13 and 16 of the dDCO authorise further potential interference with RWE Generation's rights of way or existing apparatus and have the ability to disrupt the access to the TEC site and the service corridor.</p>	<p>the 'Order Land'.</p> <p>Article 34 only applies to the 'Order Land' so would not affect RWE. Article 35 corresponds to streets that are stopped up. On the Tilbury2 site this would only be relevant to the small area of private means of access to be re-provided in a slightly different position under the Order. Even if apparatus were required to be moved because of this, this article provides statutory undertakers with sufficient protections that no loss would be suffered.</p> <p>Article 41 does not confer any property rights, as such its utilisation would be subject to RWE's existing rights.</p> <p>None of RWE's rights in the Tilbury2 site would be affected by these provisions as they do not fall on land within the definition of 'Order Land' under the DCO.</p> <p>The use of article 12 is discussed above. Whilst articles 8, 13 and 16 are general powers, they do not override the provisions of RWE's reserved rights (given they are not compulsorily acquired). The Applicant would be keen to understand RWE's concerns in relation to article 7 (limits of deviation).</p>
	WR 6.10-6.12	<p>As with the rights relating to access and services, the rights relating to the jetty are also third party rights which may be capable of being overridden pursuant to the Applicant's powers in Articles 27, 28, 34, 35 and 41. Articles 23 and 25 would also be relevant powers in respect of the rights relating to the jetty if the Book of Reference was to be updated.</p> <p>Insofar as the jetty rights and rights relating to existing and future infrastructure are concerned, these rights are 'relevant rights' belonging to RWE Generation in its capacity as a Statutory Undertaker for the purpose of it carrying on its undertaking, and the existing infrastructure is 'relevant apparatus' for the same purposes. Section 138 of the Planning Act 2008 therefore applies and RWE Generation resists interference with these rights.</p> <p>The existence of the rights should be noted against the relevant plots in Part 1 of the Book of Reference on the basis that RWE Generation has an interest in the land, has rights to use the land, including to attach equipment to it, and its equipment 'occupies' the land, (with reference to dclg guidance as noted above).</p>	<p>As noted above, no changes are required to be made, as no compulsory acquisition is proposed for these rights or infrastructure. As such, RWE's existing reserved rights will still subsist and the use of these DCO powers will still be subject to them.</p>
	WR 7	<p>The protective provisions in favour of Statutory Undertakers (including RWE Generation) at Part 1 of Schedule 10 of the dDCO relate to the protection of existing statutory apparatus but do not extend to cover RWE Generation's concerns. Given the property rights that RWE Generation retains on the Tilbury 2 site and its proposal for the TEC, RWE Generation will promote further suitable protective provisions to enable continued use of its operational site now and in the future in an unfettered manner.</p>	<p>As indicated above, RWE's existing property rights are not affected by the proposals, so additional protections in that regard are not required in the Protective Provisions.</p>
	WR 8	<p>The proposed TEC project will be sensitive to dust generated by the Tilbury 2 development in particular arising from the operation of the construction materials and aggregates terminal. RWE Generation would wish to ensure that the Operational Management plan incorporates sufficient provisions for its protection and that it is consulted on any changes or amendments thereto and that such concerns are addressed through a protective provision.</p>	<p>The Applicant refers to its response to RWE's Relevant Representation on this point (Document Reference PoTLL/T2/EX/32) which is set out below for ease:</p> <p><i>"Where an industrial facility is sensitive to particulates, whether released from another nearby facility in an existing industrial setting or an ambient source such as soil or sea salt, it is expected that the design of such a facility would</i></p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p><i>incorporate an air filtration system appropriate to its setting. This would ensure removal of any such particulate matter and avoid contamination of or damage to sensitive equipment.</i></p> <p><i>The size range of dust particles arising from the proposed activities within the CMAT at Tilbury2 are expected to be within that of ambient particulate matter as typically encountered in the atmosphere of a semi-rural/industrial setting. Such ambient particulate matter includes both natural and anthropogenic sources (vehicle exhaust, solid fuel burning, sea salt aerosol, pollen and Saharan dust).</i></p> <p><i>The Tilbury2 proposals include an Operational Management Plan (Document PoTLL/T2/EX/40) which is secured in the draft DCO. The OMP describes dust mitigation and management for the CMAT that is appropriate to control potential impacts on sensitive receptors such as the ecological mitigation area and public footpaths adjacent to the site (see ES (Document Reference 6.1) Table 18.19)".</i></p> <p>This information will be able to be used by RWE when considering the design of the proposed TEC and determining the need for appropriate design and mitigation within their scheme development. It should also be noted that the CMAT facilities will also be subject to the environmental permitting regime.</p> <p>The Applicant understands that RWE may suggest changes to the OMP once it has had a chance to fully consider it.</p> <p>However, the Applicant's starting position is that RWE will not be able to suggest changes to the OMP or scheme design after the Tilbury2 Examination has completed, given that RWE's is currently an uncertain, unconsented project. It will be for RWE to develop proposals which are mindful of the CMAT uses.</p>
Marine Management Organisation	WR parts 1, 3 and 6. FWQs 1.9.1, 1.9.3, 1.9.7, 1.9.8, 1.9.11, 1.9.17, 1.9.18, 1.9.23, 1.9.24	The MMO made a number of comments regarding the drafting of the deemed marine licence (DML) within its written response and response to FWQs. The references to FWQs in the column to the right are to the MMO's response to such questions.	<p>Part 1.</p> <p>The Applicant will continue its discussions with the MMO regarding the appropriate conditions for the DML. The responses and requests of each of the bodies outlined by the MMO in part 1 of their written response will be taken into consideration during discussions between the Applicant and the MMO. As set out in response to the MMO's answer to FWQ1.9.1 below, the Applicant considers that the DCO should include all harbour-related provisions and should ensure that PoTLL is on the same footing as other harbour authorities operating within the PLA's jurisdiction. Discussions over this point continue.</p> <p>Part 3</p> <p>In response to the MMO's point regarding Harbour Powers and the exemption under the Marine and Coastal Access Act 2009, the Applicant again refers to its response to the MMO's answer to FWQ1.9.1 below. The Applicant considers that progress has been made with the MMO over the conditions and structure of the DML and that the version submitted in revision 1 of the draft DCO represents an improved position which is closer to agreement between the parties.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>Part 6</p> <p>The Applicant acknowledges the MMO's written summaries of its oral case made at the February hearings and has no specific comments to add.</p> <p>FWQ 1.9.1</p> <p>A marine licence does not empower a person to carry out an activity; a marine licence only removes the prohibition on carrying out a licensable activity set out in s.65 of the Marine and Coastal Access Act 2008. In so far as the carrying out of the activity might have an impact on the rights of others, then a further power is necessary to permit that interference with rights. There are public rights of navigation on the river Thames and as such, even if a marine licence is granted, a person wishing to carry out dredging will need some form of statutory authorisation to defend them against potential claims for interference with third party rights. As such, it is necessary for the DCO to empower PoTLL to carry out maintenance dredging activities in the body of the Order (in the same way as it empowers PoTLL to carry out the initial capital dredge). The DML simply deals with the prohibition under s.65 of the Marine and Coastal Access Act 2008 and, in so doing, operates to condition the exercise of the power.</p> <p>It is correct that there are no powers to carry out dredging transferred to PoTLL under the 1991 Transfer Scheme. However:</p> <p>(1) this has no relevance to whether or not the exemption under s.75 could or should be applied; and</p> <p>(2) at the time of the 1991 Transfer Scheme there was no specific part of the on-going Port of London Authority dredging functions that could reasonably be allocated to the then existing Port of Tilbury, but this is not the case for Tilbury2 which will have a clear need for on-going certainty in relation to maintenance of the berth pocket. Such an on-going need is recognised in respect of London Gateway Port further along the river which has an on-going power of maintenance dredging in article 13 of the London Gateway Port Harbour Empowerment Order.</p> <p>It is correct that the exemption in s.75 of the Marine and Coastal Access does not apply to a harbour authority created by a DCO under the Planning Act 2008. As drafted, section 75 applies only to a harbour authority created by local Act or a harbour order under the Harbours Act 1964. However, it is only due to the scale of the Tilbury2 scheme that a DCO is required - if Tilbury2 were a scheme with a smaller capacity it could be consented by a harbour empowerment order. (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 Planning Act 2008 ("the 2008 Act")). As a result of this, s.31 of the 2008 Act requires that Tilbury2 be authorised by a DCO. Under s.33(2) of the 2008 Act "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".)</p> <p>The DCO will contain all the relevant harbours provisions that would ordinarily be included in a harbour order made under the 1964 Act and of note, under s.145 of the 2008 Act "...the provision which may be included [in a DCO] in relation to a harbour authority includes in particular...any provision...which</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>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...".</p> <p>There is no reason in policy or logic as to why a harbour authority in respect of a larger port should not enjoy the same powers as a harbour authority in respect of a smaller port. As such, there is no good reason why the exemption under s.75 of the 2008 should apply to a harbour authority created by harbour order under the 1964 Act, but not a harbour authority created by DCO under the 2008 Act. The dDCO therefore provides that PoTLL should be treated in respect of Tilbury2 as though the exemption in relation to maintenance dredging under s.75 of the 2008 Act applies to harbour authorities created under DCOs (in the same way as it would to harbour authorities created by harbour order).</p> <p>Nothing in what is proposed in the dDCO would restrict any powers of the PLA to carry out dredging.</p> <p>Discussions on this point continue with the MMO.</p> <p>FWQ 1.9.3</p> <p>The Applicant is in discussions with the MMO on this point. 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. The requirement for the submission of a maintenance dredge WFD has been removed from the latest version of the DML consistent with the position that the DML should not relate to maintenance dredging for the reasons set out in respect of FWQ1.9.1 above.</p> <p>FWQ 1.9.7</p> <p>The Applicant is considering this point and will discuss it in more detail with the MMO in future meetings.</p> <p>FWQ 1.9.11</p> <p>The Applicant reiterates its response to FWQ 1.9.11. However, the Applicant is considering the request from the MMO in respect of works other than dredging which are licensable activities and will aim to discuss and agree the appropriate coordinates with it at the next meeting between the parties.</p> <p>FWQ 1.9.17</p> <p>The Applicant refers to its response to FWQ.1.9.17.</p> <p>FWQ 1.9.18</p> <p>The Applicant refers to its response to FWQ.1.9.18.</p> <p>FWQ 1.9.23</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			As per the Applicant's response to FWQ.1.9.23, such mitigation would be secured through the CEMP (Document Reference:PoTLL/T2/EX/31) and the DML. The Applicant does not therefore consider the condition proposed by the MMO to be appropriate but will discuss this at the next meeting between the parties.

1.4. CONSIDERATION OF ALTERNATIVES

PoTLL Response

The Applicant offers no response to Written Representations, Local Impact Reports and Interested Parties' Responses to First Written Questions relating to this topic as it considers that no points made by Interested Parties in respect of these topics require a response at this stage.

1.5. CONSTRUCTION

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Historic England	Appendix 2 Response to FWQ 1.13.4 para 2.2	2.2 North of Fort Road there is an area of marshland very close to the northern extent of the landward defences within the development boundary limit, where subsidiary compound uses are under consideration. In view of the proximity of this land parcel to the landward defences, we request consideration should be given to siting these facilities elsewhere and retaining this land as grazing marsh. Though the use would be temporary, the construction period would be lengthy (15 months), its relocation would reduce proximity and visual prominence of works in views to and from the water defences.	<p>The nearest plots within the Order limits to the landward defence limits of Tilbury Fort are plots 03/04a and 03/05.</p> <p>Plot 03/04a cannot be used for construction purposes as it forms the 'replacement land' for the common land that is to be compulsorily acquired for the purposes of the Tilbury2 proposals. Under Article 37 of the dDCO, this land must be acquired for the benefit of the common land prior to the commencement of works under the Order, or before any temporary possession is taken.</p> <p>Plot 03/05 was land that had potentially been identified for use for construction purposes in relation to the proposed works to Fort Road and the infrastructure corridor. However, following consideration of Historic England, Natural England, Buglife and Essex Field Club's representations, and a re-consideration of construction planning, it has been determined that this plot can be removed from the Order limits.</p> <p>A revised set of Land, Crown Land and Special Category Land Plans (Document Reference PoTLL/T2/EX/58) has been submitted at Deadline 2 to reflect this change.</p>

1.6. CONTAMINATED LAND AND WASTE

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Thurrock Council	RFWQ 1.6.3	<p>a) No. The SWMP only considers the waste arising from the demolition, excavation and construction phase and should also include provision to consider the waste arising from the operational phase of the project.</p> <p>b) An estimate of the commercial waste arising from the canteen, offices and workshop has been provided. However, there is no calculation of the waste arising from the operation of the facility, including the batching and block-making facilities. Waste from this process are likely to include packaging wastes from the materials brought onto site, as well as reject materials from the process which will need to be recycled either on-site or elsewhere.</p> <p>c) The pro-forma used includes a table to "Specify Waste Management Facilities" but the names of such facilities are only provided in generic terms. This means that it is not possible to assess whether the most sustainable options for managing the waste arising are to be used and whether these facilities are likely to have sufficient capacity to manage the arisings from the development.</p> <p>d) TC has provided the Applicant's agent with a list of waste management facilities in the TC area, but this has not been used. For example, it is estimated that 53,200 tonnes of inert soils and stones and 56,177 tonnes of non-inert dredgings will be sent to an inert recycling facility. It is therefore important to understand the location of the facilities that will be used to recycle this material in order to understand the environmental impact.</p> <p>e) The table on the final page of the SWMP gives a forecast for the amount of waste arising and the amount to be sent to landfill, but the preceding tables do not show how these numbers are derived. Where quantities of waste are given, (e.g. "Total Forecast Waste") totals are not shown and so it is not possible to understand the total impact.</p> <p>f) TC and the Applicant are currently liaising on further assessment work.</p>	<p>a) The SWMP has been produced in line with the (revoked) Site Waste Management Plans Regulations 2008 and the SWMP template produced by WRAP which is considered industry best practice. As such, the SWMP does not include operational waste.</p> <p>b) It is not possible to forecast waste production from the operation of the batching and block making facilities until the final equipment and operating procedures have been identified. Activities on site will be optimised to minimise waste generation and any wastes generated will be recycled within the processes as far as practicable.</p> <p>c) The SWMP is a live document that is designed to be updated as the CD&E phases of the project progress. At this early stage in the project it is not possible to identify the exact facilities that will be used to manage and dispose of waste from the scheme as this is up to the contractor and can be considered commercially sensitive.</p> <p>d) The list of waste management facilities was not provided by TC in time to be incorporated into the ES. We have been working with TC to refine this list and derive a baseline capacity for Thurrock that is acceptable to both parties.</p> <p>e) SWMPs only contain the waste forecasts and not details on how these are derived. As mentioned previously, the SWMP is based on industry best practice. The impact assessment for waste is based on a worst-case scenario of all waste generated by the project being disposed of at landfill.</p> <p>f) No response required.</p>
Thurrock Council	RFWQ 1.6.9	<p>No. The site lies within the Unitary area of TC which is also the Waste Planning Authority. The waste capacity of infrastructure in Thurrock needs to be assessed in order to understand the impact of the proposal.</p> <p>The Essex County Council and Southend on Sea Replacement Waste Local Plan (RWLP) and RWLP Capacity Report should not be used as a proxy for Thurrock nor as the baseline for the assessment of arisings and capacity. Using a sequential approach, facilities within the ECC area could be considered after assessing the impact on Thurrock facilities as part of the context for the sub-region to assess the wider impact of the proposal. However, this cannot act as a substitute for understanding the impact of the proposal on Thurrock.</p> <p>Discussions have since taken place between consultants acting for TC and the Applicant to seek to agree the C, D & E waste managed and available capacity of waste management facilities in Thurrock. This has been derived from readily available data from the Environment Agency.</p> <p>The arisings from the proposal also need to be assessed in order to understand the impact of the proposal on the capacity of existing Thurrock waste facilities. This is to be discussed between the parties.</p> <p>TC would then expect the data on both Thurrock C, D & E capacity and impact of the proposal on this</p>	<p>Essex was used as a proxy study area for the impact assessment as waste arisings and waste infrastructure capacity data for Thurrock was not readily available at the time the Environmental Statement was produced. Readily available data is considered to be data that has been verified by a third party (i.e. it is not data obtained via the manipulation of a raw dataset). This was considered to be a robust approach.</p> <p>As a result of consultation with Thurrock Council, and as stated in its response, the Applicant has been working with the Council to agree C,D&E waste managed and available capacity of waste management facilities in Thurrock. Waste generated by the Scheme has then been assessed against the agreed waste capacity. This exercise has been undertaken as a sensitivity test to further support the work undertaken in the Environmental Statement. The results of this test are set out at Appendix E to this document.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		capacity to be incorporated into the Impact Assessment for the Environmental Statement.	
Thurrock Council	WR3.12	The SOCG notes that the applicant and TC will work to agree a methodology for the consideration of waste capacity within Thurrock. Subject to the resolution of this outstanding issue there are no outstanding matters under this heading.	The methodology to derive waste capacity for Thurrock has been agreed by both parties.
Essex County Council	RFWQ 1.6.3	ECC is satisfied with the level of detail contained within the SWMP.	No response required.
Environment Agency	RFWQ Paragraph 2.3	A full preliminary risk assessment should be provided by the applicant including sources of evidence that have informed the report. This could include historic maps, operational plans, building blueprints and pollution incidents that have occurred at the site. Currently the draft Construction and Environmental Management Plan (October 2017) (CEMP) refers to the Environment Agency Groundwater Protection: Principles and Practice and this has been superseded.	<p>As stated in Section 5 of our Response to Relevant Representations Document (Ref. PoTLL/T2/EX/32), a full preliminary risk assessment was undertaken as part of the ES and is included in the Hydrogeology and Ground Conditions Chapter of the report as follows:</p> <ul style="list-style-type: none"> • Section 15.32 – Topography • Section 15.34 – Site walkover • Section 15.35 – Site history • Section 15.40 – Geology • Section 15.54 – Hydrogeology • Section 15.61 – Hydrology • Section 15.68 – Historical and ecologically important sites • Section 15.72 – Waste management sites • Section 15.73 – Industrial and other potentially contaminative land uses • Section 15.78 – Summary of previous investigations • Section 15.111 and Appendix 15.F – Preliminary Conceptual Site Model <p>Sources of evidence are listed in Section 15.31 of the ES and a copy of the Envirocheck Report including historical maps etc is provided in Appendix 15.B.</p> <p>The CEMP was updated at Deadline 1 (Document Reference PoTLL/T2/EX/38) with references to the most recent guidance documents.</p>
Gravesham Borough Council	LIR Paragraph 2	Gravesham BC recognises that unexploded ordnance could have a negative, albeit short-term, impact on residents and business on the southern shore. It is assumed to be short-term until the risk is negated by removal or controlled explosion. The report considers there to be a Medium Risk that items of unexploded German air-delivered ordnance could have fallen unnoticed and unrecorded within the site boundary, and a Low-Medium Risk of the site being contaminated with Allied ordnance. Whilst dredging in water is mentioned it is not clear whether the UXO report has fully considered the chance of UXO from dredging – it is a risk in the Thames see http://news.bbc.co.uk/1/hi/england/kent/5010196.stm . The PoTLL are advised to have an Unexploded Ordnance (UXO) Marine Specialist Presence on site to support shallow intrusive works.	The Detailed Unexploded Ordnance (UXO) Risk Assessment report contained in Appendix 15E of the ES (Doc Ref APP-084) contains a number of Recommended Risk Mitigation Measures. This includes having a UXO Marine Specialist Presence on Site to support shallow intrusive works when dredging in water. The requirement to comply with these recommendations is secured via the CEMP.
Gravesham Borough Council	RFWQ Page 9	GBC supports the Environment Agency's suggestion, in their relevant representation, that a requirement should be added to address the issues related to contaminated land. The EA suggested wording that: Following the grant of the DCO no development shall take place until a scheme that includes the following components to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the Environment Agency.....	<p>As stated in Section 5 of our Response to Relevant Representations Document (Ref. PoTLL/T2/EX/32), a preliminary risk assessment was undertaken as part of the Hydrogeology and Ground Conditions Chapter and is included in the ES.</p> <p>The requirements to undertake additional site investigation and further assessment of the ground conditions at the site including remediation if required, are included in the CEMP (Document Reference 6.9).</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			The scope of the proposed ground investigation and any remediation will be agreed with the Local Authority Contaminated Land Officer and Environment Agency prior to the works being undertaken. A Site Specific Remediation Strategy (SSRS) will be developed and submitted for approval. These measures are also set out in the CEMP.

1.7. CUMULATIVE AND COMBINED

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Gravesham Borough Council	LIR Page 18 5 th Paragraph	Cumulative Impacts: there are some areas where we think in combination effects need to be considered in more detail for example lighting impacts with the Tilbury Energy Centre.	<p>PoTLL remain of the view that it should not be for the Environmental Assessment of Tilbury2 to consider the cumulative effect with TEC. However, PoTLL has prepared a 'high level' Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to this view. This is attached as Appendix C to PoTLL's response to the Examining Authority's First Written Questions (POTLL/T2/EX/49) 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. With regard to the particular point raised by GBC, there is no information available as to the lighting proposals for TEC. It has therefore only been considered in a generalised fashion at para. 3.27 where it comments that <i>"artificial lighting associated with the Tilbury2 and TEC would represent a cumulative effect."</i></p> <p><i>To some extent lighting associated with the TEC would likely represent a moderate extension of lighting within Tilbury2 which would extend over a greater area."</i></p>

1.9. DREDGING AND NAVIGATION

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Port of London Authority	Response to the ExA FWQ- 1.9.15 (page 2) WR Paragraphs 9.2 and 9.3	<p>(ExA FWQ) 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.</p> <p>(PLA response) Discussions regarding these matters are on-going and the status of these discussions is reflected in the SoCG. The key environmental matters, as advised within the PLA's relevant representations are concerned with maintenance dredging being dealt with under the DCO. The ES is not clear as to the extent of maintenance dredging and therefore what is being consented/assessed, and in any case cannot assess the impacts of maintenance dredging that takes place any significant time after the authorised development has been completed.</p> <p>(PLA Response and WR Paragraph 9.3) Even as regards such assessment as the ES can make, there are inconsistencies: the reference in paragraph 5.12 of the ES to maintenance dredging producing 100,000 cubic metres of arisings per day is surely intended to be 100,000 cubic metres per year as in paragraph 5.68.</p> <p>The ES also leaves uncertainties (it is not known for example what amount will be dredged from the approaches to the berth). The PLA accepts that it is impossible to be certain now as to what will be required for the whole life of the authorised development.</p> <p>(WR Paragraph 9.2): In relation to both capital dredging and maintenance dredging under article 43, article 7(e) of the dDCO would authorise downward deviation to any extent "up to the limits" shown in the engineering sections and plans. The relevant sections (drawing no. 5153187-ATK-ZZ-XX-DR-ZZ-1009 rev P05) state figures all of which are stated to be approximate. An approximate figure is not a limit. More importantly, it is not the same as the familiar qualification that reference to a fixed figure is deemed to refer to that figure "or thereabouts", or similar wording'.</p>	<p>Section 5.12 of the ES should read: '...100,000 cubic metres of material <i>per annum</i>'. This is stated correctly in the Marine Ecology chapter, Table 11.1 of the ES.</p> <p>For capital dredging, the amount to be dredged from the berth approach areas shown in the plans for the CMAT is estimated to be ca. 25,000 cubic meters.</p> <p>The maintenance dredging requirements are based on the findings of the Hydrodynamic and sediment study (Document Reference: APP-089), and will involve the removal of less material than the capital dredge.</p> <p>The Applicant acknowledges that the PLA accept that it is impossible to be certain now as to what maintenance dredging will be required for the whole life of the development.</p> <p>In response to 9.2, PoTLL Deadline 1 submission included a revised Limits of Dredging Plan POTLL/T2/EX/45 (drawing no. 5153187-ATK-ZZ-XX-DR-ZZ-1009 P06) which has removed the word 'approximate' from the dredge levels.</p>
Environment Agency	WQ 1.9.3 (page 3)	<p>(ExA FWQ) 1.9.3 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 preconstruction 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 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?</p> <p><u>a) Compliance with Water Framework Directive</u></p> <p>Sediment chemical analysis has been carried out at a number of locations, and with the exception of one or two hotspots for particular chemicals, the levels of WFD chemicals detected were not unusually high for this part of the Thames estuary (which is located in the Thames Middle WFD waterbody). With the exception of perylene (a polycyclic aromatic hydrocarbon with no WFD defined Environmental Quality Standard limits- so its presence even in high concentrations technically could not cause a WFD chemical</p>	<p>a) The 'hotspots' identified during the sediment chemical analysis will be dredged by removal dredge techniques such as backhoe dredging, and not by dispersive dredging techniques.</p> <p>PoTLL has committed to additional controls for dredging, which will be</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>classification failure) the levels of most chemicals at the majority of sampling locations do not indicate strong likelihood of a WFD deterioration under a dispersive dredge scenario. Hotspots could be dredged by removal dredge techniques to further mitigate risks by limiting the mixing of this material with the water column and transporting the more contaminated material to a suitable disposal site, leaving the remaining areas to be dredged by dispersive dredge methods, whose impacts can be further mitigated by the adoption of the conditions of :</p> <ul style="list-style-type: none"> - Not conducting the dredge between the period June-August - inclusive. - Dredging on the ebb tide only. <p><u>b) Additional sampling</u> Environment Agency routine monitoring for WFD chemicals at representative points in the waterbody should be sufficient to detect a deterioration in water quality within the water body as a whole, should it occur. Although sampling locations are spread widely over the area, the placement of monitoring locations is not specifically designed to identify the effects from individual activities, so this monitoring may be ineffective at identifying whether localised exceedances of EQS maximum allowable concentration limits are occurring in proximity to the dredge activity. The request for additional water column sampling is therefore made to provide greater certainty of compliance with the EQS maximum allowable concentrations (EQS MAC) for water column substances under WFD. We would wish to develop, in conjunction with the MMO and the applicant, an agreed sampling program design to provide information on water column WFD compliance local to the dredged area.</p> <p><u>c) In combination effects</u> On the matter of the in-combination effect with the proposed power station, we are aware that the power station applicant is considering the matter, and will include this in their WFD assessments Progress on modelling of impacts in relation to thermal plumes has been made so far which is beginning to suggest that the effect may be insignificant, though further work is required to evaluate this with more confidence. We are prepared to undertake further work with the applicant and the MMO to determine what additional conditions need to be included in the Deemed Marine Licence within the Development Consent Order</p> <p>We would suggest that these should include:</p> <ol style="list-style-type: none"> 1) The design and execution of a local WFD water quality monitoring program for the capital dredge by the applicant, with technical consultation provided by the EA on the analysis suites required and input to the survey design. This should be of a form agreeable to the MMO and we are prepared to take on expert advice from CEFAS. 2) The conditions regarding ebb tide only dredging and seasonal timing of capital dredge (previously described above) are applied. 3) The matter of maintenance dredge WFD compliance is deferred until the influence (or not) of thermal plumes from the proposed power station is investigated further, and that the port will provide a method statement and accompanying WFD assessment to us. We would prefer the maintenance activity to require a MMO licence each year until such times as it can be established that there will be no deterioration of WFD status when the port carries out its maintenance dredges, whether or not the power station is operational. <p>In the event of there being a significant predicted increase in impacts as a result of the operation of the proposed power station whilst the port's planned maintenance dredge was being undertaken, the two organisations would need to decide how this impact could be mitigated to acceptable levels, such that the waterbody remains compliant under the Water Framework Directive. We anticipated the port will need to provide the WFD rationale showing why their maintenance dredge would be considered WFD compliant. The port may have their own powers to maintain the depths on their berths without further dredge licenses from the PLA/MMO, but should that be the case, it is also the case that they are still not released from their responsibilities to ensure there is no deterioration of the WFD waterbody. Mitigation would be provided to ensure the businesses of both port and power station could continue without one affecting the other's operation and without causing a WFD deterioration of status. One possible mitigation might be to, instead permitting dispersive WID dredges for maintenance purposes,</p>	<p>secured though the operation of the DML within the DCO.</p> <p>b) The MMO will be able to impose controls on dredging through the approval process of method statements for dredging; and the Port are required to consult with the EA prior to in so doing under the terms of the DML. Activity-specific requirements from the EA to address water quality such as additional water sampling or approval of a WFD assessment could therefore be suggested by the EA as part of this process.</p> <p>c) Additionally, the terms of the DML set out that the process of method statement approval from the MMO is required for both construction and on-going maintenance dredging (including at berths). Prior to submitting such an application for approval PoTLL is required to consult with the EA before submitting the statement. The EA could then make requests for any WFD information it required as part of that process.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		condition the dredge methods to be removal dredges only. This would have serious financial consequences for the costs of dredging which would appear to be borne by the port alone, unless there were some pre-existing agreement by the power station operator to subsidise the additional costs. As the port capital works will be decided before the power station is operational, acceptance of the presence of the port implies that either the port alone, or the port and the subsequent power station need to have considered their strategy for maintaining WFD compliance when the port need to maintenance dredges. Not maintaining the berths is not an option for the port. Similarly, shutting down thermal discharges whilst the port conducts its maintenance dredge program (possibly several times a year) is probably not going to be a viable option for a power company.	
Environment Agency	WR 9.2-9.6	<p>(WR 9.2) In the event that there remains uncertainty over the risks to water quality whilst undertaking dispersive dredge techniques, we would recommend some additional water sampling for WFD pollutants, to provide confidence of no deterioration, and this could be developed in conjunction with our national Estuarine and Coastal Monitoring and Assessment Service (ECMAS), since the real risks of PAH's transferring from sediment to water in significant amounts in this turbid environment are relatively poorly understood. Further information has been requested on this issue via the written questions and will be submitted within that response (questions – 1.9.3 and 1.19.22)</p> <p>(WR 9.3) In-combination effects did not include the possibility of the construction of a new power station adjacent to the port. If the power station is built then there will be cooling water effluents in close proximity to the port's maintenance dredging operations. The possible thermal uplifts should have been identified as potentially requiring consideration –because increased temperature will affect the solubility of contaminants, and may make dredging riskier for chemical compliance.</p> <p>(WR 9.4) Whilst we accept that the capital dredge could not be affected by a thermal plume once built the Port of Tilbury will have to maintenance dredge quite large volumes of sediments every year. The power station could have little in the way of options to cease discharging whilst dredging is in progress. More protective alternative dredge methods such as water injection methods may be options in this scenario but there are cost implications which the Port of Tilbury should be aware of. The Port would need to ensure operations remain WFD compliant when it undertakes maintenance dredging.</p> <p>(WR 9.5) Further investigation into this operational phase risk should be undertaken in conjunction with the applicants for the power station, to define the level of risk to WFD compliance. If necessary work should be undertaken to seek suitable mitigation strategies that would be mutually acceptable to both operations. At this stage we are aware that thermal plume modelling has not yet been carried out for the power station application. However, we believe that engagement between the developers of both the port and power station would be advantageous in resolving this issue.</p> <p>(WR 9.6) A WFD assessment for the maintenance dredge completed separately, informed by an understanding of the chemical nature of the sediment to be dredged, and the baseline conditions that will be prevailing at the time of dredge (to include consideration of any thermal uplifts in the area caused by the power station discharge, should it be consented). The capital dredge works we accept as likely to be WFD compliant, though the exact dredge methodology will need to be stated and this may affect the levels of risk. It would be appropriate for the Port to provide an updated WFD assessment once dredge methodologies and timings are decided. We would want to review and agree capital and maintenance dredge methodologies. We have provided further details regarding this issue in our response to the written questions (question – 1.9.3).</p>	<p>9.2 The MMO will be able to impose controls on dredging through the operation of the conditions of the DML within the dDCO. Activity-specific requirements from the EA to address water quality such as additional water sampling or approval of a WFD assessment, can be accommodate within the Construction Method Statement, which needs to be approved by the EA prior to the commencement of any licenced activity.</p> <p>9.3 Considering the various question regarding the interaction of Tilbury2 with the new power station, PoTLL has submitted to the PINS a 'high level' Cumulative Effects Assessment of the Tilbury Energy Centre (i.e. the new power station) with Tilbury2 [Document Reference: PoTLL/T2/EX/49 – Appendix C]. The report concludes that all impacts on marine ecology receptors would be minor or negligible, and therefore not significant. As the potential effects for the TEC project 'alone' are currently unknown it is not possible to fully assess whether cumulative effects with Tilbury2 would be significant. However, if the now decommissioned Tilbury power station is used as a proxy, it could be assumed that the operation of TEC would not have significant cumulative effects on water quality with dredging of the Tilbury2 jetty as none are known to have been identified when the Tilbury power station was operational. In addition, it is appropriate to assume that if the TEC project were to be given consent, the potential effects on water quality and resultant impacts on the marine ecology of the Thames Estuary from TEC would be appropriately managed and mitigated so that all impacts would not be significant. Given the mitigation measures to which PoTLL has already committed, and based on the information that is currently available, it is considered that the cumulative effects of the two projects on marine ecology due to changes in water quality would not be significant.</p> <p>9.4 While the power station could have little in the way of options to cease discharging whilst dredging is in progress, it has plenty in the way of technology and mitigation methods to reduce the temperature from the thermal plume and the potential effects which could interact with the Tilbury2 maintenance dredging. Irrespective of the power station developer's intentions, the applicant has committed to mitigations measures during maintenance dredging, including the exclusion of undertaking WID dredging during June – August, and dredging during ebb tide only, which will be secured through the operation of the DML. These measures will mitigate against potential impacts to WFD receptors such as water quality and fish, and will in itself remain WFD compliant.</p> <p>9.5 Currently, there is not enough information available on the thermal plume to allow a meaningful detailed in-combination assessment.</p> <p>9.6 The MMO will be able to impose controls on dredging through the operation of the conditions of the DML within the dDCO, such as requesting</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			the approval of a WFD assessment, something the EA could specifically ask for through the pre-approval consultation with the Agency that is required by the DML.

1.12. HEALTH

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Thurrock Borough Council	Local Impact Report 20.03.2018	7.4.1 Chapter 8 of the ES considers the likely health impacts of the proposals on the local population during construction and operation. In a consultation response to PINS responding to the applicant's request for an EIA Scoping Opinion, TC's Public Health Team requested the submission of a Health Impact Assessment to accompany the DCO application. The Scoping Opinion issued by the SoS in May 2017 noted that the Applicant intended to provide a Health and Wellbeing Assessment as part of the ES. The SoS advised that the applicant should have regard to the responses received from the relevant consultees regarding health, and in particular to the comments from the Public Health England and Thurrock Borough Council.	<p>PoTLL are in discussions with Thurrock Council Public Health in relation to all of the issues raised on health issues in the Local Impact Report and have explained:</p> <ul style="list-style-type: none"> • how consultation responses regarding health informed the assessment; • how impacts were evaluated; • the mitigation measures proposed and how they were proposed; • why a health chapter in the ES was appropriate rather than a standalone HIA; • the health profile data that was used for the health assessment, and how the extra ward level data highlighted by the Council in its LIR does not change health profile used for the assessment nor any of the conclusions drawn. <p>This was all explained in the form of a note, a copy of which is appended at <i>Appendix A: Explanatory Information - Health Assessment</i> to this document. It is anticipated that agreement/further matters under discussion on these points will be reflected in the Statement of Common Ground submitted at Deadline 3.</p>
		7.4.2 In response to chapter 8 of the ES, TC Public Health confirm that the methodology selected appears sound and its scope covers everything expected in relation to Human Health. Nevertheless, there are some concerns regarding the level of granularity of the ES assessment in terms of the specific community of Tilbury that will be most affected by the proposals. It is further noted that a number of health impacts are assessed as direct, negative and permanent during operation of the development, although some of these impacts are rated as resulting in 'negligible' or 'minor' health impacts. Nevertheless, because of the health inequalities particular to residents living in Tilbury, small changes in the environment could potentially have further additional detrimental impacts on health outcomes for local residents.	
		7.4.3 TC's Public Health's preference, given the size and nature of the development and its proximity to a population that experiences health inequalities, would be for the submission of a health impact assessment in its own right. Such an assessment could enable a better understanding of the overall health impacts. Nevertheless, as noted above, the ES Chapter 8 methodology and scope is considered to be sound.	
		7.4.4. to 7.4.9 Whilst the scope of the assessment is considered to be correct, ward level data could be drawn upon in making the assessment as some of the tables of data included within the ES do not include this level of detail...and subsequent paragraphs.	

1.13. HISTORIC ENVIRONMENT

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Archaeology			
Historic England	Written Representation Appendix 1	The text used in these sections does not follow use of terminology as explained and defined elsewhere in published government policy, for example, paragraph 12.62 states 'importance of heritage/archaeological assets' this is confusing use of terms when only 'heritage assets' should be used	Para 12.64 refers to heritage/archaeological assets to define the importance of both built heritage and archaeological assets. Generally throughout the Chapter the term 'heritage asset' is applied to refer to both archaeological and built heritage assets.
		Tables 12.8 and 12.11a include a receptor described as 'modern debris' Such a category should not be considered as there is no archaeological interest	The term 'modern debris' is used to describe debris that can be anticipated on the river bed associated with recent river bed activity. It was a term which was incorporated in the results of the archaeological assessment of the marine geophysical survey undertaken to support the EIA (Technical Appendix 12A AS5) and is an interpretation of some of those anomalies identified during the survey.
		Table 12.8c (Potential Non-designated Archaeological Assets – Marine) does not reflect the text of paragraph 12.90 and possible international importance of prehistoric human remains given other previous discoveries nearby. Therefore “prehistoric in situ artefacts” could be “Late Mesolithic human remains” which should be considered of “National/International Importance” although the potential for discovery might be “low”.	Para 12.90 refers to Terrestrial Archaeology and in particular the Mesolithic human remains that were found buried at depth beneath the lower peat.. It is agreed that the remains of a late Mesolithic skeleton found at Tilbury Docks approximately 1500m west of Tilbury2 is a rare find and consequently is considered to be national or international importance (high or very high value). If a similar find was recovered in the intertidal or marine zone it would be considered of equivalent importance but the potential for discovery is very low.
		, Paragraph 12.166 states that “Consequently if a worst case is considered where each pile is a displacement pile, the area of new impact including the zone of disturbance will be 0.76% of the Marine zone” is not particularly meaningful in terms of trying to equate the impact as a proportion of the “marine zone” (spatially undefined), as the significant factor is where the impact occurs given that the archaeological materials of primary interest might be spatially very restricted.	The calculation to establish the worst case impact from piling (Chapter 12 paragraph 12.166 and Technical Appendix 12A) considers the maximum zone of disturbance across the site in accordance with Historic England’s guidelines (Piling and Archaeology 2015). The site in this instance is the marine and intertidal zone (the intertidal zone and the area seaward of the low water mark within the order limits).
		In paragraphs 12.168-169 the potential impact of dredging operations is acknowledged given the possible likelihood of encountering buried archaeological materials. However, it is also not entirely clear why water injection dredging (dispersal dredging) rather than backhoe dredging, in reference to the “Rochdale Envelope”, is considered to have the greater potential impact, which seems more preoccupied by effects of sedimentation in an area estimated to be 15km either side of the proposed capital dredging zones. This position is further reflected in the detail of Technical Appendix 12.A (e.g. Archaeological Desk-Based Assessment, paragraph 1.4.3). The assumption is made that dispersal dredging could be more damaging to archaeological receptors because it is considered that this methodology limits opportunities “...to identify and recover unexpected or previously unknown archaeological receptors buried within the silt.” However, dispersal dredging might expose larger anomalies that require investigation and removal by hydraulic grab resulting in the same degree of harm, damage and loss. It seems that the only “loss” of material that might occur specifically through dispersal dredging might be smaller more fragile materials, not in situ, and of limited archaeological interest	Only two types of dredging options are proposed (backhoe and WID). Of these two options WID is considered the worst case dredging methodology in terms of impacting the archaeological resource as it potentially leads to a lack of opportunity to identify and recover unexpected or previously unknown archaeological receptors buried within the silt (Chapter 12 paragraph 12.10). Consequently a programme of mitigation measures in advance of WID will be secured as discussed above and set out the Marine WSI (to be delivered at Deadline 3).
		It is therefore our position that the determination of worst-case effect is unproven given acknowledged potential to encounter presently unknown and buried archaeological material. Furthermore, it is our advice regarding the sixth bullet point in this paragraph that a formal programme of archaeological monitoring in the form of a watching brief on board should be conducted on all dredging works close to identified anomalies of possible or known archaeological interest.	As discussed above, Water Injection Dredging is considered the worst case dredging methodology in terms of impacting the archaeological resource as it potentially leads to a lack of opportunity to identify and recover unexpected or previously unknown archaeological receptors buried within the silt (Chapter 12 paragraph 12.10). Archaeological monitoring on board will be undertaken on all dredging works close to identified anomalies of possible or known archaeological interest as set out in the Marine WSI (to be delivered at Deadline 3).
		Table 12.11c (Significance of Effects during Construction on potential Non-designated Archaeological Assets – Marine): we do not agree with any potential given as “Nil-Low” as this “potential” is not defined	The reference to 'Nil-Low' was used in Table 12.11c and Table 12.15c to define a very limited potential e.g. no potential or very low potential. However,

	<p>anywhere in this chapter and given the very limited attention to assessment of buried archaeological materials within the capital dredge area, such an assumption, at this stage, is not accepted. Furthermore, Table 12.15a (Residual Significance of Effects on known Archaeological Assets) uses the term “modern marine debris” which does not provide sufficient attention to potential historic environment interest given that section 4 defines “modern” as “AD 1800 to present” it is therefore possible that “modern” artefacts encountered could also still be considered as cultural heritage and subject to designation (vis. Introduction to Heritage Assets 1840 to 1950, Historic England, 2016).</p>	<p>the reference to ‘Nil – low’ is not used elsewhere in the chapter and consequently where it is used in these table it should be considered to mean ‘low’.</p> <p>Historic England agreed the level of baseline information provided in Chapter 12 within the draft Statement of Common Ground.</p> <p>The term ‘modern debris’ used in Chapter 12 Table 12.8a, Table 12.11a and 12.15a refers to debris that can be anticipated relating to recent river bed activity. The term was incorporated in the geophysical survey report (Appendix 12A AS5) and relate to anomalies that have no archaeological interest.</p>
	<p>We do not agree with the assertion made in paragraph 12.227 (operation) that the WSI (and associated Method Statements) are relevant to maintenance activities once any defined construction phase of the proposed project is formally concluded. The term “adverse effect” is also used throughout this chapter without adequate interpretation of how this term is used in reference to the historic environment (known or unknown).</p>	<p>The WSI will be used to secure any mitigation measures required during maintenance activities (e.g. dredging). Chapter 7 of that document currently discusses the Protocol that will be established for the project which will continue to be used during the operational dredging in the future. The Applicant is happy to discuss this further with Historic England if it is considered further clarification is required,</p> <p>Adverse Effect is defined in Table 12.6 of Chapter 12</p>
	<p>In the Archaeological Desk-Based Assessment (DBA), paragraph 1.3.8 it mentions that anomalies of ‘possible’ archaeological interest were identified from marine geophysical data, but that no Archaeological Exclusion Zones (AEZs) are recommended as there is a possibility that such anomalies might comprise contemporary debris. We therefore concur that while there might be low to moderate potential (paragraph 1.3.9) for archaeological assets dating from prehistoric to Post Medieval, we maintain that while it is “considered unlikely that prehistoric or Roman wreck sites of national importance will be found at the Site due to their rarity within the archaeological record...” we cannot agree with how this is phrased and add that any Roman sites/wrecks, if discovered, would be national importance although such discovery might be unlikely at this location. The main evidence that there are no wrecks present of possible archaeological interest is that no such sites were definitively identified during the geophysical survey. The perspective adopted is that if archaeological materials are in good condition then it is more likely to be considered of national importance. The assessment thinks it is “rare” that such materials might be encountered here and in doing so conflates two matters: rare as in unlikely that the material is present and rare that even if found it will be in good enough condition to merit consideration as being of national importance.</p>	<p>This comment is unclear as it relates to the Archaeological Statement (Appendix 12A) rather than the DBA. No AEZs were defined as no anomalies of national importance were identified during the geophysical survey (Appendix 12A AS5) not because some of the anomalies are likely to represent modern or natural debris.</p> <p>There is no conflation within the assessment when considering the potential for remains of national importance at the site and it is agreed that any Roman wreck, if discovered, would be of national importance although such discovery is unlikely at this location as presented in Chapter 12 Table 12.8c, Technical Appendix 12A paragraph 1.3.9 and AS3 Table 4.</p>
	<p>In paragraph 1.5.9, the DBA recognises the potential impact to nationally significant materials if present and in good condition. This paragraph also states that “...if identified during future investigations appropriate mitigation measures will be undertaken to allow for preservation in situ as an archaeological exclusion zone or if not possible then full recovery and recording will be undertaken.” Such measures can only be effectively addressed within an agreed archaeological WSI. It is therefore apparent from the available information that the proposed project has the potential to impact archaeological deposits inclusive of proposed piling with localised impact on the palaeo-environmental sequences of archaeological interest. We therefore agree that archaeological matters should form part of the DCO application for this proposed development. We accept that options are available for mitigation given that studies completed to date have not identified any known constraints on the foreshore or adjacent seabed within the proposed development area that would be substantially harmed by the proposed project</p>	<p>The Applicant acknowledges that Historic England agree that there are no archaeological constraints within the marine zone to prevent Tilbury2 and consequently mitigation measures can be effectively addressed in an agreed WSI.</p>
	<p>In summary, it appears that there is low to medium potential for previously unknown archaeological deposits to be encountered, such as prehistoric and Roman, but if encountered would be of significance. Medieval and post-medieval wrecks (and aircraft crash sites especially associated with the Second World War) have a medium potential due to their greater known numbers within the Thames estuary. It is therefore apparent that potential archaeological receptors could be affected by direct impacts by piling (30-50m zone of influence) associated with Jetty A, CMAT Beth Jetty B, Ro-Ro pontoon and approach bridges and capital dredging (i.e. downstream (CMAT) jetty and Ro-Ro berthing pocket). A further matter that should be addressed by the Applicant are statements that the immediately adjoining approaches to the berth pockets will also need dredging and are included within the indicative Order limits. However, from the application the spatial extent or location of the adjoining approaches to the berth pockets are not clearly illustrated.</p>	<p>The spatial extent and location of adjoining dredge pockets were included in the application. A plan identifying the approach was also provided to Historic England for review during pre-application consultation in July 2017. Chapter 12 para 12.126 refers to the worst case dredging depth for the adjoining approaches. The revised limits and dredging plan submitted at Deadline 1 confirms the depth of the dredge approach to be 10.38mCD.</p>

		<p>A formal programme of archaeological monitoring in the form of a watching brief on board will be conducted during all dredging work close to identified receptors of archaeological potential attendance by a suitably qualified archaeologist and during all construction work in the inter-tidal zone for the construction of the Ro-Ro off-ramp. However, the practicalities of any watching brief for the Ro-Ro construction phase will require more attention as will a proposed programme of investigating "A2" anomalies through grab sampling if Dispersal Dredging is used, to allow potential archaeological receptors to be assessed. Such matters are to be addressed within a WSI subsequently produced, as a Development Consent Order (DCO) condition, should this application be successful.</p> <p>Paragraph 12.223 requires clarification in that any Method Statement produced will be prepared in reference to an agreed archaeological Written Scheme of Investigation (WSI), which will be submitted to the MMO, as the competent authority for any deemed Marine Licence (should consent be obtained) and it is the role of Historic England to provide advice as to the acceptability of the any such documents produced by the Consent Holder. We concur that progress is subject to securing such approval and no archaeological works will commence unless the WSI is first agreed and the requisite Method Statement produced and accepted.</p>	<p>The WSI has been prepared and submitted as part of the application (Technical Appendix 12E) and this will be finalised during the course of the examination in consultation with Historic England. In accordance with the WSI separate method statements will be prepared for each phase of work which will set out the detailed methodology for undertaking the watching brief or grab sampling of A2 anomalies etc which will be submitted to Historic England for their approval prior to works commencing. A separate WSI will not be produced following DCO.</p> <p>As discussed above the WSI submitted as part of the application will be finalised during the course of the examination in consultation with Historic England. The archaeological method statements produced in accordance with the agreed WSI will be submitted to the MMO. However a draft may be submitted to Historic England to allow the scope of work to be agreed in advance of formal approval via the MMO (who will consult Historic England as their heritage advisor if considered necessary) as the competent authority for licensable construction activities.</p>
		<p>A sheet pile wall will also be installed to run along the northern edge of the dredge pocket. We note the claim that this proposed sheet piling could protect the integrity of the sub-tidal and intertidal bank slopes around the dredging works although carefully design will be necessary although no further detail is provided. We therefore that this element of design is important to the project and that such detail should be part of the EIA submission.</p>	<p>The purpose of the proposed sheet piled wall is to protect the integrity of the sub-tidal and intertidal bank slopes. The detailed design of the sheet pile is not currently available but will be submitted to the MMO and EA for approval during the detailed design stage.</p>
		<p>Paragraph 1.13 states that 'The WSI has been developed in agreement with Historic England and Essex County Council'. We do not accept this assertion that it is 'agreed' only that we offered comment on a draft in July 2017.</p> <p>The WSI provided as part of this application should only be considered as outline or draft, to take account of design envelop principles and that the any Deemed Marine Licence secured for this proposed project is to include the necessary conditions to secure the preparation, agreement and implementation of a project specific WSI within stated timeframes.</p>	<p>The draft WSI has been prepared as part of ongoing consultation with Historic England. The reference to Essex County Council in paragraph 1.1.3 is an error and will be removed from the WSI to be submitted at Deadline 3.</p> <p>As discussed above the WSI submitted with the application will be finalised during the process of examination in consultation with Historic England and is the framework for the mitigation measures to be undertaken within the marine and intertidal zone. No separate WSI will be submitted following DCO, instead separate method statements will be produced in accordance with the WSI for each project specific task. PoTLL is willing to discuss the issue of timing with Historic England.</p>
		<p>The draft WSI sets out that prior to the commencement of dredging, dredging vessel staff, UXO and diving contractors, and other key staff will receive information regarding any identified areas of archaeological interest. Details of these areas will be supplied to vessel staff via this task specific Method Statement. In addition, such areas will be identified during the awareness training. We concur with this approach, but also recommend that any provision made within the DCO to produce other relevant project documentation that steers delivery should also include spatial data for AEZ to be avoided or other anomalies of possible archaeological interest.</p>	<p>Reference to taking into account any AEZs and TEZs are made within the draft WSI. Once the WSI is finalised the contractors (as contractors to PoTLL) will be bound by its requirements in accordance with DCO.</p>
		<p>The WSI mentions that a protocol similar to the established Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate 2014) and the Marine Aggregate Industry Protocol for the Reporting of Finds of Archaeological Interest (BMAPA and Historic England 2005) will be established for the project. However, it remains a separate matter how any use of such a protocol might be employed for operational maintenance dredging post any defined construction period.</p>	<p>The Protocol as outlined in the draft WSI will be established during construction and operational maintenance dredging</p>
Historic England	<p>Written Representation Appendix 2 FWQ 1.13.4 paras 1.1 and 1.2</p>	<p>1.1 To secure the terrestrial archaeological mitigation strategy, we suggest that the wording in the DCO (Schedule 2, Part 1,6) should be amended as follows:</p> <p>1) No stage of pre-construction or construction groundworks may commence until for that stage a written scheme of archaeological investigation (which accords with the outline scheme of investigation has, after consultation with the Historic Buildings and Monuments Commission for England and Thurrock Borough Council, been submitted to and approved in writing by the relevant planning authority.</p> <p>2) In the event that site investigation is required, the scheme must include details of the following:</p> <p>A) an assessment of significance and research questions; and</p>	<p>Whilst PoTLL acknowledges that it is usually the case that planning applications include a draft WSI that is then finalised after consent is granted.</p> <p>However, this is not the approach that has been taken for Tilbury2. The terrestrial and marine WSI which are certified with the DCO for Tilbury2, if made, will be the 'final' version of the WSI with which PoTLL must comply during the detailed design and implementation.</p> <p>The versions of the terrestrial and marine WSI that have been included within the Tilbury2 application, and modified further to discussions with Historic England, include all the elements sought within their suggested requirement</p>

	<p>B) the programme and methodology of site investigation and recording</p> <p>C) the programme for post investigation assessment</p> <p>D) provision to be made for the analysis of the site investigation and recording;</p> <p>E) provision to be made for publication and dissemination of the analysis and records of the site investigation</p> <p>F) provision to be made for the archive deposition of the analysis and records of the site investigation and</p> <p>G) nomination of a competent person persons/organisation to undertake the works set out within the written scheme of investigation</p> <p>3) Any archaeological works or watching brief must be carried out in accordance with approved scheme</p> <p>4) In the event that site investigation is required, the site investigation and post-investigation assessment must be completed for that stage in accordance with the programme set out in the written scheme of investigation and provision made for the analysis, publication and dissemination of results and archive deposition secured for that stage</p> <p>1.2 To secure the programme of marine archaeological investigations we suggest that the draft deemed Marine Licence within the draft DCO (Ref: 3.1) be worded as follows</p> <p><u>Pre-construction plans and documentation</u></p> <p>1.1 A Written Scheme of archaeological investigation in relation to the Order Limits seaward of mean low water, which must be submitted at least six months prior to commencement of licenced activities and should accord with the draft Written Scheme of Investigation and industry good practice, in consultation with Historic England and the relevant planning authority to include -</p> <p>I) details of responsibilities of the undertaker, archaeological consultant and contractor</p> <p>II) a methodology for further site investigation including any specifications for geophysical survey, geotechnical and diver or remotely operated vehicle investigations</p> <p>III) archaeological analysis of survey data, a timetable for reporting, which is to be submitted to the MMO within three months of any survey being completed</p> <p>IV) any archaeological reports produced in accordance with these conditions are to be agreed with the Historic Buildings and Monuments Commission for England and the relevant planning authority</p> <p>V) delivery of any mitigation, including, where necessary, identification and modification of archaeological exclusion zones</p> <p>VI) monitoring of archaeological exclusion zones during and post construction</p> <p>VII) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment by submitting a Historic England OASIS form with a digital copy of the report within 6 months of completion of construction of the authorised scheme and to notify the MMO and the relevant planning authority that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission</p> <p>VIII) a reporting and recording protocol, including reporting of any wreck or wreck material during construction and operation of the authorised scheme</p> <p>IX) a timetable for further site investigations which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order Limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licenced activities. The Consent Holder shall not commence construction of a relevant work until the Consent Holder has appointed the Retained Archaeologist to ensure the delivery of the Scheme; and carried out the pre-</p>	<p>and DML wording.</p> <p>PoTLL has been (as noted by Historic England, since July 2017) and will continue to discuss the wording of the WSI with Historic England as the focus of securing archaeological mitigation.</p>
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Historic England	Written Representation Appendix 2 FWQ 1.13.8 a Would Historic England provide comment on the tidal dynamics modelling presented in the baseline assessments?	<p>We have checked our records and we confirm that we were supplied with a redacted copy of the “Scope of Work” for the HR Wallingford technical report, via email on 12/05/2017, which explained the computational modelling techniques that could be employed, but not which dredging methodologies were to be tested. This was a topic discussed at the meeting on 23/05/2017 and we expressed particular interest in how this work was done given the western extent of the proposed jetty lies within the scheduled monument boundary of Tilbury Fort. We add that the completed HR Wallingford technical report was not subsequently provided to us or specifically addressed at meetings held on 11/07/2017, 30/08/2017 or 24/01/2018.</p>	<p>An extract from the HR Wallingford method statement for the Hydrodynamic and Sedimentation Study was provided to Historic England on 12th May 2017 with an explanation that the works had already been undertaken and the results would be provided in due course. The results were provided to Historic England via email ‘on 24th August 2017. The results were subsequently discussed as part of the review of Historic England’s PEIR response during the 3rd pre-application consultation meeting on 30th August between the Applicant’s archaeological consultant, Historic England and Essex County Council Place Services. The agreed conclusion of these discussions led to the statements that were 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.</p>
		<p>To summarise the present outline detail provided by the Applicant regarding the proposed capital dredge programme in the vicinity of a bulk handling berth and a western RO-RO berth. We understand that the dredge pockets are to be dredged to -15 m Chart Datum (CD) at the bulk handling berth, and -7.9 mCD at the RO-RO berths. Presently, the minimum pre-dredge depths in these areas are approximately -8.0 mCD and -3.9 mCD respectively.</p>	<p>The proposed dredge pocket at the bulk handling berth will be -14.98m CD and for Ro Ro will be -7.88m CD. The minimum pre-dredge depths referenced by Historic England have been taken from Section 5.0 of the HRW report.</p>
		<p>We note that in Chapter 12 (Historic Environment) that the HR Wallingford report is referenced as August 2017, but the submitted copy in Appendix 16.D is dated October 2017. We are therefore uncertain if the assessment provided by the Applicant was based on a draft report produced by HR Wallingford rather than a final version (see Appendix 16.D Section: “Document history” which includes a version dated 17/08/2017).</p>	<p>The Applicant can confirm that the conclusions of the baseline assessments in Chapter 12 are the same for the August 2017 draft (shared with Historic England as noted above) HR Wallingford Report as in the final version in October 2017. The changes between the August 2017 report and October 2017 report reflect the results of additional assessments on contaminant dispersion modelling and waves but no changes were made to the hydrodynamics or sediment movement.</p>
		<p>It is apparent from the HR Wallingford report that it was an objective to determine any potential changes to erosion or accretion at the intertidal foreshore e.g. as might affect nature conservation designations, nearby vessel berths and other riparian activities. No specific and direct reference was made to any implications for Tilbury Fort e.g. status of any foreshore structures and how they might be affected – positively through sediment accumulation or negatively by foreshore lowering.</p>	<p>As discussed above the assessment was undertaken prior to consultation with Historic England. The results however have been considered in the context of the effect on Tilbury Fort, e.g. the status of any foreshore structures and how they might be affected. This is included in Chapter 12 para 12.167, 12.169, 12.170, 12.171 and the Archaeological Statement Technical Appendix 12A and AS 3. The hydrodynamic and sediment study, shows that the construction and operation of Tilbury2 will only have a small impact on the river flow condition and infill rate, and it will not affect the overall hydrodynamic processes. Considering this and the distance, this means there will not be any perceivable geomorphological changes to the</p>

			<p>foreshore of Tilbury Fort. Any effect can be mitigated through controls on dredging imposed by the MMO via the DML. The methodology of dredging needs to be approved by the MMO prior to dredging taking place. The current proposed restriction of undertaking water injection dredging during ebb tide only is aimed at protecting ecological features in Swanscombe, but will largely benefit the foreshore at Tilbury Fort as through the WID methodology the sediment plume is predicted to mostly be confined to the subtidal areas with limited increase in suspended sediment concentration or sediment accumulation on the intertidal areas. The sediment dynamic simulations [APP-089] have shown that the landward extent of any influence of the dredging can be significantly limited by dredging being restricted to the ebb tide.</p> <p>The MMO will consult with Historic England as their specialist advisor on the Historic Environment during the detailed design phase.</p> <p>The proposed sheet piling would protect the structural integrity of the sub-tidal and intertidal banks, by reducing the risk of the bank sliding towards the berth pockets.</p>
		<p>When determining any possible negative impact associated with this proposed dredging we must consider the associated capital dredging programme which downstream of the CMAT jetty will necessitate lowering the riverbed by approximately 1m to 5.8m. The RoRo berthing pocket (next to the western end of the existing jetty and around its westward extension) will require dredging to lower the riverbed by approximately 0.10m to 2m and that the adjoining approaches to the berth pockets will also be dredged. However, Section 2.8 (Layout of proposed works simulated) within the HR Wallingford report describes the basis for the computational modelling of "Up to 4 m of dredging is required to bring the western berth to the target depth; about 7 m of dredging is required to bring the eastern end of the berth area adjacent to the existing jetty to the target depth. Additionally up to 2 m of dredging would be needed to provide the dredged approaches." Elsewhere in the report, see section 3.3.2 (result) it states that at the eastern end of the bulk berth "...dredging, up to 6m below the present bed level so notable infill would be expected here." These different descriptions of the proposed capital dredging programme do not appear to tally with other detail we have seen in the submitted Application and is a matter that should be clarified by the Applicant.</p>	<p>The proposed dredge pocket at the bulk handling berth will be -14.98m CD and for Ro Ro will be -7.88m CD. Consequently dredging at the bulk handling berth will require lowering the river bed up to approximately 6.98m and dredging for the Ro Ro will require lowering the river bed up to approximately 3.98m. The Wallingford report considers the worst case impact from the dredging and the figures above sit within the Rochdale Envelope.</p>
		<p>The report is clear that dredging the berth pocket "...to several metres below the natural regime depth in an area which is known to be sensitive to sedimentation is likely to lead to the dredged areas being subject to ingress of sediment." The issue therefore is whether this ingress of sediment might be from associated with drawdown of foreshore adjacent to Tilbury Fort. For example, Figure 3.5 seems to suggest that loss of sand infill will occur extending west to Tilbury Fort and Figure 3.11 seeming to show modelled scour at the extreme western end of the proposed development.</p>	<p>The Wallingford report suggests that there may be some sand type sediment loss within the river channel to the south of the fort but that this is no different to the current baseline conditions as shown in Figures 3.4 and 3.5 of the report.</p> <p>Similarly there is a small amount of net mud type sediment loss from the area in front of the fort in post development conditions (Figure 3.11), but this is again very similar to current conditions (Figure 3.10), and so the impact of the development on the sediment regime of the foreshore of Tilbury Fort will be minimal.</p> <p>Both of these models show that the only major change in sediment regime would be within the dredge pockets, particularly towards the east of the Ro-Ro berth (approx. 350 meters from the eastern extent of Tilbury Fort's foreshore), although there is some potential for slight mud accumulation changes within the upper inter-tidal area. Again these are fairly minor.</p>
		<p>We appreciate that this technical report directs particular attention at how the dredged areas will infill and that to inform the computational modelling exercise two dredging techniques were considered. In particular, it seems that the technique of back hoe dredging was selected as the spatial area for the capital dredge was considered to be a relatively small area. Furthermore, the attention given to WID seems to be because it is frequently used for maintenance dredging requirements (see section 4), given the likelihood that on-going maintenance dredging will be required post capital dredge. In the Environmental Statement (ES), Chapter 5 (Description of the Proposals), section 5.11 (berth pockets and approach dredging) it states that "...proposals are currently progressing several dredging options including Back Hoe Dredging and Water Injection Dredging (WID)." It therefore seems that the HR Wallingford report should have considered other dredging techniques in order to identify different worst case scenarios.</p>	<p>Only two dredging options are being considered for the purpose of Tilbury2, these are WID and backhoe dredging.</p> <p>The releases of sediment from both backhoe dredging and WID have been considered within the HR Wallingford report in order to demonstrate the potential effects of a range of dredging methodologies. Sediment release from methods such as use of a cutter suction dredger (loading into barges) or trailer hopper dredger would be in the range between the two methods modelled [APP-089, pa. 7.3, page 88].</p>
		<p>The report describes that if WID is employed sediment remains within the tidal river and modelling results are produced to show sedimentary dynamics on both ebb and flood tides. It therefore seems that such consideration should have considered the implications to heritage assets such as Tilbury Fort and whether</p>	<p>As discussed above the results of the Wallingford report has been assessed in the context of the effect on heritage assets such as Tilbury Fort and included in Chapter 12 and supporting Technical Appendices. The only major</p>

		capital dredging at a particular state of the tide might have measurable influence on sedimentary dynamics as may affect the adjacent foreshore.	change in sediment regime would be within the dredge pockets, particularly towards the east of the Ro-Ro berth (approx. 350 meters from the eastern extent of Tilbury Fort's foreshore), although there is some potential for slight mud accumulation changes within the upper inter-tidal area. Again these are fairly minor. The current proposed restriction of undertaking water injection dredging during ebb tide only is aimed at protecting ecological features in Swanscombe, but will largely benefit the foreshore at Tilbury Fort as through the WID methodology the sediment plume is predicted to mostly be confined to the subtidal areas with limited increase in suspended sediment concentration or sediment accumulation on the intertidal areas. The sediment dynamic simulations [APP-089] have shown that the landward extent of any influence of the dredging can be significantly limited by dredging being restricted to the ebb tide.
		Section 7.3 states that "Alternatively the overlying soft silts and finer sands found in the boreholes could be removed by water injection dredging (WID) with any stronger or coarser sediment found at depth removed by backhoe." We therefore request that attention is directed at understand how a combination of dredging techniques might affect sedimentary dynamics and therefore what the worst case scenario might be in reference to identified sensitive receptors such as Tilbury Fort and seabed anomalies of possible archaeological interest. We note that the report does mention the use of cutter suction dredger (loading into barges) or trailer hopper dredger both of which would seem to merit more attention given the statement made in Chapter 5 (as referenced above).	It is possible that a combination of WID and backhoe dredging will be undertaken. WID will be used for most of the dredge area, and backhoe dredging will be used for sediments in the 'exclusion zone' (an area with higher contaminants) and for those coarse sediments which WID is unable to remove. These dredging techniques are unlikely to take place at the same time, since material from WID undertaken near the Ro-Ro terminal could interfere with backhoe dredging near the CMAT, rendering the later less effective. However, in case that a combination of dredging techniques is used, cumulative effects to sedimentary dynamics are expected to be minimal, because the results from the backhoe dredging modelling – which mobilises less sediments than WID- suggest that the depth averaged concentration (20mg/l) and net deposition (approx. 1-5mm at the Tilbury Fort foreshore) would be negligible to minimal [APP-089, section 4.4, page 40, and Figures 4.7 and 4.8]. No other dredging techniques are currently being considered, and this will be controlled through the operation of the DML given that many other assessments have been based on this assumption.
		From our review of the ES it seems that consideration of potential effects on coastal process within and adjacent to the proposed development area should have been included in Chapter 16 (Water Resources and Flood Risk) and that the assessment is based on the HR Wallingford Hydrodynamic and Sediment Study (Appendix 16.D). However, this report does not specifically and directly include geomorphological evaluation of foreshore changes as might affect Tilbury Fort. Furthermore, in Chapter 16, Table 16.22 (Water Resources and Flood Risk – NPS Compliance), in response to NPS paragraph 5.3.5, it states that: "It is considered that there are minimal additional adverse impacts to coastal processes and geomorphology assuming the proposed mitigation measures of this chapter are implemented." We cannot find these mitigation measures, other than reference to provision made within the Development Consent Order (deemed Marine Licence) (see section 16.99).	The hydrodynamic and sediment study, shows that the construction and operation of Tilbury2 will only have a small impact on the river flow condition and infill rate, and it will not affect the overall hydrodynamic processes. Considering this and the distance, it is not considered that there would be any perceivable geomorphological changes to the foreshore of Tilbury Fort. Any effect can be mitigated through controls on dredging imposed by the MMO via the DML
		It is our advice that such matters are addressed by the Applicant, for example in reference to what is presently known about elements of the proposed design, such as detailed in paragraph 16.122 regarding the Ro-Ro berth comprising "...a sheet piled wall to be installed offshore, approximately 130 m from the bank to depths of c.30 m below the bed of the River Thames. The piles will form a wall c.330 m long." We therefore, cannot support at this stage statements made elsewhere in Technical Appendix 12.A (Archaeological Statement) that there will be a negligible effect on sedimentary conditions as might be considered to be "...protecting archaeological receptors outside the Site boundary including that part of the Scheduled fort that extends into the Thames". The only means to demonstrate anticipated negligible effects is to set out viable options for mitigation including an associated monitoring programme against an established foreshore elevation baseline adjacent to Tilbury Fort.	The plan showing dredging limits re-submitted at Deadline 1 shows the location of the sheet piled wall, which is also depicted in the original engineering plans [APP-015]. The wall will protect the integrity of the adjacent bank and slopes. As discussed above the hydrodynamic and sediment study, shows that the construction and operation of Tilbury2 will only have a small impact on the river flow condition and infill rate, and it will not affect the overall hydrodynamic processes. Considering this and the distance, it is not considered that there would be any perceivable geomorphological changes to the foreshore of Tilbury Fort. Any effect can be mitigated through controls on dredging imposed by the MMO via the DML. The only major change in sediment regime would be within the dredge pockets, particularly towards the east of the Ro-Ro berth (approx. 350 meters from the eastern extent of Tilbury Fort's foreshore) although there is some potential for slight mud accumulation changes within the upper inter-tidal

			area. Again these are fairly minor.
Built Heritage			
Thurrock Council	FWQ responses 1.13.5a	Potential additional mitigation: Although the Written Representation approved by TC's Planning Committee on balance supports the proposals, the following measures are suggested as offering the potential to further reduce impact on built heritage assets. In order to reduce the visual impact of the containers and improve the effectiveness of the vegetative screening consideration could be given to reducing the maximum height of container storage within a zone adjacent to the western boundary of the. TC notes that the Applicant's response to the Relevant Representations includes a Minimisation Statement which states <i>"that the storage of containers on site is a constantly changing set of movements and stored products, and there is never therefore a constant site wide block of containers causing a monolithic visual impact."</i> Nevertheless, the suggested introduction of a height restriction zone adjacent to the western boundary may assist in minimising the potential for a monolithic appearance close to the built heritage asset.	The Applicant is considering additional mitigation options, including site layout arrangements, to minimise impacts arising from the stacking of containers.
	FWQ responses 1.13.5a	Sheet 3 of the proposed Works Plans identifies a general area within which the proposed silo would be located (Work No. 8A). Within the Limit of Deviation for this Work the silo should be sited as far as possible from the edge of the River Thames to ensure that visual impact is reduced in outward historic defensive views towards the Thames from Tilbury Fort, as well as the views across the river to the other forts within the sequence of forts protecting the Thames.	The silo has been located within maximum pumping distance of the CMAT berth to ensure its position is balanced between operational considerations, affording it optimal use, and the need to minimise visual impact on the outward views of the fort. The slim nature of the silo (15m dia. (secured through the DCO)) will not impede views of the defences on the south side of the river and the sights for crossfire patterns will remain appreciable.
	FWQ responses 1.13.5a	As noted in the TC's Local Impact Report, paragraph 12.235 of the ES refers to potential enhancements to Tilbury Fort as further mitigation. TC agrees that measures should be secured to enhance the immediate setting of Tilbury Fort, to better reveal its significance and to ensure its long-term viability as a visitor attraction which is considered its optimum viable use. These enhancements could be secured through a legal agreement between the Applicant and TC and the draft heads of terms for such an agreement appear in document reference 5.3. Paragraph 3.1.1 of the this draft refers to a financial payment ('fund') payable to TC in order to: i. undertake a feasibility study into enhancements at the Fort to bring forward tourism and heritage benefits; and ii. implementation of measures identified by the feasibility study to be reasonably capable of implementation. TC will work with the Applicant and English Heritage as necessary to agree the details of the fund and the range of potential enhancements. Separately, paragraph 3.1.3 of the draft Heads of Terms refers to improvements to walking / cycle networks and wayfinding to be secured through an Active Travel Study.	A number of opportunities for enhancement have been identified by English Heritage as operators of Tilbury Fort and the Applicant is continuing to actively engage in consultation with them to identify appropriate and proportionate contributions (as discussed below).
Thurrock Council	FWQ responses 1.15.2	a) The main issue is considered to be the presence of the ships moored at the jetty as these will be much closer to the Scheduled Ancient Monument. The best option would be to move the jetty eastwards away from Tilbury Fort, although it is understood from the Applicant that this is not feasible for operational reasons. TC would therefore propose that additional mitigation and enhancement works could be undertaken in the common land and remnant grazing marsh around Tilbury Fort in order to improve its immediate setting. Measures could include more significant boundary treatments around the Main Site and new infrastructure corridor (including light spill as detailed below) and landscape management improvements in the surrounding common land and relict grazing marsh. These measures could also include replacing poor quality fencing, restoring the ditch network, clearing previously dumped material and the provision of new hedges or trees further from the open marsh area.	The presence of a jetty in close proximity to Tilbury Fort is not without historical precedent as is explained in the Tilbury Fort Paper appended to the Applicant's response to First Written Questions (PoTLL/T2/EX/49 Appendix D) . The nature of the setting at this location is principally characterised by river activity and the associated trade and passage of goods which the fort has previously participated in. The technical note at Appendix E to the Applicant's response to First Written Questions explains the landscaping proposals that have been included in the Tilbury2 proposals, and which will be managed in accordance with the Landscaping and Ecological Management Plan (LEMP). The measures suggested here are outwith the Order limits and so could not fall within the purview of the LEMP.

Thurrock Council	LIR Section 7.5 Landscape Character & Visual Amenity	7.5.5 With reference to landscape and visual mitigation, table 9.15 of the ES refers to a 'Landscape Strategy' (ref. Figure 9.9) which would be maintained and managed through the proposed Landscape and Ecological Management Plan (ref. 6.2 10.P). TC's relevant representation suggested that a more robust landscape mitigation package could be provided, which could also assist in providing additional ecological mitigation. At the time of drafting this LIR potential further landscape mitigation proposals are under discussion between TC and the applicant. These measures could include a fund to enable off-site landscape mitigation measures to be implemented. It is noted that the draft DCO (ref. 3.1) includes the Landscape and Ecology Management Plan as a 'compliance' influencing the construction and operation of the development.	The technical note at Appendix E to the Applicant's response to First Written Questions explains the landscaping proposals that have been included in the Tilbury2 proposals, and which will be managed in accordance with the Landscaping and Ecological Management Plan (LEMP). Together these demonstrate that a robust package has been developed. Thurrock Council will also have access to contributions made through the s106 that could be deployed for off-site mitigation if it can be reasonably related to the proposed development and its potential effects.
Thurrock Council	LIR Section 7.7.21 Terrestrial Archaeology & Built Heritage, Potential Further Mitigation	7.7.21 Paragraph 12.235 of the ES refers to potential enhancements to Tilbury Fort in the form of improvements to access, wayfinding and car parking. These potential enhancements could be secured via a s.106 agreement between POTLL and TC, the heads of terms of which are set out in document reference 5.3. The heads of terms are in draft form and are still to be agreed between the parties but nevertheless include a financial contribution to be used partly for the investigation and implementation of tourism and heritage enhancements at the Fort. The draft heads of terms also refer to potential improvements to the highway network outside of the Order Limits via an Active Travel Study. The draft travel improvements identified by the Study include improvements to walking and cycling links in the area in order to better connect Tilbury Fort and the riverfront with Tilbury town and the Tilbury ferry terminal. In principle TC supports these measures which could enhance the Fort as a tourism destination and better connect the Fort.	The Active Travel Strategy would improve the pedestrian route between Tilbury town to the river and fort through wayfinding signage and the upgrade of the existing walking track which passes World's End Tavern on the west side. The enhanced access to the fort will also improve connection from Tilbury town and rail station to Coalhouse Fort along the river, thus emphasising a series of strategically and physically related river defences. The joined up pedestrian routes and enhanced built environment are expected to increase visitor accessibility and desirability of the fort as a destination and is therefore expected to increase ticket sales at the fort. This is considered to have a direct benefit to the upkeep and active conservation works to the historic fabric of Tilbury Fort.
Gravesham Borough Council	FWQ response 1.13.3a	GBC is of the opinion that the operation of the proposed development will have a potential adverse impact on a range of designated and undesignated heritage assets on the southern shore of the Thames as it lies within their setting and will represent a major intensification of development and activity directly opposite and downriver of Gravesend's historic town centre and the Riverside Leisure Area. Whilst Gravesend is an important riverside town and port activity contributes to its character, the expansion of the port into Tilbury2 will detract from the relationship between Tilbury Fort, New Tavern Fort and the Gravesend Blockhouse in particular as closely inter-related defence heritage assets..... Also, the applicant has declined to take into account the combined impact of the Tilbury2 development with RWE's proposals for a new power station adjoining, leaving the latter's own NSIP application to deal with the matter. Whilst, GBC would not expect Tilbury2 to mitigate the impact of the RWE proposal, it is necessary to understand what the combined impact in terms of intensifying development and activity immediately east of Tilbury Fort is likely to be. RWE has recently undertaken a public consultation on their proposals and the concept is therefore understood in general terms. Irrespective of this, the fact that development of this type of scale is highly likely to take place on a site immediately adjoining should have been taken into consideration as the two will need to sit comfortably together whilst avoiding (as far as practicable) harm to the significance of identified heritage assets. In this context, the acceptability or otherwise of the proposed silo and the degree to which both sites will be lit are likely to be important material considerations. No comments are made here on the harm to significance of heritage assets on the northern shore, this being a matter for Historic England and Thurrock Council. However,	PoTLL remain of the view that it should not be for the Environmental Assessment of Tilbury2 to consider the cumulative effect with TEC. PoTLL has set out its position and reasoning in this regard in a number of documents, most recently in the 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. However, PoTLL has prepared a 'high level' Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to the above view. This is attached as Appendix C of the Response to First Written Questions document (PoTLL/T2/EX/49). 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. The identified potential adverse impacts on designated and undesignated assets located on the southern shore are all related to perceptible changes to setting. There will be no changes to the fabric of any of the designated and undesignated assets. The intensification of development and activity is distant from the identified heritage receptors on the south side of the river and does not represent a considerable loss of significance for any asset in Gravesend. The relationship between the New Tavern Fort and the Gravesend Blockhouse is principally expressed through the pattern of crossfire, the sightlines of which have been maintained from critical locations and will only partially be interrupted by intermittent RoRo ships berthing. The identified setting of Tilbury Fort includes the relationship with the forts on the south side of the river and the BHA assessments of significance and of impact have taken this into account. Similarly this is reflected in the ES assessments of heritage value, magnitude of

		this does not mean that harm (for example) to Tilbury Fort through development within its setting does not have implications for Gravesham, given that it is part of the context within which assets in Gravesham are appreciated and understood.	effect and likely significance of effect.
Gravesham Borough Council	FWQ response 1.13.3b	<p>In terms of impact on heritage assets, it is not changes to views across the river from Gravesend per se that is the issue rather how the proposal has the potential to affect the significance of those heritage assets as development within its setting. This will differ between day and night time, particularly as there will be an operational need for the site and ships on the jetty to be lit. The position and movement of ships will also itself have an impact.</p> <p>As noted above, the primary harm to heritage assets on the southern shore would arise due to the intensification of port and other development immediately to the east of Tilbury Fort. This would adversely affect the setting of Tilbury Fort and the way in which it's interrelationship with defence heritage assets on the southern shore are appreciated and understood. This interrelationship goes back to the 1540s when both Gravesend Blockhouse and Tilbury Fort became operational. Whilst this relationship has evolved over time, as the defences were upgraded, the basic concept of a 'cross fire' zone to prevent attack by enemy ships remained key – extending also down to Coalhouse, Cliffe and Shornemead forts over time.</p> <p>It is therefore how the defence complex and the role of Gravesend as the river gateway to London over hundreds of years which is key to mitigating the adverse impact of the development and this could be achieved in part through the upgrading of interpretive materials/facilities both on site but also via web and audio-visual resources such as phone apps etc.. Historic England's London Walks webpage provides examples of what has been achieved elsewhere in respect of the latter https://historicengland.org.uk/get-involved/protect/keep-it-london/walk-history-london/</p> <p>Whilst it has not discussed the scope of such a project with Historic England/Thurrock Council to date, there is clear potential to do something similar for the northern shore as an integrated package. Not only would this improve understanding of the heritage assets themselves and their interrelationship but also provide a unique opportunity to exploit their potential as an educational, cultural, and recreational resource alongside the creation of the National Coastal Path. An added benefit of such a project could be that it also includes material to better reveal the significance of the historic development of Tilbury itself as a major port and undesignated heritage asset in its own right.</p> <p>GBC would therefore wish to see Tilbury2 make a proportionate contribution toward such a project that could be used as matched funding for an HLF bid with a wider remit to include renovation works that are currently required but not necessarily linked to the mitigation of the impact of the port expansion and is prepared to enter into negotiations on that basis.</p>	<p>PoTLL are in discussions with Thurrock Council regarding the inclusion of Two Forts Way into the Coastal Pathway system, including signage and a comprehensive wayfinding system. This represents the opportunity to improve the connections between the cruise terminal, Tilbury Fort and Coalhouse Fort. This is an enhancement to the wider environment which is considered beneficial to all three designated heritage assets by improving access and connectivity as well as offering mitigation to potential effects on the visitor experience, by making the relationships between northside and southside forts more explicit through interpretation.</p> <p>Preliminary discussions with GBC in this regard have included the potential provision of interpretation material related to the defences on the south side of the river. Discussions on such provision and the potential scope for PoTLL contributions towards such measures and to the Coastal Pathway are on-going.</p>
Gravesham Borough Council	Pg 12	It is noted that the applicant's Built Heritage Assessment (ES Appendix 12B) concurs that there will be an adverse impact on the significance of these assets and also on others on the river frontage. Whilst this impact is likely to be minor adverse and result in less than substantial harm, Gravesham BC would argue that any degree of harm is made worse by its cumulative nature whereby it impacts simultaneously on multiple assets and not on each one individually as set out in the applicant's Built Heritage Assessment.	<p>In keeping with Historic England guidance in GPA3, the legibility of each asset and its interrelationships is explored through the understanding of setting and assessing its contribution to significance.</p> <p>The assessment of significance recognises that each relevant asset has a strategic and visual relationship with other elements related to river defence, however none of these rely on the others to maintain heritage value and therefore the assessment of impact or effect on the setting of individual assets is considered appropriate.</p> <p>The impact or effect upon each asset is addressed separately and specifically therefore further assessment of a group comprised of the same assets, which are not bound through any specific heritage status that might be representative of further heritage values, would be</p>

			extraneous to the steps set out in GPA3.
Gravesham Borough Council	Local Impact Report Page 19, third and fourth paragraphs.	<p>The Port of Tilbury has offered Gravesham BC an agreement pursuant to Section 1 of the Localism Act 2011 and Section 111 of the Local Government Act 1972 rather than an agreement pursuant to Section 106 under the Town and Country Planning Act 1990. Section 1 of the Localism Act 2011 provides for a Local Authority being able to enter in an agreement for the benefit for the authority and its area whilst Section 111 of the Local Government Act 1972 gives a Local Authority the power to do anything which is calculated to facilitate, or is conducive or incidental to discharge of any of their functions.</p> <p>Gravesham BC has suggested that a better mechanism would be a S106. For Bluewater, that applicant has entered into a section 106 agreement with Dartford BC to provide a “town centre mitigation payment” for Gravesend (Gravesham BC) and Chatham (Medway Council) as well as Dartford itself in recognition of the potential impact the development could have on their town centres.</p> <p>Thurrock appear comfortable with such an option so long as a legal mechanism is put in place to protect Thurrock from financial penalty if it passes on the payment to Gravesham BC but Gravesham BC did not spend the money as agreed.</p>	<p>As there is no land within the Order Limits which is situated within Gravesham Borough Council's jurisdiction, the Applicant had previously proposed an agreement pursuant to section 1 of the Localism Act 2011 and Section 111 of the Local Government Act 1972 as opposed to an agreement pursuant to section 106 of the Town and Country Planning Act 1990 (“a s106 agreement”). For the agreement to be a s106 agreement, some land within Gravesham's area would have to be 'bound' by the agreement and this is not possible in this case.</p> <p>The Applicant is, however, willing to consider the proposal by Gravesham to include a mechanism within the s106 agreement to be agreed with Thurrock Council which means that the contribution payable to Gravesham is made through that agreement. The Applicant will have to agree such mechanism and ensuing drafting with Thurrock and will report back to the Examining Authority on the progress of such discussions during the course of the Examination.</p>
Gravesham Borough Council	Local Impact Report Page 10,	<p>In the executive summary of 6.2.9.J the impact is summarised as:</p> <p>1.1.5. The assessment recognises that the primary impact from the proposed development is visual. This will be most notable in views from South of the River Thames, from Tilbury Fort and Coalhouse Fort (once demolition of Tilbury B has occurred). The proposal introduces light sources and lit activity into an area that is currently predominantly dark. The indicative scheme seeks to minimise the number of high level (high mast) light sources apparent in extended views whilst ensuring safe operation of the port facilities.</p> <p>..... 1.1.7 The obtrusive lighting study establishes that there is no apparent obtrusive light to neighbouring residential properties from the Tilbury2 Site. The study has highlighted the potential for lighting within the CMAT to exceed post curfew luminaire intensity guidelines as a visual impact, however as there is no detailed scheme or operator for the CMAT Site at present it is not possible to determine their exact lighting requirements for inclusion within the calculations. Luminaire intensities are provided for guidance within obtrusive lighting criteria therefore do not represent an absolute instance of obtrusive light. These areas and sources will need to be reviewed through developed and detailed design phases to minimise the risk of high luminaire intensities</p> <p>As a result of the concerns expressed by Gravesham BC in its PEIR response and comments on the draft submission documents, the PoTLL offered to provide Gravesham Borough Council with some night-time visuals of the proposals and asked us to confirm the viewpoints that we felt should be used. As Gravesham BC needed to arrange access to Fort Gardens, which is secured at night, we understand that these photos were taken at the end of November 2017.</p>	<p>Night time views were prepared to demonstrate the appearance of the proposed development. The night time visuals are offered on the available night time photography (captured November 28th 2017) with commentary on the expected future baseline conditions by reference to other portions of the image or other images.</p> <p>These images are included in this document at Appendix B: Night-Time Visualisations.</p>
English Heritage	Written Representation including FWQ Responses Section 2.12 – 2.14	<p>Question 1.14.19.</p> <p><i>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?</i></p> <p>2.12 We consider the matter of the impact of setting in response to the Environmental Statement in our section five below. Suffice to say, the setting of the fort will be permanently affected.</p> <p>Views of linked heritage assets and across the Thames will be significantly affected or</p>	<p>There is no test in the National Policy Statement for Ports requiring that long term viability of heritage assets is maintained. The changes to the setting of the Fort and any potential or feared effects on today's commercial operation therefore cannot be considered to increase the assessed level of harm to significance.</p> <p>Consequently the consideration of compensation for feared impacts to commercial operation should be appropriately limited.</p> <p>In their Written Representation (Appendix E), English Heritage has forecast a decline in</p>

		<p>lost, and the eastward approaches will be significantly impacted. It is our belief that this would constitute very significant harm (but less than substantial). Therefore the balancing exercise (NPPF paragraph 134) of this harm with any public benefit must be undertaken.</p> <p>2.13 The proposed scheme also jeopardises the long-term viability of the Fort, the proposed mitigation measures are considered largely ineffective and are unlikely to reduce the overall harm sufficiently. This risks the harm being increased to 'substantial' as the proposals will compromise the assets optimum viable use. The applicant must, therefore, introduce compensatory measures to enhance and better reveal the assets significance as well as ensuring the assets long term viability.</p> <p>2.14 The mitigation (as is outlined in the Tilbury2 Environmental Statement) and compensation (as we outline in this response) are both necessary to make the proposals acceptable in planning terms.</p>	<p>visitor numbers over the next financial year with an expected five fold increase in revenue from facilities rentals. It is understood that while filming might be lucrative in the immediate forecast, it will also restrict access of members of the public to the fort for extended periods of time. The Applicant requests that the Panel consider this in relation to facilities rental and whether it is a sustainable enterprise and the fundamental objective of English Heritage to allow members of the public to experience historic places first hand. The Applicant considers that there is no evidence to support that the changes to the setting of the fort will have any impact on the viability of the fort as a film location.</p> <p>The Applicant is continuing discussions with English Heritage to determine an appropriate and proportionate contribution in relation to the commercial operation of the Scheduled Monument.</p> <p>The assessment of harm to significance is based on the appreciable experience of the fort in its historic setting and it was concluded that there is no considerable loss of significance such as to cause substantial harm to the asset. Visitors to the site will still be able to experience the fort and what it represents in terms of cultural heritage in a meaningful way.</p> <p>Increased visitor numbers and associated ticket sales, resulting from the Active Travel Study, will also directly benefit the upkeep and active conservation of the historic fabric.</p>
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.6-5.11</p> <p>Socio-Economic</p>	<p>Socio-economic 5.6 We note at paragraph 7.101 of the ES (and 7.100 of the PEIR) the following comments: "...The 16th century fort is popular with visitors and is a designated English Heritage (EH) site. Whilst the receptor has been considered as part of the LVIA and Cultural Heritage chapters, it is also considered as a business in this socio-economic assessment, with the potential to be affected by indirect amenity impacts. It should be noted that the receptor is already affected by amenity impacts from existing and longstanding operation of the Port of Tilbury. The LVIA and Cultural Heritage chapters have stated at this stage that this receptor is expected to be affected indirectly from amenity and cultural heritage impacts. Access to the fort for both staff and visitors is not expected to be affected by the proposals. The effect of the proposals on Tilbury Fort has been assessed as being Indirect, Negative, Permanent, but Negligible."</p> <p>5.7 It is our view that this assessment and those included in tables 7.22 and 7.25 do not fully recognise the socio-economic value of Tilbury Fort nor do they appropriately mitigate the impacts. Tilbury Fort is an education facility, tourist attraction and filming location. As noted above, at section 4, and in Appendix E we include a breakdown of visitor numbers annual income that demonstrates the scale of economic investment and value that there is in the site. The value of this revenue is directly related to the continued preservation and enhancement of the scheduled monument, listed buildings and their setting.</p> <p>5.8 The landscape assessments have considered the significance of the setting of the heritage assets, but as is noted above at our section 4, the landscape (and seascape) setting is also directly related to the ability of the English Heritage to realise revenue opportunities from filming. Therefore, there are two elements that ought to be considered, mitigated and compensated as appropriate.</p> <p>5.9 We contest the implication of the comment made at paragraph 7.101/7.100 that there are already impacts to setting and the Fort's viability. Our visitor numbers and filming opportunities are restricted in relation to existing port activities, and additional development at Tilbury2 would increase any adverse impacts. We note above at our section 4 that the views to the east and especially over the water were of particular importance to film locations. The films and dramas listed – e.g. Sharpe and SSGB – used a period setting that would not be possible (or would become expensive to recreate and therefore reduce the appeal of the Fort as a location) if the Fort becomes surrounded by industrial development, especially on the estuary side. It is very likely that any further development would reduce filming opportunities.</p> <p>5.10 It is our view that the socio-economic impacts go beyond purely the landscape</p>	<p>5.6 - 5.11 Socio-Economic</p> <p>With regard to EH's representation at paragraph 5.7, the Applicant's assessment acknowledges that there are current socio-economic effects from the existing longstanding operation of the Port.</p> <p>Whilst not explicitly assessed, professional judgement was informed from experiences of similar 'heritage as a business' attractions elsewhere that, like the Fort, operate ably in economic terms whilst being in a 'modern' (non-original) setting. Nearby examples include Rochester Castle/Temple Manor and the Tower of London.</p> <p>This also needs to be put in context of the setting of the Fort in so far as its relation with the current Port, the town of Tilbury, the sewage treatment works and the power station site (including the jetty/terminal on the estuary side). As an overall effect on the 'visitability' and 'utility' of the Fort it remains our view that the effect of Tilbury2 would be indirect, negative, permanent but negligible.</p> <p>5.8</p> <p>It is understood that the Fort generates significant income from filming. The assessment of the potential impact on this aspect has been taken into account through the landscape assessment process, and the heritage assessment has considered effects on the site itself. This business need of the Fort needs to be weighed against, as set out in the Outline Business Case, the compelling national and local policy case for supporting the port as an existing and well-established business which contributes many thousands of jobs to the local and regional economy and which is also in a fixed location with intrinsic requirements for riverside access.</p> <p>5.9</p> <p>It is not clear what point is being made. The socio-economic assessment notes that as a receptor it is already <i>affected</i> from the existing and longstanding operation of the Port. The contention that visitor numbers are <i>restricted</i> by the Port implies a direct and/or physical limitation which is patently not the case. But the existing influence of the Port on the Fort, and the Fort on the Port, is not disputed.</p> <p>In terms of the Fort's appeal as a filming location, the limits implied by proposals for Tilbury2</p>

		<p>setting and heritage challenges mentioned above, but also include ‘amenity’ impacts from vibration and noise that would detract visitors and investors, and also threaten the fabric of the buildings they come to see and use. We recommend that additional and continued monitoring of the effects of vibration on the Tilbury Fort tunnel system are included in the necessary package of mitigation for the scheme. We comment on this further below at paragraphs 5.75 to 5.77.</p> <p>5.11 Access to the Fort has a clear and tangible effect on economic sustainability. If visitors, commercial users and residents find it difficult to get to the site, or are completely put off by the challenges then the revenue that they would have bought will be reduced or lost. It is unclear from the plans and transport surveys that we have seen so far what impact the proposals will have on Fort Road. We are not convinced by the statement that access to the fort will not be affected. A changed road alignment and increased HGV movements will change traffic flows, also there is a risk that lorries will park along Fort Road and create problems for access. We would like to see commitment to avoiding any adverse impacts to the access arrangements at the Fort and suggest that appropriate mitigation and compensation should be included in the Tilbury2 proposals, for example:</p> <ul style="list-style-type: none"> • prohibiting parking on the verges along Fort Road; • traffic calming to reduce the desirability of Fort Road to HGV and make it more attractive to visitor traffic – this should not however restrict access for film crews; • improvement to the driveway access to the Fort; and, • improvement to the northern car-parking arrangements at the Fort. 	<p>are not considered to be increased on the baseline that would have previously had to consider Tilbury B, Anglian Water and Stobarts in terms of visual effect and Tilbury 1 in terms of noise and light effect none of which have inhibited recent stated growing income from this source.</p> <p>5.10 Vibration and noise The noise assessment submitted in the initial application includes the fort as a receptor. It identifies that there will be no change to noise levels at Tilbury Fort</p> <p>5.11 Access to the Fort From a socio-economic perspective, the key part of the ES assessment was whether the Fort was any better or worse off in physical access terms for visitors. There is current road access to the Fort. The operation of Tilbury2 would not negatively affect this.</p> <p>Indeed, the role of the Active Travel Study is to increase the accessibility to the riverside and this will itself assist the appreciation of the Fort, whether individuals chose to pay to access the grounds of the Fort itself or not. This is an objective which is described in the Thurrock Core Strategy as part of Thematic Policy CSTP28 River Thames. Paragraph 5.182 states that whilst industry and the large tracts of industrial landscape should be safeguarded and promoted to support the regeneration of Thurrock riverside in the broadest sense, the river and its setting needs to be accessible and visible, capitalising on the landscape and environmental improvements that will be realised for the future through the policies in this Core Strategy.</p> <p>This approach is consistent with the advice of the NPS at para. 5.12.12 which states that the decision-maker should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and <u>the positive contribution they can make to sustainable communities and economic vitality</u> (our underlining). The access to the riverside and the Fort is therefore part of a wider contribution to regeneration and is also consistent with the footnote to para 5.12.12 in the NPSP which indicates that heritage assets having a potential to be a catalyst for regeneration in an area, particularly through leisure, tourism and economic development. Improving access to the Fort and the riverside more generally, is therefore a clear enhancement of the heritage asset.</p>
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.12-5.18</p>	<p>Landscape and visual impact (setting)</p> <p>5.12 Views of Tilbury Fort, and from it, are included within the ES and PEIR.</p> <p>5.13 Table 9.15 of the ES identifies ‘embedded landscape and visual mitigation’ within the proposals.</p> <p>5.14 At table 9.16 of the ES (and 9.13 of the PEIR) the visual amenity impact at Tilbury Fort (to residents and users of recreational and/or tourism facilities) is assessed.</p> <p>5.15 At table 9.18 of the ES (updated from 9.14 of the PEIR) a range of potential further mitigation is listed.</p> <p>5.16 A further statement about the changes from the PEIR to the ES is made at paragraph 9.233 of the ES: “It was recommended during the scoping and draft PEIR stages that measures to reduce potential effects associated with the proposed cement silo were included (relocate approximately 0.5km north and split into two 50m high units) and the western RoRo berth (kept as short and low key as possible). These measures have been reviewed by the applicant but cannot be applied due to essential operational constraints as set out in the Masterplanning Statement.”</p> <p>5.17 We have reviewed the Masterplanning Statement and the reasons why the</p>	<p>Para 5.12 - 5.18. With respect to the predicted impact of the proposed RoRo berth on the significance of Tilbury Fort, English Heritage are of the opinion that benefits to the operation of the proposed RoRo facility are evident, but there is <i>no balancing public benefit</i> provided in line with NPPF (paragraph 134 applies).</p> <p>Potential landscape and visual impacts have been identified and all options for mitigating these have been examined and applied where practicable, culminating in the Landscape and Ecological Management Plan.. Residual adverse impacts have been identified for which mitigation is not available due to operational constraints. By way of compensation an Accessibility/Active Travel Strategy, forming part of a s106 Agreement, is being devised. The strategy will provide public benefits including access to Tilbury Fort.</p> <p>With regard to the approach English Heritage has taken to assessing the proposals,</p>

		<p>recommendations of the PEIR – to reduce the height of the silos and alternatives for the RoRo berth – have not been included in the final ES. The essential operational reasons argued, are coincidental in nature, and there does not appear to have been a robust balancing exercise undertaken. At paragraphs 4.8, 4.11 and 4.25 – 4.27 of the ES “APPENDIX 5.A: MASTERPLANNING STATEMENT” the need for the RoRo is identified as an operational requirement, the fact that the proposal site already has a such a facility makes it a candidate for the development and it is explained that <i>“[i]t was concluded early in the design process that the retention of the jetty would be a fixed parameter. This was because the jetty structure includes water intakes that were previously used by RWE for the coal fired power station. The acquisition of the site by PoTLL was conditional on the retention of these water intakes and as such, PoTLL is contractually required to retain them.” And also that “it was both environmentally and commercially sensible to retain this structure. Removing it in order to replace it with a new structure would have not only been an option with much greater construction cost but would have caused a significant extension to the construction programme (hence increasing the temporal scope of construction related environmental impacts) as well as requiring greater intervention in the marine environment as a result of the demolition of the existing jetty and its replacement.”</i></p> <p>5.18 The proposed need for the RoRo berth in the locations intended is understood, however, for this consideration to be in accordance with national policy (NPPF paragraphs 132 – 134) its impacts – upon the significance of the Fort – should be directly balanced against any identified benefits. Benefits to the operation of the proposed port are noted but nothing in the public benefit. We suggest that an assessment of alternative options and the monetary cost should be made, and this should be weighed against the impacts upon the fort and the costs of the mitigation and compensation measures outlined in the ES and this representation.</p>	<p>they have referenced the relevant paragraphs of the National Planning Policy Framework. However, pursuant to section 104 of the Planning Act 2008 (“PA2008”), in considering a DCO, the Secretary of State must have regard to any relevant National Policy Statements that have effect and decide the application in accordance with any relevant National Policy Statement (subject to certain exclusions</p> <p>For the ports sector, there is a National Policy Statement for Ports (2012) ('the NPS'), which will apply to the proposals. The NPS is therefore the most important policy document against which the proposals will be assessed. Whilst the NPPF has been had full regard to and played an important role in the development of the proposals, it does not carry the weight of the NPS in the decision making process. It is not explicitly referred to in PA2008 but is a document that is likely to be considered 'important and relevant' to the Secretary of State's decision under section 104(2)(d) of the PA2008; however, to the extent that their policies conflict with the National Policy Statement that document will take priority.</p> <p>The NPS for Ports (NPSP) starts with a presumption in favour of granting consent for ports development, unless any more specific and relevant policies set out in the NPSP (or another NPS) clearly indicate that consent should be refused (para. 3.5.2). The application has sought to set out the public benefits it is considered will arise from the proposals and so in accordance with para 5.12.14 of the NPS, the decision-maker will need to assess the harm to heritage assets (taking into account the proposed mitigation) and balance the level of that harm against the public benefits identified by PoTLL in its application in order to determine whether these benefits outweigh the harmful impact identified. However, the primacy of the NPSP – and the urgent need for port capacity that is established in the NPSP - has not been considered by English Heritage in their assessment as the EH assessment has been framed in the context of the approach of the NPPF. In the submission of PoTLL this changes the basis of the assessment of the acceptability of the proposals against the harm to heritage assets.</p>
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.19-22</p>	<p>5.19 We note the comments at paragraph 5.17 of the masterplanning statement that the process “considered lower but a larger number of silos in order to consider whether this might be beneficial in environmental or operational terms. However, the Landscape and Visual Impact Assessment has concluded that the additional bulk that would be created by having a greater number of silos would off-set the benefits of a lower height. Moreover, from an operational perspective, a larger number of silos would consume a greater area of the site.” And again, we understand the benefits of this exercise to the viability and commerciality of the proposal and accept the opinions stated in the LVIA, but the viability and sustainability of the Fort should be considered in the public benefit because 100m high silos will have an impact on the setting of the Fort and the ability of visitors to understand the significance of it and for filming opportunities in general.</p> <p>5.20 English Heritage welcomes the statement at paragraph 9.234 (sic) of the ES that “more imaginative solutions” may be appropriate forms of mitigation and look forward to constructive engagement to this end through any S106 negotiations and potential continued design and construction stages.</p> <p>5.21 According to table 9.20 of the ES the further mitigation reduced the visual impacts to residents of the Fort to “low-very low” and to the recreation/tourist users of the Fort the magnitude of the impact is reduced to “medium to very low” and the significance is reduced to “Moderate to slight.”</p> <p>5.22 The summary conclusions of impacts are then included at table 9.22 of the ES</p>	<p>5.12 - 5.26 Landscape Character & Visual Amenity (JM)</p> <p>Para 5.19-5.20. The proposals for Tilbury2 include one silo at up to 100m high where previously there were two chimneys that would have made more of a visual impact. In terms of viability of operations at the fort, it is considered that the proposals would have no greater effect on viability of commercial operations than previously when TilburyB was prominent in the setting of the fort.</p> <p>Para 5.21. references table 9.20, the reference should be to Table 9.19.</p>

		(updated from 9.17 of the PEIR).	
English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.23-24	<p>5.23 English Heritage disagree with the assessments at tables 9.20 and 9.22 of the ES and suggest that the impact, particularly to tourists and other commercial users, will continue to be substantial. The screening mitigation presented as embedded within the proposal and the further mitigation suggested are necessary but do not go far enough. There will still be a significant landscape impact to the setting of the Fort, particularly to the links between the Fort and the church of St. James in West Tilbury, the Fort and Coalhouse Fort (viewpoint PEIR 59 – our viewpoint 9), the Fort and the line of fire across the Thames (our viewpoints 7 and 8) and the distant setting of the Fort seen from the opposite bank of the Thames and from the ferry (our viewpoints 1 and 2).</p> <p>5.24 It is English Heritage's opinion that the significance of the impact has been underestimated, and the mitigation proposed is therefore largely ineffective. It is unlikely that any additional mitigation could reduce the impact of the proposals so – using the balancing exercise of paragraph 134 of the NPPF – it would be difficult to avoid this harm. Also public benefit that better reveals the significance of the setting of the Fort is an added positive dimension to consider. The setting could be demonstrated to visitors through improved interpretive signage at the fort that explains the links to local landmarks and views as explained in our appendices B and D.</p>	<p>Para 5.23-4. English Heritage suggests that the impact on tourists and “<i>other commercial users</i>” will continue to be substantial inclusive of mitigation and that the significance of the impact as reported has been underestimated and as a result the mitigation proposed is largely ineffective.</p> <p>The residual visual impacts referred to relate to residents occupying the former officers' quarters within the Fort and a series of views from different locations at the Fort affecting visitors- as represented by viewpoints 27, 59 & 62. Proposed further mitigation in relation to these viewpoints includes:</p> <ul style="list-style-type: none"> • the retention of existing mature Monterrey pine trees at the western boundary- these will continue to grow and screen much of the proposed container storage area; • lighter colouration of proposed structures as seen against the sky; and • to provide low key lighting to illuminate waterside elements of the development. <p>The residual levels of visual effect as reported and evidenced, would be of <i>moderate-slight</i> significance for residents and between <i>moderate</i> to <i>slight</i> significance for visitors, according to location. The effects would not fall into a <i>substantial</i> category as suggested. The mitigation is sufficient to prevent this level of effect occurring and is effective in doing so.</p> <p>Further enhancement to the setting of Tilbury Fort is proposed by the Applicant through the Active Travel Plan which has been developed in consultation with Thurrock Council and includes interpretation signage to draw attention to functional, experiential or visual relationships with other heritage assets.</p> <p>With respect to the stated significant landscape impact to the setting of the Fort, particularly to the links between the church of St. James in West Tilbury, it is likely that any remaining visual link will be lost in any event as a result of consented woodland planting on an intervening screen bund associated with the Stobart waste timber processing facility. This is illustrated in Appendix B to the Applicant's response to First Written Questions.</p> <p>The establishment of the church predates the fort by some centuries. The fort's location was driven by strategic concerns to principally observe and defend approaches from the river. It is unlikely that the original principal design intention of either asset was intervisibility.</p>
English Heritage	Written Representation including FWQ Responses Section 5.0 Para 5.25	<p>5.25 It should also not be forgotten that that the setting of the Fort is an important part of its commercial value in terms of filming. The permanent and significant effects upon the setting of the Fort should also be compensated for these reasons. The enhancement of access engendered by the proposed works to the car park and bridges would go some way to offset the impacts to setting. The public benefit in continued filming opportunities at the Fort is realised through reinvestment of all income in the conservation of the heritage assets and an improvement of the visitor experience of them.</p>	<p>Para 5.25. It is suggested by English Heritage that permanent and significant effects upon the setting of the Fort should be compensated in respect of the commercial effects on its use for filming. Although not strictly a matter for landscape and visual assessment , it was noted at the time of survey that filming was being undertaken at the Fort at a time when there were far more substantive structures associated with the former Tilbury power station remaining in place.</p>

English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.26-5.28	<p>Heritage sensitivity and impact</p> <ul style="list-style-type: none"> 5.26 Table 12.9 of the ES (12.7 of the PEIR) - Built Heritage Assets Sensitivity - includes Tilbury Fort with the identified sensitivity / value indicators recorded as “very high,” and for the Officers Barracks Tilbury Fort the sensitivity / value is recorded as “high.” 5.27 There is some “Embedded mitigation” cited in the ES (Paragraph 12.144 carried over from the PEIR: 12.107) as follows: “...<i>Maximum height of container storage will be six containers high; however, the short dwell times of containers within the RoRo terminal are such that in general, stacking will be two containers in height. This measure will help to reduce potential adverse effects on the setting of heritage assets with a higher level of inter-visibility with the Site, including Tilbury Fort, Coalhouse Fort and the numerous heritage assets on the southern side of the river.</i>” <p>5.28 Through paragraphs 5.12 to 5.25 above, we discuss the impacts of the Tilbury2 proposals on the landscape setting and views to and from the Fort (with our viewpoints 7, 8 and 9 at particular risk). In addition to our comments above we raise significant concerns about the maximum container heights, and the dwell times cited in the ES. There does not appear to be a robust argument to necessitate a maximum container height of six, particularly if the general stacking height is expected to be two. Obviously the fewer containers that are stacked on top of each other, the lesser the impact. We seek assurances, and request the opportunity to discuss future agreements, that have the ability to restrict container stacking heights especially at times of filming at the Fort.</p>	The Applicant is considering further mitigation options, including site layout, to further minimise impacts.
English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.29-5.31	<ul style="list-style-type: none"> 5.29 Paragraph 12.148 of the ES states: <i>The ‘Two Forts Way’ public footpath runs through the Tilbury2 Site along the river front between Tilbury Fort and Coalhouse Fort. This Public Right of Way (PRoW) will be retained within the scheme, helping to preserve the historic connection between the two forts.</i> 5.30 The retention of the Two Forts Way PRoW is welcomed, and considered by English Heritage as essential to the continued tourist value of Tilbury Fort. It is also considered that the link between the two forts – both physical, viewed and educational – remain vitally important in aiding how the significance of the relationship between the two forts is better revealed. 5.31 English Heritage welcome the commitment at paragraph 12.150 of the ES: “<i>An Active Travel Study forms part of the DCO application and includes improvements to the footpaths and network surrounding Tilbury Fort. This includes resurfacing of footpaths and car parking to improve their appearance. This measure will help to improve connectivity to Tilbury Fort and thus open up new pedestrian links and encourage visitors towards both the Scheduled Monument and its landscape setting. Design and materials of the surface treatments will be in consultation with Thurrock, Historic England and English Heritage.</i>” We request that the details of these improvements are discussed and included in the S106 agreement as necessary mitigation. 	The Applicant is committed to continuing discussions on this matter through the preparation of the Statement of Common Ground. The Study will be secured through a section 106 agreement.
	Para 5.32 Piling	5.32 We also note the comments at paragraph 12.151 of the ES: “ <i>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 historic assets, in consultation with English Heritage and Historic England. This is secured through the CEMP.</i> ” English Heritage consider this to be a very	The Applicant has made provision through the CEMP for vibration monitoring in relation to piling.

		necessary part of the proposals, implementation and monitoring of this scheme.	
English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.33-5.34	<ul style="list-style-type: none"> • Construction phase • 5.33 The potential construction impacts on the Fort are described at paragraph 12.177 as follows: “...<i>Construction of Tilbury2, including the extension of the jetty and the infrastructure corridor, will likely have an impact upon the setting of Tilbury Fort through potential visual intrusion and increased noise, vibration, construction traffic and lighting. This is likely to impact on views both of and from Tilbury Fort and its landscape setting to the north.</i>” • 5.34 English Heritage agree with this statement regarding the impact to views to the north, but also wish to highlight impact on seaward views, as discussed at paragraphs 5.12 to 5.25 above and Appendix B and Appendix D. The construction traffic will also have an impact upon the ability of visitors and staff to access the site. The traffic calming and access improvement measures that we have outlined in response to the Inspectors’ question 1.13.1 c) will go some way to mitigating the impacts of this, and because there will be an impact through the construction phase these mitigation measures should be a pre-commencement or very early condition to any potential development comment. 	It is not agreed that construction traffic will impact on visitors’ ability to access Tilbury Fort - the construction traffic figures are not substantial enough to mean that Ferry Road and Fort Road will become congested or unable to be used.
English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.35-5.40	<ul style="list-style-type: none"> • 5.35 Paragraph 12.177 goes on to state: “...<i>The construction of the lower elements of the scheme within the main Tilbury2 Site are likely to be largely screened from view by existing vegetation and intervening built development, including the Anglian Water Recycling Centre and the Stobart’s wood processing site.</i>” • 5.36 Our opinion is that the screen provided by the existing development to the east will be negligible. Activities on the site, from the commencement of the project, will have an impact in terms of visual intrusion, visitor amenity and access. The views to St James church in West Tilbury and to Coalhouse Fort will be affected, and so the additional compensation measures of interpretive signage should be a pre-commencement condition of the development. • 5.37 The impact of the proposals is better described in the following paragraph 12.118: “...<i>construction of the higher elements of the proposals are likely to be visibly prominent, including the 100m high silo (above a ground level of a worst case maximum of 4m AOD), warehouse buildings and CMAT facilities in the northwest area of the Tilbury2 Site, as well as of the construction of the infrastructure corridor, situated to the north of Tilbury Fort. The CEMP and CTMP, which form embedded mitigation, will ensure that construction activities and working hours are appropriately controlled. The construction of the proposals will alter the setting of Tilbury Fort through increasing the industrial character surrounding Tilbury Fort.</i>” • 5.38 English Heritage believe that this should be robustly mitigated for heritage and commercial reasons. The embedded and further mitigation that is discussed below goes some way to mitigating the effects of the proposal but do not rule out a significant impact to the setting of heritage assets. Therefore, because the impact cannot be ruled out, it is reasonable to expect some compensation should the proposal be given consent. • 5.39 Paragraph 12.118 goes on to state: “...<i>Whilst Tilbury Fort is already experienced within an industrial context, the construction of the proposals will bring this character closer to the Scheduled Monument. This is likely to be principally through visual and noise impacts; the latter relating to the temporary increase in construction traffic using Fort Road to enable the construction of the infrastructure corridor</i>” • 5.40 It is our view that the impact of the ‘industrial context’ is over stated and the proposal should be considered on its own merits. Tilbury2 will bring with it significant impacts to the landscape setting of the fort and therefore to its heritage value and commercial sustainability. These impacts will be felt from the commencement of operations, should the proposal be permitted. Therefore 	<p>The views to St James Church are already affected by intervening development, specifically the recently consented woodland planting on an intervening screen bund associated with the Stobart waste timber processing facility. The Applicant has submitted a long section drawing between St James Church and the river edge demonstrating the principal site line being interrupted by this existing development.</p> <p>It is important to note that activity at the application Site would be foregrounded by existing activity at the Anglian Water site and the Stobart wood processing plant. This is the existing context and the Tilbury2 proposal is therefore considered to be an industrial type of activity of a subordinate nature in the immediate vicinity.</p> <p>It is thought that interpretive signage to enhance the heritage significance and the visitor experience would be appropriately delivered as part of the Active Travel Study which is to be secured within the s106 agreement between the Applicant and Thurrock Council (see the Heads of Terms at Document Reference 5.3).</p>

		interpretive signage and access improvements should be a pre-commencement condition with the surfaces of Fort road monitored during construction to avoid deterioration caused by machinery and plant related to the construction of the infrastructure corridor and the proposed port areas themselves.	
English Heritage	Written Representation including Responses FWQ Section 5.0 Paras 5.41 – 5.42	<div><div><div>Receptor</div><div>Designation</div><div>Value</div><div>Magnitude of Effect</div><div>Likely Significance of Effect</div></div><div><div>Tilbury Fort</div><div>Scheduled Monument</div><div>Very</div><div>Medium Adverse</div><div>Moderate to Major Adverse</div></div><div><div>Officers Barracks, Tilbury Fort</div><div>Grade II*</div><div>High</div><div>Medium Adverse</div><div>Moderate to Major Adverse</div></div></div> <div><div><div>5.41</div><div>Table 12.12 of the ES: Potential Likely Significance of Effects on Built Heritage Assets during Construction contains the following assessment:</div></div><div><div>5.42</div><div>English Heritage are pleased to note that the magnitude of effects has been better recognised than in table 12.10 of the PEIR, but consider this to still be inadequate, as discussed above. The significance of the effects is very much at a level that, we suggest, must be robustly mitigated as far as possible and also compensated if the proposals are allowed (as outlined in our response to the Inspectors' question 1.13.1 c).</div></div></div>	<div><div><div>Given that the Applicant agrees Tilbury Fort to be of the highest heritage value, the "Likely Significance of Effect" is driven by the difference in assessing the Magnitude of Effect.</div><div>The Applicant considers that the proposed development would result in: Changes to the setting of a built heritage asset, such that it is considerably modified, which concludes a Likely Significance of Effect of Moderate to Major Adverse.</div><div>To conclude a Likely Significance of Effect that is Major Adverse, the test would involve some component of demolition of the asset or 'Radical transformation of the setting of a built heritage asset such that its significance is substantially affected' as defined in ES Table 12.6: Definitions of Magnitude of Effect.</div><div>The Applicant does not consider that the proposals represent a radical transformation of the setting of Tilbury Fort because changes are proposed in the periphery of the fort and represent an intensification of the industrial character which is already present. Because of the nature of the fort and its various components, much of the experience of the fort will remain unchanged.</div></div></div>
English Heritage	Written Representation including Responses FWQ Section 5.0 Paras 5.43 – 5.46	<div><div><div>Operational phase</div><div>5.43</div><div>The following ES paragraphs identify the potential visual impacts of the Tilbury2 proposal: 12.191 ...<i>The proposals are likely to have an impact upon the setting of Tilbury Fort, through extending the existing industrial built context and character in which the asset is currently experienced. The alteration of its setting will occur principally through visual impacts of berthed vessels, the infrastructure corridor and new buildings, structures and lighting on Site.</i> 12.192 ...<i>Visual impacts upon the setting of Tilbury Fort during the operational phase are likely to principally derive from the highest elements of the proposals...</i> 12.193 ...<i>the most visually prominent aspects of the proposals are likely to be the vessels at the extended jetty and the 100m (above a ground level of a worst case maximum of 4m AOD) high silo...</i> 12.194 ...<i>Tilbury Fort is already experienced within the context of frequent shipping movements, including large industrial vessels associated with the existing Port of Tilbury and substantial cruise liners...</i> 12.195 ...<i>higher buildings and structures associated with the CMAT processing facilities and bulk storage area in the northern section of the Tilbury2 Site are also likely to be visible...</i> 12.196 ...<i>the upper levels of the RoRo storage containers and warehouse are also likely to be visible in views from and surrounding Tilbury Fort, in particular in views from the bastions, ramparts or sea wall...</i></div></div></div>	<div><div><div>The representation at para 5.45 concludes that any mitigation to impacts on key views would be largely ineffective and that additional compensation measures should be required.</div><div>It is not clear whether the 'adverse impact' is related to significance, as understood in NPPF terms, or to the commercial operation of the fort.</div><div>The issue of compensation is considered to arise in relation to the fear of adverse impact on commercial operation of Tilbury Fort and is not directly related to impacts on significance in planning terms.</div><div>In the context of the commercial operation of the fort, the Applicant considers that the proposed development represents less industrial character in the wider environment than that previously present during the reported successful commercial operation of the fort, prior to the demolition of Tilbury B and its twin chimneys.</div><div>Therefore it is considered that, in regard to the commercial operation of the fort, neither greater mitigation nor additional compensation, related to an effectively lesser level of industrial character in the wider environment, are necessary in the manner presented by</div></div></div>

		<p>12.197 ...The main landscaped setting to Tilbury Fort lies to its north and is defined by areas of open flat marshland on either side of Fort Road. The proposed infrastructure corridor will be built within the northern part of this landscaped area, in close proximity to the existing railway line which is screened by existing vegetation...</p> <p>5.44 English Heritage has provided a viewpoints assessment and map at Appendix B, and the Conservation Plan at Appendix D that demonstrate that during the operational phase there will be an adverse impact on views, particularly from the Fort to West Tilbury and to Coalhouse Fort and also to the Fort from the south bank of the Thames and from the ferry between Tilbury and Gravesend.</p> <p>5.45 Our assessment of views at and the Conservation Plan also demonstrate that the proposal at Tilbury2 have an additional impact over what is already built. These impacts will be significant and proposed mitigation (or any mitigation), whilst necessary to soften the impacts would be largely ineffective. Therefore the additional compensation measures that we outline in response to the Inspectors' question 1.13.1 c) must be a condition of development and included in the S106 agreement.</p>	English Heritage.
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.46 – 5.49</p>	<p>5.46 Paragraph 12.199 goes on to suggest: "...However, the contribution of this landscape to the significance of the Scheduled Monument has already been somewhat reduced through the introduction of the Anglian Water Recycling Centre and Stobart's wood processing site which has further industrialised the area and physically, visually and experientially served to separate the Tilbury2 Site from the immediate landscape setting of Tilbury Fort. As such, Tilbury Fort and its landscaped setting survive within an existing appreciable industrial and built context defined by the surrounding land uses, buildings and structures. The wirelines show that whilst the infrastructure corridor will, in part, further reduce Tilbury Fort's landscape setting to the north, the proposals will be consistent with the existing industrial character that forms part of the heritage assets setting. Crucially, an appreciation and understanding of the landscape setting and its contribution towards the significance of Tilbury Fort will not be entirely lost, as the proposals will only occupy a small part of this land and will be appropriately mitigated to reduce visual and noise effects."</p> <p>5.47 The retained open space to the north is recognised, but demonstrates the very much reduced vista that are now afforded from the Fort. In particular, the impact upon of views 1, 2, 5, 8 and 9 shown in Appendix B mean a significant reduction in the setting of the Fort. The risk to the viewed connection between the Fort and the church of St James in West Tilbury; the Fort and Coalhouse Fort; and, the Fort and the wider Thames estuary are all significant. We seek appropriate mitigation as outlined in the ES for this and also the additional compensation include in the response to the Inspectors' question 1.13.1 c).</p> <p>5.48 The concluding paragraphs, 12.204 and 12.205, to this section of the ES state the following: "Overall, it is considered that the proposals will represent an alteration to the wider setting of Tilbury Fort through increasing the industrial character and activity within its setting, however, this will importantly be experienced as an extension of the existing industrial character surrounding Tilbury Fort and therefore will not fundamentally change the existing wider context in which the heritage asset is experienced. Whilst the 100m (above a ground level of a worst case maximum of 4m AOD) high silo on the river front will likely form a new landmark structure, it will be slender in appearance to reduce its overall massing and will not be out of character with other tall structures that lie within Tilbury Fort's setting, such as the wind turbines to the west of the Fort. Shipping activity in proximity to Tilbury Fort will increase as a result of the proposals and in particular the scheme will introduce large stationary vessels in close proximity to Tilbury Fort at the extended jetty. Together with the RoRo terminal, CMAT facilities and 100m (above a ground level of a worst case</p>	<p>The importance of setting to significance is related to the experience of a place or asset. GPA3 notes that 'Its (setting's) extent is not fixed and may change as the asset and its surroundings evolve.' The Active Travel Study strengthens the access between the fort and Tilbury town as well as improving access to Two Forts Way which links Coalhouse Fort and Tilbury Fort. This approach to the experience of the designated assets is considered an improvement particularly with the inclusion of interpretation material to reveal the latent qualities of place such as the historic crossfire sightlines.</p> <p>The applicant considers that the improved access and offering of heritage interpretation to be delivered through the Active Travel Study is sufficiently robust to mitigate the potential impacts arising through changes to the setting of the fort and potential impact on its commercial operations, such that further compensation is not necessary.</p>

		<p>maximum of 4m AOD) silo, this will result in an overall increased industrial character to the east of Tilbury Fort, within its setting. The wirelines indicate that this has the potential to have an impact upon views both to and from Tilbury Fort. Furthermore, berthed vessels will have some impact on disrupting the historic crossfire sightlines between Tilbury Fort and New Tavern Fort. However, this is not considered to be significantly harmful to the significance of Tilbury Fort given that the key sightlines will be retained and thus the visual connection between the two assets will remain understood. In addition, vessels will not be berthed constantly and therefore the visual disruption of these sightlines will be temporary. The proposed infrastructure corridor will impact upon the historic landscape setting to the north of Tilbury Fort and lead to a reduction of this land. However, the marshland character and connection with Tilbury Fort will remain appreciable surrounding Fort Road and the embedded mitigation will reduce the visual and noise impacts of the infrastructure corridor. Whilst the proposed infrastructure corridor will harm the setting of Tilbury Fort through reducing the historic marshland to its north, it will also result in a reduction of HGV traffic on Fort Road which passes Tilbury Fort in close proximity. This change in character to Fort Road will have a beneficial impact on the landscape setting immediately surrounding Tilbury Fort.”</p> <p>5.49 English Heritage raise significant concerns about this conclusion, as we have discussed above the permanent and significant impact of any increased industrialisation upon setting, views and access to the Fort. The mitigation must be robust, however, there will be an inevitable need for additional compensation as a result of unavoidable effects if the proposal is permitted.</p>	
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.50 – 5.53</p>	<p>5.50 The operational effects on the Grade II* listed Officers Barracks are considered at paragraph 12.207 of the ES: “...The operational phase of the proposals is likely to have a potential impact upon the setting of the Officers Barracks, which is principally derived by Tilbury Fort itself, through a likely increase in noise, lighting and visual effects of high structures on site, specifically including the 100m (above a ground level of a worst case maximum of 4m AOD) high silo, and visibility of vessels berthed at the extended jetty... ...The listed building has thus long been experienced within a wider built industrial context defined by tall structures and shipping movements. Whilst Tilbury B will have been removed by the operational phase and the 100m (above a ground level of a worst case maximum of 4m AOD) high silo in proximity to the river will likely be visible in views from the Parade Ground, this will appear as a slender structure on the skyline and visually separate in central views of the listed building from the Parade Ground.. ...Nonetheless, the proposals will increase the proximity of industrial uses during operation and alter the wider setting of the listed building...”</p> <p>5.51 As demonstrated in Appendix D and Appendix D English Heritage believe that there continues to be the potential for significant visual effects. The barracks are viewed in context from our viewpoints 5 (PEIR 62) and 6, and the other amenity and access impacts will also be felt, and this will affect our tenants and our ongoing commercial and tourist performance. The effects cannot be entirely mitigated and ruled out so it is therefore appropriate in the balancing exercise to consider additional compensation to the Fort in this case, should the proposals be given permission.</p> <p>5.52 Given what we have noted and responded to above, it is English Heritage’s opinion that the summarised effects recorded at table 12.13 of the ES (below) underplay the significance of the effect and that these are better described as major adverse. We are pleased to note, however, a better recognition of the magnitude of effects from the PEIR but believe that this further demonstrates the greater need for mitigation and compensation.</p> <p>5.53 Therefore, the viewpoints at Appendix B should be further considered in</p>	<p>As described in the Applicant’s response to FWQ (Appendix D), the Officer’s Barracks enjoys a more discrete setting that contributes to its significance, than the larger setting associated to the significance of the fort.</p> <p>However, the changes to the setting of the Officer’s Barracks and potential impact on the commercial operation of Tilbury Fort, as presented by English Heritage, are separate to the impacts on heritage significance. The compensation requested by English Heritage should be measured against the baseline of Tilbury A and Tilbury B both of which were present when the fort has previously been used as a film location.</p> <p>The Applicant considers that the issue of heritage significance, as described in planning terms, should be dealt with separately to the issue of changes in the wider environment that might affect the sustainable commercial operation of Tilbury Fort.</p> <p>The representation does not acknowledge the wider environment was more industrial in character during previous, successful location film shoots when the power station buildings and twin chimneys were extant.</p> <p>The Applicant considers that the proposed development represents less industrial character in the wider environment than what was previously present during location filming.</p> <p>Therefore it is considered that neither greater mitigation nor compensation, related to an effectively lesser level of industrial character in the wider environment, are necessary in the manner presented by English Heritage at paras. 5.52 -5.53,</p>

		mitigation. Also, our proposals at in response to the Inspectors' question 1.13.1 c) should also be included as conditions to the development permission and as part of the S106. Table 12.13 Archaeology and Built Heritage - Likely Significance of Effects during Operation Potential Further Mitigation or Compensation	
English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.54 – 5.65	<p>Heritage sensitivity and impact</p> <p>5.54 The ES outlines a range of mitigation and compensation measures at the conclusion of the Archaeological and Cultural Heritage chapter. Below we consider each in turn, and also in our response to the Inspectors' question 1.13.1 c) we provide details of additional/alternative necessary measures to ensure the proposals remain acceptable and allow the continued viable use, enjoyment and understanding of Tilbury Fort.</p> <p>Built Heritage</p> <ul style="list-style-type: none"> 5.55 ES paragraph 12.228 states: <i>"The following potential mitigation proposals are subject to consultation and agreement with Historic England, Thurrock Council and Gravesham Borough Council."</i> 5.56 English Heritage also expect to be involved in these discussions, and is included in later paragraphs, so we assume that this is simply a typo. It should be noted that English Heritage has begun engagement with Thurrock District Council and the applicants regarding the agreement of S106 obligations. 5.57 ES paragraph 12.229 states: <i>"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 historic assets, in consultation with English Heritage and Historic England."</i> 5.58 As outlined in paragraphs 5.75 – 5.77 below, we consider this to be of vital importance. Operational Phase 5.59 ES paragraph 12.230 states: <i>"Possible further mitigation measures to potentially reduce the effects on the settings of the surrounding built heritage assets during the operational phase could include the following. These are subject to both operational viability and further consultation with stakeholders."</i> <ul style="list-style-type: none"> Retention of mature Monterey 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, compliance with which is secured by a DCO 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, surface treatment of the silo and the CMAT facilities will be required by the DCO to be approved by Thurrock Council, in consultation with Historic England and Gravesham Borough Council. 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 	<p>In regard to the EH representation at 5.60, a visibility study between St James Church and the fort was submitted by the Applicant at Deadline 1, demonstrating that the sightline is already interrupted by the existing development at Anglian Water and the recently consented woodland planting on an intervening screen bund associated with the Stobart waste timber processing facility (refer to Appendix B to the Applicant's response to First Written Questions).</p> <p>Therefore the applicant does not consider that further mitigation nor compensation should be required in relation to that sightline.</p> <p>The Active Travel Study includes an enhancement to the Two Forts Way which affords improved connectivity and access between the Forts. This is considered to be an appropriate mitigation for the potential of the proposed development to interrupt long distance views between the two forts.</p> <p>The EH representation at 5.61 refers to silos in the plural, however it should be noted that the proposal is for only one silo. The wireline images demonstrate that the silo appears (even at the maximum height of 100m) in a limited number of views and remains peripheral to the experience of the fort. The positioning of the silo forms part of the embedded mitigation which is described in the Minimisation Statement submitted by the Applicant ahead of Deadline 1. The Applicant considers that this is appropriate mitigation for impacts on the setting of the fort arising from the proposed development and that no further compensation should be required</p> <p>The EH suggestion at 5.62 that lighting at Tilbury2 be turned off during filming would be unacceptable to the safe and secure operation of the port, particularly in relation to the border and customs controls that will exist on site.</p>

		<p><i>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, MMO and Gravesham Borough Council, to be in general accordance with the Preliminary Lighting Strategy and Impact Assessment (Document Reference 6.2 9.J)."</i></p> <ul style="list-style-type: none"> 5.60 The effect of retaining the trees is recognised in reducing the impact of the proposals, particularly in the views of St James's church West Tilbury and Coalhouse Fort. This, however, does not resolve the impact so it is considered that additional compensation is reasonable and necessary. 5.61 The effect of these silos on the views away from the Fort will continue to be significant even with this mitigation. This both impacts the heritage setting and the commercial viability (visitors and filming) of the Fort. We believe, therefore that the mitigation is necessary, but also that additional compensatory measures must be considered. 5.62 Lighting proposals will affect the heritage setting and the commercial operations. Therefore we seek additional compensation measures to manage this and also would like the consideration of agreements that lighting can be completely switched off, particularly in advance of filming. 5.65 ES paragraph 12.232 states: <i>"It was recommended within the PEIR that measures to reduce potential effects associated with the proposed cement silo were included (split into two 50m high units or three 35m high units) and the jetty to be extended to the east rather than the west. Other measures such as splitting the silo have been considered by the Applicant but cannot be applied due to essential operational constraints; as explained further in the Masterplanning Statement (Document Reference 6.2 5A)."</i> 5.66 English Heritage maintain particular concerns that a full balancing exercise – as required by NPPF 134 – has not been carried out with reference to this and the likely effects of the RoRo jetty. It is not clear what the public benefits of the Tilbury2 proposals are, what the costs of its construction and operation are or how these have been balanced against the very significant (albeit less than substantial) harm to the designated heritage assets of Tilbury Fort and the viable sustainability of them. 	
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.67 – 5.68</p>	<ul style="list-style-type: none"> 5.67 ES paragraph 12.233 states: <i>"PoTLL is continuing to engage with the relevant key stakeholders for the historic environment in relation to mitigation measures, and will continue to do so following the DCO submission."</i> 5.68 English Heritage welcome this commitment and look forward to continued constructive discussions and the delivery of robust mitigation and compensation 	The Applicant is committed to constructive discussion and has proactively engaged in the development of the Active Travel Study as robust mitigation to potential impacts arising from changes to the setting of Tilbury Fort, including visitor accessibility, improved connectivity between heritage assets and new heritage interpretation collateral.
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.69 – 5.74</p>	<ul style="list-style-type: none"> Potential Heritage Enhancements 5.69 ES paragraph 12.234 states: <i>"Further direct engagement will be undertaken with Historic England, English Heritage, Thurrock Council and Gravesham Borough Council in regard to potential heritage enhancements that could be offered by the Applicant."</i> 5.70 English Heritage welcome this commitment and look forward to continued constructive discussions and the delivery of robust mitigation and compensation. 5.71 ES paragraph 12.235 states: <i>"Enhancement measures could include improvements to access, wayfinding, car parking and visitor experience to Tilbury Fort. Initial meetings with HE and EH were held on 29 November 2016 and 23 August 2017 (the latter also with Thurrock Council) on this topic. Whilst further engagement is required, opportunities to improve the footpaths and wayfinding in</i> 	<p>The Applicant is progressing a General Specification for Materials and Finishes within the development order limits in consultation with Historic England in the first instance and to be shared for comment by other stakeholders. This is a detailed element of mitigation that will be secured through Schedule 2 of the DCO.</p> <p>By way of enhancement, the Applicant has offered English Heritage the opportunity to input to the integrated wayfinding signage associated to the Active Travel Study under development with Thurrock Council which is to be secured through the Section106 agreement.</p> <p>Section 2.7 of the representation from English Heritage outlines and costs eight potential 'Mitigation / Compensatory Measures'. Two of these, including driveway resurfacing, signage and interpretation at the north entrance, have been considered within the Active Travel Study. Potential contributions to resurfacing of the original carpark and the supply of timber for bridge repairs have also been discussed with English Heritage.</p>

		<p><i>proximity to Tilbury Fort were discussed and have the potential to enhance both visitor experience and the setting of the heritage asset. Enhanced car parking and improvements to the surface treatment and approach to Tilbury Fort could also be explored.”</i></p> <p>5.72 In response to the Inspectors’ question 1.13.1 c) we outline the mitigation and compensation that we consider to be reasonable and necessary. We look forward to continued constructive discussions and the delivery of robust mitigation and compensation.</p> <p>5.73 ES paragraph 12.236 states: <i>“Further heritage enhancements may also be appropriate on the southern river bank. The assessment of impact indicates that the main impacts of the proposals upon heritage assets in Gravesend will be visual and could potentially disrupt the outer historic crossfire sightlines between New Tavern Fort and Tilbury Fort which could result in a low level of less than substantial harm to the significance of New Tavern Fort. Likely appropriate enhancements could therefore be in the form of new heritage interpretation boards at New Tavern Fort and Tilbury Fort to visually map and explain the historic crossfire and relationship between the two defences in further detail, thus introducing a new element of interpretation to enhance public appreciation of the crossfire that the two forts were built for. This has been raised with Gravesham Borough Council and further engagement is required to agree appropriate enhancements. PoTLL will seek to secure any heritage enhancements through a Section 106 agreement and this is subject to further discussions with GBC.”</i></p> <p>5.74 English Heritage have significant concerns about the potential loss of these sightlines, which we have discussed above. We give some details about appropriate ‘interpretive signage,’ and other reasonable mitigation and compensation, in response to the Inspectors’ question 1.13.1 c). We look forward to continued constructive discussions and the delivery of robust mitigation and compensation.</p>	<p>Contributing to the total reconstruction of the bridges over the moats is considered to be disproportionate and not related to the level of harm to significance at Tilbury Fort, which arise from possible impacts on the setting only.</p> <p>The repair and dredging of the moats is considered to be disproportionate and not related to the level of harm to significance at Tilbury Fort, which arise from possible impacts on the setting only. It is also considered to be potentially ecologically harmful to the LWoS (as discussed below).</p> <p>The Applicant considers that the inclusion of interpretation panels along Two Forts Way to explain the cross fire sightlines would be direct and proportionate, and therefore robust, mitigation for the partial interruption of the sightlines during the intermittently berthed ships, such that compensation would not be necessary.</p>
English Heritage	<p>Written Representation including FWQ Responses</p> <p>Section 5.0</p> <p>Paras 5.75 – 5.77</p>	<p>Vibration</p> <p>5.75 We note that in the ES at paragraph 12.203, it is stated that: <i>“The Noise and Vibration Chapter of the ES (Chapter 17) considers the potential likely significant effects with respect to noise and vibration as a result of the operation (including maintenance) of the proposals. Within the assessment Tilbury Fort has been identified as a Noise Sensitive Receptor (NSR). The assessment concludes that there are unlikely to be any significant noise impacts upon Tilbury Fort.”</i></p> <p>5.76 The tunnels in the South East and South West bastions of the Fort are closed and have been for several years due to safety and conservation concerns. The proximity of the tunnels to the river have caused significant cracking in the structure of the tunnels as well as water ingress - these are underlying faults which we have been assessing and repairing periodically as needed. There is a real risk that the construction phase of the Tilbury2 development in particular may cause such a significant increase in vibration levels as to exacerbate the deterioration of the tunnels’ condition. We would expect that the Port of Tilbury install a system of monitoring both before and during construction so that the effect of the vibration and any deterioration directly caused can be accurately measured. Advice from Stuart Ellis, Head of Civil and Structural Engineering at Historic England (19 March 2018) is: <i>“It would be worth having a [laser scan] survey done and vibration monitoring set up well in advance of any works to record background vibration levels so that any changes and damage during construction can be attributed.”</i></p> <p>5.77 Therefore, as we comment in our paragraph 5.6.5 above, we consider that continued monitoring of vibration, particularly in the tunnels at the Fort, is necessary. Should this monitoring show any effects to the fabric of the Fort, appropriate mitigation</p>	<p>The Applicant recognises the need for vibration monitoring at crucial construction stages in relation to piling and appreciates the invitation to access the receptor as required to undertake an appropriate survey process. It is expected that baseline monitoring would commence two weeks ahead of the start of works and that a graded alert system would pick up any effects in the locale.</p> <p>It is assumed that safe access to the tunnels can be arranged for the purposes of establishing the baseline, but it is also worth noting that due to the condition of the tunnels any limitations on safety may necessarily restrict the positioning of equipment.</p> <p>All of this will be able to be agreed pursuant to the requirement in paragraph 10.2 of the CEMP that the Contractor must develop and implement a monitoring and mitigation regime to monitor and mitigate the vibration effects of piling on historic assets, in consultation with English Heritage and Historic England.</p> <p>No significant effects are considered likely at Tilbury Fort arising from operation of the infrastructure corridor.</p>

		should be provided as necessary. We note that the vibration monitoring baseline considered points close to the Fort but not within the complex. We would be pleased to grant access to the applicant to install monitoring equipment and agree a surveying programme before and during construction and also through operation as necessary.	
English Heritage	Written Representation including FWQ Responses Section 5.0 Para 5.78	Ecology 5.78 The marshland and moats, partly managed by the English Heritage, are recognised as significant elements of the setting of the Fort scheduled monument. These are also a Local Wildlife Site (LWS). The preservation and enhancement of these will also provide for the added benefit of no net loss in biodiversity.	<p>Whilst there will be permanent losses of the most distant areas of coastal and floodplain grazing marsh within the Tilbury Marshes LoWS, this will be compensated by grazing marsh provision off-site, so as to achieve no net loss of habitat (there being no scope to deliver new grazing marsh within the immediate setting of the Fort). For the moats, there is no threat from the development, so there is no 'net loss' to them to be considered. Mitigation and compensation measures to avoid, reduce or compensate for defined impacts are already defined in the application documentation. There is therefore no mitigation basis upon which to base any suggestion that the applicant should interfere with these features.</p> <p>To do so would require that their existing interest be more closely defined, and the compatibility of that interest with English Heritage's suggested 'enhancements' subject to rigorous assessment if such 'enhancements' were not themselves to give rise to impacts. For example, the citation for the Tilbury Marshes Local Wildlife Site (LoWS) says of these features "The moats are prone to inundation with brackish water and, because of problems with the sluice controls are currently rather dry. These moats should be examined for invertebrates associated with saline lagoons, an Essex habitat BAP. This has had the benefit of allowing a diverse saltmarsh flora to develop, with species such as Saltmarsh Rush (<i>Juncus gerardii</i>), Glassworts (<i>Salicornia</i> spp.), Sea Aster (<i>Aster tripolium</i>), Annual Seablite (<i>Suaeda maritima</i>) and the nationally scarce Stiff Saltmarsh-grass (<i>Puccinellia rupestris</i>) and Sea Barley (<i>Hordeum marinum</i>)." To maintain the scarce plant species mentioned in the LoWS citation, it is likely to be appropriate to maintain the <i>status quo</i>, i.e. ensuring that the outer moats, which have benefited in botanical terms from impaired sluice control, are not permanently inundated as this would render conditions of much reduced suitability for the diverse saltmarsh flora which has developed</p>
English Heritage	Written Representation including FWQ Responses Section 5.0 Para 5.79	5.79 Paragraph 9.43 of ES identifies the value of the moats in a landscaping opportunity by suggesting that consideration should be given to "soften the edges of developments with areas of open water and reed beds reflecting the moats at Tilbury Fort." Thus recognising the landscape and by inference the setting value of the moats. The improvements of these has direct heritage, and indirect ecological, improvement benefits	By reference to paragraph 2.7 of English Heritage's response, the 'improvements' proposed for the moat include 'repairs to and dredging' of the inner and outer moats. It is understood that English Heritage has recently had an ecological survey undertaken as part of ongoing management duties. PoTLL has requested a copy of the survey report but it has not yet been provided. However, the Tilbury Marshes LoWS citation makes clear that works of the type proposed by English Heritage could be harmful to the ecology of the moats, and by extension the LoWS. The citation states under the sub-heading of 'condition and proposed management' : "Although an important part of the historical landscape, flooding the moats would harm the developing saltmarsh vegetation." Softening the edge of development (both existing and proposed) will be achieved by new woodland and scrub planting, adding or replacing the partial screening effect of existing vegetation. The planting will graduate to scrub grassland at its southern edge leading to a new drain with reed margins, reflecting the wider requirements of landscape, visual amenity, ecological and heritage related mitigation.
English Heritage	Written Representation including FWQ Responses Section 5.0 Paras 5.80	5.80 The ecological value of the moats are further considered through chapter 10 of the ES, as part of the Tilbury Marshes LWS. In particular at paragraph 10.110 where it is stated that: "In addition to the counts of the inter-tidal area, counts for waterfowl and waders were also undertaken for the moat around Tilbury Fort and for the area of grazed common land to the north of the Fort in order to establish any use by these species of areas directly or indirectly affected by the proposals for the infrastructure corridor"	Surveys of the grazed common land to the north of the Fort for wintering wildfowl and waders found that "it does not support an associated community of breeding waders or wintering wildfowl" (ES Table 10.45; Document 6.1 [APP-031]). No disturbance impacts are predicted for birds using the moats and grazing marsh immediately surrounding the Fort, as these will be sufficiently remote from the infrastructure corridor and already habituated to vehicle movements over Fort Road. There is no resultant need for mitigation from an ecological perspective.
English Heritage	Written Representation including FWQ Responses Section 5.0	5.81 We note the following at paragraphs 10.372 and 10.373 of the ES: "As it was identified at an early stage in the design process that off-site compensation would be required, this also, somewhat unusually, forms a part of the embedded mitigation, albeit that work is continuing to provide the requisite security of delivery of off-site compensation prior to the Examination, and this will form part of the EMCP to be submitted shortly. Over and above these embedded	Embedding of off-site compensatory measures is not unusual in situations where off-site provision is essential to delivery of the required mitigation. Proposed ecological mitigation and compensation measures have been outlined in the ES (para 10.316 - 10.326) and further detail will be provided in forthcoming updates of the EMCP. These measures have been carefully and sensitively developed and are considered appropriate to the needs of the project. For avoidance of doubt, further ecological mitigation and compensation measures will not include dredging of the Fort moats as this would potentially damage their existing

	Para 5.81	measures, the scope for further mitigation and compensation would be considered on a reactive basis and where identified as appropriate, pursued, as part of the process of implementing the project, with the overarching aim of securing minimal or no net loss of biodiversity.”	ecological interest and would in any event create wholly different habitats (saline lagoon) that have little or no relevance to the impacts incurred by the project.
English Heritage	Written Representation including Responses FWQ Section 5.0 Paras 5.82	5.82 If the mitigation and compensation that we suggest – especially the moat dredging – is included as part of the conditions and S106 then the offsite improvements to biodiversity as considered in the ES can, in part, be realised. This will aid the proposal in its aims to have the least possible adverse impact upon biodiversity and build towards no net loss. Dredging of the Tilbury Fort moats could have adverse impacts on scarce plant species associated with priority saltmarsh habitat, and by extension the LoWS.	The LoWS citation also states that there is scope for those components of the moats that do hold water to support invertebrates associated with saline lagoons, and recommend that the moats be surveyed for these species. It is not clear whether the recent surveys commissioned by English Heritage included studies of the invertebrate communities; however, in the absence of survey work to confirm otherwise, the precautionary principle should be invoked and the potential presence of rare invertebrate communities should be assumed. Dredging of the wetter moats could therefore also risk harm to rare saline invertebrate communities. In summary, the mitigation proposed by English Heritage at paragraph 2.7, while potentially having non-ecological benefits, has the potential to generate significant adverse ecological impacts, and is not compatible with the 'aims to have the least possible adverse impact upon biodiversity and build towards no net loss', and therefore cannot be supported by the Applicant over and above the fact that it would be a habitat enhancement measure of little relevance to the impacts incurred by the Tilbury 2 project in any event.
Historic England	Written Representation Section 4.0 (Selected)	4.2.1 ...While vessels on the river are part of the established use, the scale of vessels which would moor at the proposed berths would be far greater [than] that of any historic vessel and their presence moored would dominate the fort, whether experienced from within the monument or in views toward it.	There are a number of ways to approach the fort including from the ravelin / redan at the north and from the west edge of the fort site. While the moored ships may be prominent in the approach from the river, the other approaches would hold the ships in the periphery so as not to be dominant in every experience of the fort.
Historic England	Written Representation Section 4.0 (Selected)	4.3 The PPG stresses that although views of or from an asset will play an important part, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust and vibration from other land uses in the vicinity, and by our understanding of the historic relationship between places. In this case, the overall change to the built surroundings, skyline and the spatial quality of views to the north and east Tilbury Fort would be dramatic. This would not only be due to the form, massing and height of the development, but its industrial character, which would be underlined by other associated infrastructure such as lighting standards (and light levels), together with increased levels of noise from both these facilities and the surface access corridor during construction and operation, but especially during the construction period, when the risk of damage to historic fabric from vibration cannot be ruled out. While some of these effects would be temporary, the construction period would be considerable and these impacts would all adversely affect the experience of Tilbury Fort in its landscape setting, and would be harmful to its significance.	The ES addresses noise levels, dust and lighting in respect of Tilbury Fort as a receptor for each. The air quality assessment for Tilbury2 presented in the ES (Document Reference 6.1, Chapter 18) has considered Tilbury Fort as a sensitive receptor for both construction and operational impacts of dust. The assessment determined that with the CEMP and OMP in place, residual dust effects at the fort would not be significant. The noise assessment also shows no change to the baseline effects during construction and operation of the proposed development on Tilbury Fort. Lighting effects during operation with high level lighting masts, have been addressed through a study of Night-time Visualisations which are included to this document at Appendix B. The Applicant recognises the need for vibration monitoring at crucial stages and will arrange access to the fort as required to undertake an appropriate pre commencement survey process. It is expected that baseline monitoring would commence approximately two weeks ahead of the start of works and that a graded alert system would pick up any effects in the locale during construction.

		<p>4.5 Cumulative Impacts</p> <p>4.5.3 We are aware that a number of other developments affecting the setting of the fort are due to come forward which have the potential to further damage the setting of the fort, in particular the Lower Thames Crossing. We consider that the cumulative impacts of these proposals should be appropriately assessed, particularly as considered cumulatively, there is the potential to increase the degree of harm to the setting of the fort within the vicinity of the Tilbury2 infrastructure corridor, to the north of the landward defences.</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, PoTLL has prepared a 'high level' Cumulative Effects Assessment of the TEC with Tilbury2, without prejudice to the above view. This is attached as Appendix C of the Response to First Written Questions document. 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 extent of the potential development and effects,</p> <p>The TEC proposals include a single visual which describes the site arrangement and heights of built elements on the site, including three 95m chimneys, three 55m high boiler houses and associated turbine halls estimated to be around 40m high.</p> <p>The conclusion of the built heritage CEA for TEC remains consistent with the assessment of significance of effect presented in the ES for Tilbury2.</p>
		<p>4.7 Assessment of Harm</p> <p>4.7.1 Historic England conclude that the impact of the proposed development would result in severe harm to the significance of Tilbury Fort That is, the level of harm would be very high, even if "less than substantial" in the terminology of the NPS. In assessing the contribution which the setting of Tilbury Fort currently makes to its significance we have noted that it has been compromised by past development. Considered cumulatively, the extent and nature of the proposed development would result in the fortifications being divorced from their landscape setting by almost completely encircling the Fort with large industrial buildings and structures, blocking and eroding key views, and reducing the experience and enjoyment of the designated heritage asset. The setting of the Fort makes so important a contribution to its significance that the extensive and dramatic damage that the proposed development would do, particularly when considered with that caused by past development, leads us to the conclusion that the Fort's significance itself would be severely harmed.</p>	<p>The Applicant agrees that, in NPPF and NPS terms, the level of harm to significance of the fort is less than substantial. The Applicant's assessment concludes that there are no changes to the fabric of the fort, that the setting is only partially affected and that the appreciable experience of the fort is sufficiently consistent with the future baseline (i.e.excluding Tilbury B) to be in the middle of the spectrum of less than substantial harm.</p> <p>The Applicant does not consider the proposals to result in 'almost completely encircling the Fort' as there is existing development to the east, west and north of the fort site which establishes the industrial character of the wider setting. The proposals are identified as an intensification of the existing industrial nature. The proposed development is further removed from the setting of the fort than the existing industrial development.</p> <p>The potential for key views to be blocked lies in the intermittent movements of ships to the east of the fort and potentially affects only a segment of the cross fire sightline. Crucially, the sightlines for cross fire patterns will be largely maintained and this was considered in the preparation of the proposals as presented for examination. It is not considered that these views will be eroded, as they will still be visible between ships berthing.</p>
Historic England	Written Representation Section 5.0 (Selected)	<p>5.2 The applicant's assessment of the setting of heritage assets and the impact of the proposed development on them, as set out in the ES, uses two different baselines (ES 12.67; 111-120). That for the sensitivity and value of heritage assets and their settings was undertaken prior to the demolition of the Tilbury B chimneys, and describes the detailed settings of the heritage assets, and the way in which these contribute to their significance, in the context of a baseline in which the power station is a dominant feature in views to and from the fort. This is combined in each case with a 'high level assessment' following the complete removal of the Tilbury B station , based on views in Appendix 9F of the LVIA where the proposals are shown within the context of a 'future baseline' - I.e. without Tilbury B.</p> <p>5.3 We draw the Panel's attention to this, since elements of the Fort's setting 'as experienced' differ from a future baseline without Tilbury B, against which the future setting of heritage assets, either with or without the construction of Tilbury 2, should be assessed.</p>	<p>The Applicant would like to make it clear that this circumstance is simply the result of differing project sequences and that every effort has been made to address the future baseline without any influence from Tilbury B, including in the assessment of the significance of the asset and undertaking the digital removal of the building and chimneys from the wireline views to represent the future baseline for assessment of impact. The assessment of impact in the BHA and the 'likely significance of effect' level in the ES have been based on the future baseline which is a methodology that was consulted and agreed, with statutory consultees, to be a reasonable approach, given the circumstances, ahead of the preparation of the PEIR.</p>

		<p>5.5 We draw attention to the applicants' statements regarding the Rochdale envelope and its use to assist worst case impacts. The applicants have use the 'Rochdale Envelope'. However, in the assessment of impacts on heritage assets and need for mitigation. (SIC) In the case of the container storage area, (ES 12.196) it is suggested that the worst case scenario will not pertain and impacts will be lessened and mitigation more effective. Given that the DCO would allow for containers to be stored at the maximum height over the maximum area, and that working practices may change, we consider no weight should be given to these statements.</p>	<p>The Rochdale envelope affords flexibility which allows the port to accommodate operational changes with agility to ensure optimum viable use of the site. As described in the Minimisation Statement, the maximum occupation of the Rochdale envelope would render the port site inaccessible and therefore redundant. The Applicant has explained the minimum circulation requirements in the Minimisation Statement which inherently limit and prevent the full occupation of the Rochdale Envelope.</p>
		<p>5.6 In our view the statements in the Planning Policy Compliance Document that "the development would be more an increase in established urban industrial influence rather than the introduction of new ones" (4.131), or that the increase of the industrial character and activity within the fort's setting will be experienced as an extension of the existing industrial activity ... and therefore will not fundamentally alter the existing wider context in which the heritage asset is experienced (4.139) do not take (SIC) adequately reflect the future baseline.</p>	<p>The Applicant's assessment of the established urban industrial influence acknowledges that Tilbury B is not included in the consideration of the future baseline. However it is considered that the existing port to the west, the Water Treatment Works, the Stobarts wood chip recycling plant and the retained electricity pylons all contribute to establishing the urban industrial character of the future baseline of the setting of the fort.</p>
		<p>5.8 While the level of harm would be less than substantial, the severity of the impact on this aspect of the significance of the designated heritage asset is such that we consider that using the applicants' classification for "Likely Significance of Effect" in the Environmental Statement, this should be considered as "Major Adverse", rather than "Moderate to Major Adverse" as concluded by the applicants in the ES (Table 12.16). We consider that the applicants' assessment understates the contribution which the current and future baseline setting of the Fort makes to its significance, and the severity of the harm to its significance that the proposed development would bring, when considered cumulatively.</p>	<p>Given that the Applicant agrees Tilbury Fort to be of the highest heritage value, the "Likely Significance of Effect" is driven by the difference in assessing the Magnitude of Effect.</p> <p>The Applicant considers that the proposed development would result in: Changes to the setting of a built heritage asset, such that it is considerably modified, which concludes a Likely Significance of Effect of Moderate to Major Adverse.</p> <p>To conclude a Likely Significance of Effect that is Major Adverse, the test would involve some component of demolition of the asset or 'Radical transformation of the setting of a built heritage asset such that its significance is substantially affected' as defined in ES Table 12.6: Definitions of Magnitude of Effect.</p> <p>The applicant does not consider that the proposals represent a radical transformation of the setting of Tilbury Fort because changes are proposed in the periphery of the fort and represent an intensification of the industrial character which is already present. Because of the nature of the fort and its various components, much of the experience of the fort will remain unchanged.</p>
Historic England	<p>Written Representation</p> <p>Appendix 2 Response to FWQ 1.13.4 paras 1.3-1.6</p>	<p>1.3 Agreement of External Materials</p> <p>1.3.1 As currently drafted, the DCO provides that details of the external materials to be used in the construction of the following works: No 8A (i), 8C (ii) and fencing in Work Nos. 9 or 12, which must be submitted to, and approved in writing by, the relevant planning authority in consultation with Historic England and Gravesham Borough Council. We would expect to this requirement to cover all elements of the of the development which visually impinge on the setting of Tilbury Fort in order to support the principles of good design and the careful consideration of materials and colours for structures where this may help to mitigate the impacts of the development. Even though such measures would only achieve a softening of the visual impact which the development would have, rather than leading to any material reduction in the level of harm which would be caused to the significance of the scheduled monument, it remains desirable that all measures which could help to moderate the visual impact of the development should be implemented.</p> <p>1.4 We welcome the similar provision for Historic England to engage in agreeing the lighting strategy for the same reasons.</p> <p>1.5 The embedded mitigation provides for the retention of trees and vegetation (as far as is operationally possible) on the western boundary of the development site, as well as the landscape planting associated with the surface access</p>	<p>1.3.1 The Applicant is progressing a General Specification for Finishes and Materials in consultation with Historic England to ensure all structures within the Rochdale envelope will comply with principles of good design as supported in GPA3 including, visual permeability (extent to which it can be seen through), reflectivity and materials (texture, colour, reflectiveness). This will be delivered through the provision of an adaptation of the current requirement 3 in Schedule 2 to the dDCO.</p> <p>1.4 Likewise, the DCO provisions at Schedule 2 require consultation with Thurrock Council and Historic England in relation to lighting strategy:</p> <p>Lighting Strategy</p> <p>12.—(1) No part of the authorised development may be brought into operational use until a written scheme of the proposed operational lighting to be provided for that part of the authorised development has been submitted to and approved in writing by the relevant planning authority, in consultation with Historic England and Gravesham Borough Council.</p> <p>(2) The written scheme submitted under sub-paragraph (1) must be in general accordance with the preliminary lighting strategy and impact assessment.</p> <p>(3) The authorised development must be operated in accordance with the scheme approved under sub-paragraph (1).</p>


		<p>corridor. We consider that such planting (which is, in any case, alien to marshland character) would have limited potential for screening the appearance of the proposed development. Ultimately this would be more effective in relation to the surface access corridor than the Tilbury 2 site, and would, at best, soften the appearance of the lower elements of the development. It would not materially reduce the harm which would be caused to the significance setting of the Fort.</p> <p>1.6 The proposed enhancements to be secured via S 106 Agreement have the potential to bring heritage benefits to Tilbury Fort. While they would not reduce the harm that the development would cause to the setting of the Fort, they would have the potential to enhance other elements of its significance in line with NPS 3.3.3 and 5.12.12. Historic England considers that proposals relating to the implications for tourism etc. on Tilbury Fort are matters that The English Heritage Trust may wish to comment on.</p>	<p>1.5 In consultation with Historic England, the applicant is investigating the potential for further planting to provide screening on the western edge of the Site. Although alien to mediaeval grazing marshland, there is some evidence of tall trees in the area during the 19th Century.</p> <p>1.6 The Applicant is in discussion with English Heritage in relation to Tilbury Fort as a commercial operation.</p>
Historic England	<p>Written Representation</p> <p>Appendix 2 Response to FWQ 1.13.4</p> <p>Para 2.1</p>	<p>2.1 Scope of Development: In First Written Questions the applicants have been asked whether the CMAT development is justified. This component of the development is particularly harmful to the significance of the scheduled monument and its exclusion from the scheme would remove two of visually most intrusive structures: the CMAT processing building and the silo. Since giving consideration to reducing the scope of a development is an important form of mitigation, we ask that this is considered, since it would reduce the adverse impacts of the development on the setting of Tilbury Fort and minimise the harm which would be caused to its significance in line with NPS para. 5.11.16.</p>	<p>The Applicant submitted a justification of the CMAT terminal in response to the Panel's FWQ at Deadline 1. The "CMAT Position Paper" can be found at Appendix B of the Applicants response to FWQ. It makes the case for the CMAT berth in this geographical location based on the river depth available at Tilbury and the necessarily deep draft of aggregates vessels. It also describes the need for aggregates and construction materials within the national economy and in particular London and the south east. The NSIP application is specifically for "harbour facilities", being the RoRo Berth and the CMAT berth, and all other facilities in the development proposal are considered Associated Development to that NSIP development.</p> <p>The landward CMAT facilities are:</p> <ul style="list-style-type: none"> • directly related to the NSIP - they are for the processing of construction material and aggregate to be landed at the harbour facilities NSIP; • subordinate to the NSIP – the processing facilities will have no purpose unless construction material and aggregate is landed at the harbour facilities NSIP, they are by definition therefore subordinate; • necessary to avoid inefficient double-handling of material whereby it would be landed, handled in bulk, transported elsewhere, handled again in bulk, processed and then onward handled – processing at point of landing avoids such inefficiencies (and their related impacts); • proportionate in nature and scale to the construction material and aggregate capabilities of the proposed NSIP – they do not, for example, provide for processing capabilities significantly in excess of the quantity of material that could be landed at Tilbury2; and • are typical development brought forward alongside port development as demonstrated by similar port operations. <p>All marine dredged and imported aggregates are landed either at one of the 68 wharves or 45 ports around the UK where direct physical and economic advantage is gained either by access to infrastructure (roads, rail, river) or proximity to market. It is essential that in order to preserve the value of these raw materials and create the most sustainable development outcomes they are processed as close to the first point of rest as possible to limit damage and waste, multiple handling and additional transportation and to ensure that high quality finished products can be manufactured. In addition, due to the low value of the product, economies of scale are needed in transporting these goods which necessitate larger bulk movements by vessel or train.</p>

1.14. PLANNING POLICY

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Gravesham Borough Council	RFWQ 1.14.14	<p>GBC's primary concern in local plan terms relates to the potential of the proposal to adversely impact upon and affect the delivery of the regeneration of the Gravesend Canal Basin area which lies directly opposite on the south side of the River Thames only some 930 metres from the jetty. Such impacts not only relate to the operation of the site itself but potentially how and when ships manoeuvre onto the jetty. The Gravesend Canal Basin area is identified as a key development site and therefore a strategic allocation under policy CS04 of the Gravesham Local Plan Core Strategy (2014).</p> <p>The Canal Basin Key Site (2.1) is identified at figure 9 on page 51 and on the schematic plan at figure 10 on page 58. Attention is also drawn to Policy CS04 at 4.5.32 on page 56 which relates directly to the Canal Basin Key site.</p> <p>Whilst the last outline planning application for this key site is time expired, this provides some idea of what is likely to come forward in due course.</p>	<p>It is noted that planning permission was granted for the Gravesend Canal Basin development referred to in GBC's response to FWQ 1.14.14 on 10 April 2014. No planning conditions have been discharged and applications for the approval of reserved matters have been made.</p> <p>Clearly if an application for the site were to be made in the future, after the Tilbury2 DCO has been granted, the proposals would, if necessary, take account of this change in land use planning context (amongst other changes in context or planning and environmental policy since 2014) and would be approved on this basis.</p> <p>GBC indicate that they consider that Tilbury2 could adversely impact upon and affect the delivery of the site. However, PoTLL have no evidence as to why the development approved in 2014 did not proceed and what effect Tilbury2 would have on this position. There can be many reasons for development not proceeding.</p> <p>PoTLL therefore invite GBC to provide detailed evidence as to what the barriers to delivery have been to date and what change they consider would arise (financial or otherwise) if Tilbury2 is approved; and how this would affect the delivery of the Canal Basin development. PoTLL can then review that evidence.</p>

1.15. LANDSCAPE AND VISUAL IMPACTS

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Gravesham Borough Council	Response to First Written Questions	<p>1.13.3 c) Table 10 to the document includes an assessment of lighting impact. The applicant accepts that there will be an adverse impact when the site is viewed from the southern shore but contends that this is within acceptable limits. GBC would make the following comments in relation to the applicant's assessment:</p> <ul style="list-style-type: none"> It is difficult to assess what the actual as opposed to predicted impact will be and the erection of temporary lighting on site to assist the Panel during an evening site visit may be useful. In any event, GBC would expect any DCO to contain provisions as to what measures will be undertaken in the event of light nuisance being caused and the steps the applicant will take to remedy such nuisance. It is unclear as to whether a detailed assessment has been made of the impact of the proposal (including any ships likely to be moored on the jetty, which will presumably also be lit) on the Gravesend Canal Basin key development site included as a strategic allocation under policy CS04 in the Gravesham Local Plan Core Strategy (2014). Whilst outline planning permission for this site has time-expired, it remains a strategic allocation within the local plan and impact of lighting at the port should not prejudice its future delivery. Within the DCO, it should be made clear that any measures to mitigate light nuisance extend not only to existing development but that proposed on the riverside at the Canal Basin. The assessment provided by the applicant primarily considers impact on sensitive receptors, such as residential areas overlooking or close to the site. However, the material does highlight the significant impact the development will have in re-introducing night time activities immediately adjacent to Tilbury Fort – including ships tied up on the jetty to the south of the Anglian Water site. This should be taken into account when considering impact on the significance of the identified heritage assets because at the moment night-time views would be closer to what would have been seen when the fort had its original marshland context. An adverse impact such as this will also affect the context within which heritage assets on the southern shore are appreciated and understood. The assessment compares the impact of the silo with CAA lighting with that of the former power station chimneys – which were also lit. However, these have been demolished and what is in the assessment does not represent a true 'without development' baseline. Also, whilst the proposals for the new power station are at an early stage, the consultation proposals show three new chimneys with a height of 95m. It is not known whether these would require CAA lighting. However, if they do, the result would be a cluster of 4 tall structures (including the silo) that would be lit at night and have a significant visual impact. 	<p>PoTLL do not consider erecting temporary lighting would be of any particular assistance to the Panel as it could not properly represent what is proposed as this has not been designed in detail at this stage.</p> <p>PoTLL do not consider that the DCO should contain provisions in respect of nuisance from lighting. The DCO specifically requires at R12.that a written scheme of the proposed operational lighting to be provided for each part of the development and requires consultation with Gravesham Borough Council prior to the determination of its acceptability. This gives GBC an opportunity to look in more detail at the proposed operational lighting and its effects, including the Canal Basin scheme where relevant. The DCO requires that the authorised development must be operated in accordance with this scheme. Such 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. 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 which causes statutory nuisance by reference to the Clean Neighbourhoods and Environment Act 2005 (Section 102).</p> <p>Whilst the terms of reference within that Act exclude lighting associated with the proposed infrastructure corridor, the scope of the LVIA assessment included this element. 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, and a nuisance is therefore not expected to occur.</p> <p>The assessment of predicted artificial lighting within the LVIA is based on a worst case scenario including ships moored at the jetty. The effects of artificial lighting have been assessed, sufficient to identify potential impacts affecting all selected representative viewpoints and to devise appropriate mitigation. This includes views in the vicinity of the Gravesend Canal Basin. PoTLL have no evidence as to why the development of the Canal Basin, approved in 2014 did not proceed. There can be many reasons for development not proceeding. Equally PoTLL invite GBC to provide evidence as to how the impact of lighting would prejudice its delivery.</p> <p>The impact of lighting on night time views of heritage assets has been taken into account in assessing the significance of harm to those assets and Tilbury Fort. The assessment of the impact of artificial lighting is based on a future baseline wherein all lighting associated with the former power station is no longer in operation. Whilst the imaging used for the Preliminary Lighting Strategy and Impact Assessment retains the presence of Tilbury Power Station at the time of survey, the presumption made in assessment is that there would be no existing lit elements appearing in their place following removal. As a result the future baseline conditions have been employed. RWE's proposals for the new power station are at an early stage so it is unknown if they would proceed on the basis of their non-statutory consultation layout. It will be for RWE to assess the consented Tilbury2 proposals alongside their own at the time of their Environmental Impact Assessment.</p>
Gravesham Borough Council	Response to First Written Questions	<p>1.15.5 b) Whilst Gravesham supports the expansion of the Port of Tilbury in principle and accepts that lighting on this site and that adjoining (i.e. the former power station</p>	<p>It is important to note that the actual wording in the LVIA (para 9.249) states <i>..it would, to some extent, represent re-establishment of the long established historic industrial and waterfront lighting associated with this part of the Thames.</i> This is an altogether different interpretation and a reasonable assumption based on the level of</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>site) is capable of being designed so as not to cause a direct impact on residential properties (both existing and proposed) to the south of the river, it does not accept that this simply re-establishes historic industrial and waterfront lighting along the Thames.</p> <p>The application site formed part of the former Tilbury power station site whereby lighting levels were in general terms more subdued – GBC has been unable to find any evidence within the submission that clearly demonstrates that the lighting level was similar to that proposed or that it extended over such a wide area.</p> <p>A stock photo available on-line at http://www.alamy.com/stock-photo-tilbury-power-station-gravesend-kent-england-at-night-23853209.html shows Tilbury B power station viewed from Gravesend at night. Whilst the light associated with the London Gateway port to the east is evident, light spillage onto the river from Tilbury power station itself appears to have been primarily associated with the CAA lights on the chimneys, area lighting; lighting to the main structure and conveyors; and the jetty. It would appear that lighting to the actual current application site was negligible at this stage and that it didn't extend so far to the west – albeit that the Anglian Water site even further to west is not in shot.</p> <p>On this basis, it is difficult to see how the applicant's contention in terms of re-establishment can be sustained. The level of lighting and its intensity is likely to be greater given the need to have high columns and adequate lighting to areas to meet operational requirements. A comparison with the lighting at London Gateway may be useful in this respect given that it can clearly be seen at some distance to the east.</p>	<p>predicted effects.</p> <p>The stock photograph referred to appears to have been taken primarily for photographic effect and includes a record of extensive obtrusive floodlighting of a type not proposed for Tilbury 2.</p> <p>Evidence provided at Appendix 9.D (APP-038) shows the effect of obtrusive lighting present at the adjacent water treatment works adjoining the order limits main site to the west. In addition there exist many tall masted floodlights within the works (not operating at the time of survey) which would have a significant effect when lit. There are other photographs available to view online which also indicate this.</p> <p>A panoramic record of night-time lighting within Tilbury from an elevated viewpoint to the north-west in Chadwell St Mary was made by David Jarvis Associates in 2010 and appended to this document. Whilst distant, the record indicates that the area in the vicinity of the order limits main site (indicated with an arrow) was not dark and contained a significant level of lighting. There are other photographs available to view online which also indicate this. A copy of these are also appended.</p> <p>It is considered that the imaging supplied at Appendix 9.I (APP-043) indicates that proposed lighting would be of much lower intensity than London Gateway – a photographic example of part of which can be seen below (Copyright Claridon Group):</p> 
Gravesham Borough Council	Written Representation, Draft Development Consent order, Schedule 2 Requirement, Page 8	Table under 3(3) contains maximum height but not other dimensions- these are needed as a building's bulk and volume can be as important as its height. (GBC) has made comments in the LIR about the justification for one tall silo rather than two more modest in scale.	<p>The maximum development parameters of the silo are 100m high (104m AOD) and 15m diameter as defined in the ES and illustrated in the Chapter 9.0 wireline images (appendix 9.F). This represents the worst-case scenario and has defined the Rochdale Envelope for assessment purposes.</p> <p>Alternative design options for the proposed cement silo have been considered. These relate to using up to three silos of lower height but equivalent storage volume. A cluster of silos would still be of sufficient height to rise above the remainder of development in most views and would still draw the eye due to their larger massing against the skyline. A single, relatively slender structure would have a more elegant form and would not adversely disrupt key views from Tilbury Fort to the same extent as the alternatives.</p>
Gravesham Borough Council	Local Impact Report Page 9, final bullet point:	The masterplanning process has considered lower but a larger number of silos in order to consider whether this might be beneficial in environmental or operational terms. However, the Landscape and Visual Impact Assessment has concluded that the additional bulk that would be created by having a greater number of silos would off-set the benefits of a lower height. Moreover, from an operational perspective, a larger number of silos would consume a greater area of the site.	

1.16. NOISE AND VIBRATION

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Colin Elliot	Written Representation Page 1	Has concerns about: <ul style="list-style-type: none"> Ongoing EMR plant noise issue Proximity of close to road and rail link and the measures to reduce the noise. Combined effects of Tilbury2 and LTC 	<p>The Environmental Agency (EA) is currently working with the EMR operator to resolve the noise issue. PoTLL understands that the EA has placed operational restriction on start times and weekend working as well as dust suppression controls.</p> <p>Chapter 17 of the Environmental Statement provides an assessment for the rail link and road link to Tilbury2 that includes two noise barriers that are secured by the DCO to reduce noise levels. The noise barriers will comply with BS EN 1793-2:2012, Category B2 for the road barrier at a height of 3m and 1.5m for the railway. The assessment concludes that the noise impacts from the rail link and road link will not be significant.</p> <p>At present there are no traffic figures/data to undertake a noise assessment with Lower Thames Crossing (LTC). However, at a high level the combined noise effects of the operation of LTC with Tilbury2 are likely to increase noise levels in Tilbury due to increased road traffic movements with LTC routing through the transport corridor.</p>
Chris Henderson	Written Representation	Has concerns about: <ul style="list-style-type: none"> construction phase lorries re-directed through residential streets. Heavy freight movement causing vibration Effects of other construction activities. 	<p>Chapter 17 of the Environmental Statement provides an assessment for the construction phase which includes an assessment of construction traffic on the local road network and construction vibration. The construction traffic will use Ferry Road and Fort Road to access the Tilbury2 site as set out in the Construction Traffic Management Plan (to be approved by Thurrock at detailed design). The assessment concludes that construction traffic on the local road network has the potential to give rise to negligible adverse effects.</p> <p>Piling is to be undertaken for the overbridge and compaction for the rail line. The ES noise chapter states at paragraphs 17.150 and 17.151 that:</p> <p><i>The nearest receptors to the rail line compaction works are ~35m away and there is potential for temporary, direct, moderate significant adverse effects at these NSRs. Minor adverse impacts are expected at properties between around 40 and 80m from the compaction activities which would not be significant. Receptors beyond 80m would get negligible impacts.</i></p> <p><i>The proposed overbridge is located approximately 75 m from the nearest residential property. The significance of construction impacts will depend on the duration of the event. On this basis the piling works have the potential to give rise to temporary, direct, moderate adverse effects at NSRs between 75 and 125m from the works and therefore will have significant impact in the short-term. For receptors between 125m and 300m impacts would be minor and not significant. Impacts would be negligible for properties beyond 300m.</i></p> <p>The Construction Environmental Management Plan (CEMP) provides details of mitigation for vibration such as the use of low vibration techniques and that the Contractor must obtain a section 61 consent from Thurrock Council</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			<p>before construction works commence.</p> <p>In relation to the operation of freight trains, ES paragraph 17.204 states that:</p> <p><i>The vibration levels from the proposed freight trains are unlikely to be significantly different from the existing freight trains, and therefore there would be no change to the level of vibration, just to the total duration of the vibration events.</i></p> <p>The increase in VDV is due to the increase in duration.</p> <p>In relation to the main site ES paragraph 17.141 states that:</p> <p><i>Within Tilbury (NSRs 2 to 5) levels from the construction of the main site are below both LOAEL and SOAEL demonstrating no effect from construction of the main site.</i></p>
Gravesham Borough Council	GBC Response to First Written Questions 1.16.6	GBC, if consulted would have highlighted the existing dwellings in the Canal Basin area, such as the Venture Court location that was used for LT4. Heritage Quay next to the Customs House, cottages at Mark Lane and the upper floors of Chantry Court would have been other suggestions for noise monitoring. The locations suggested by GBC are marked in green dots at attached Appendix XXX.	<p>PoTLL acknowledge the suggested monitoring and assessment locations by GBC of Customs House, Cottages at Mark Lane and Chantry Court. The monitoring location at Venture Court (LT4) provides a representative noise climate for properties on the south bank of the Thames near to Tilbury2, including the Canal Basin Regeneration Area.</p> <p>Venture Court (LT4) is directly opposite the Tilbury2 location and is currently the closest residential block with a clear view of Tilbury2. Daytime levels on the façade of LT4 facing Tilbury2 are considered less influenced by local road traffic noise than Heritage Quay and Chantry Court, and less affected by industrial noise than the Cottages at Mark Lane. The noise climate at these locations is likely to be similar to that measured at Venture Court particularly during the night time period when there is less influence from local sources.</p> <p>Cottages at Mark Lane, Heritage Quay and the upper floors of Chantry Court are likely to have a similar noise climate as measured at Venture Court and it is considered that LT4 is representative of these locations.</p> <p>The revised Appendix 17.2 – Figure 2 attached at Appendix C to this document, shows the locations suggested by GBC marked with green spots, and the locations of NSR 7 (Clarendon road, Gravesend) and NSR 8 (Committed Development - Canal Basin Regeneration Area, Gravesend) marked with yellow spots.</p> <p>The assessment NSRs provide a good coverage of locations in Gravesham and Tilbury. The predicted noise levels at Heritage Quay, Cottages at Mark Lane and Chantry Court will be similar to those identified at NSR 7 (Clarendon road, Gravesend) and NSR 8 (Committed Development, Gravesend) due to the similar separation distances between the locations and Tilbury2.</p>
Gravesham Borough Council	GBC Response to First Written Questions 1.16.12 and 1.16.20	GBC have concerns about the 24 hour operation and the noise impacts on residents in Gravesend.	<p>The need for 24/7 Working at Tilbury2 (PoTLL/T2/EX/32) sets out the PoTLL explanation and justification for the required 24 hour operation. PoTLL is undertaking early engagement with a potential CMAT customer to understand their operational requirements.</p> <p>It is noted that there are similar 24 hour aggregate operations in Gravesham,</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			near to Mark Lane, with vessels discharging anytime of day.
Gravesham Borough Council	Gravesham BC Local Impact Report for Tilbury2 Pages 17 second paragraph	Gravesham BC also requires more information on the PoTLL expectations about the on-going monitoring and mitigation regime and how acceptable noise levels will be agreed.	PoTLL will discuss this with GBC as the detailed design progresses, but ultimately it must agree the monitoring and mitigation scheme with Gravesham to enable the Port to operate.

1.17. SOCIO-ECONOMIC EFFECTS

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Gravesham Borough Council	LIR, P. 7/8	There is no information within the transport section on current patronage of the ferry or associated bus service and how it may be affected by Tilbury2 in quantitative terms. Because of this, it is unclear how the indirect, positive, permanent and minor conclusion has been reached.	Paragraph 7.98 of the socio-economic impact assessment within the Environmental Statement [APP-031] sets out that consultation with the ferry provider identified that the receptor would benefit from increased patronage. The ferry service has formed part of the qualitative assessment of potential impacts as a result of the proposed scheme. The assessment conclusion was informed by the current role of the ferry service within the Tilbury area, its servicing of the nearby Gravesham Opportunity Areas for regeneration, and the role that the ferry can play in combination with wider transport, housing and growth ambitions for the area. This anticipated increased patronage resulting from the proposed development, along with the proposed contribution from the Port, will enhance the existing service and support ferry connectivity.
Gravesham Borough Council	LIR, P. 7	Consideration of Sunday service enhancements as part of the mitigation	The current ferry service operates from Monday to Saturday, supporting improved connectivity between Gravesham and Tilbury. This is set out in Paragraph 7.98 of the socio-economic impact assessment within the Environmental Statement [APP-031]. The ferry is included within the assessment and given appropriate consideration reflecting its role in promoting employment opportunities and sustainable travel. It should be remembered that the Port and its employees are not the only customers of the ferry, nor is the Port able to require the ferry to operate at particular times or service patterns. It is expected that, as a separate commercial undertaking, the ferry operator would respond appropriately to market demand.
Gravesham Borough Council	LIR, P. 19	It is not clear to Gravesham BC whether the Employment and Skills Strategy and Active Travel Strategy are meant to mitigate impacts on Gravesham	The Skills and Employment Strategy (SES) [APP-029 Appendix A] provides details on the training and employment initiatives and commitments associated with the development proposals. Section 1.2 of the SES outlines the 'local area' or 'local population' as referring to Thurrock. The SES has been prepared principally in consultation with Thurrock Council, since Tilbury town is the primary centre of the Port's employment activities. The socio-economic impact assessment within the Environmental Statement [APP-031] outlines (within Figure 7.2 [AA-107]) the existing employment catchment which extends both north and south of the Port. This catchment therefore reflects the area within which the port has an interest as a current employer. As such, encouraging local employment opportunities, local advertising, greater connectivity across educational institutions and overcoming barriers to accessing employment and training would apply across the labour catchment. The SES refers to initiatives, both current and potential, that relate to wider regional networks, such as Opportunity South Essex. The Port expects location-specific SES initiatives (such as FE training) to be focused in existing facilities. However, there will be no residence restriction on take-up such that potential apprentices or employees from Gravesham would be able to take advantage of the opportunities offered. The Port would be keen to involve Gravesham within such meetings or fora which might convene to discuss local employment opportunities. The Active Travel Strategy provides for improvements to facilities for pedestrians and cyclist connections to and from Tilbury2. It is aimed at mitigating transport impacts albeit there would be related benefits. The enhancements include links with the Ferry terminal which would benefit those travelling to and from Gravesend.
Thurrock Council	RFWQ, P. 19	Thurrock Council's aspiration is to have more employers across the Borough who work with us in the	In line with views expressed by Thurrock Council and other stakeholders who

			way that the Port of Tilbury do. In that context, TC would like to be able to use, where it can, development at the Port help us to achieve this. TC provided a list of potential additions to the S106 agreement surrounding PoTLL commitments to employment, training and the supply chain.	<p>recognise the strong focus the Port places on being a proactive local employer, draft amendments are being made to the Skills and Employment Strategy and will be submitted at Deadline 3. These changes are intended to provide comfort to Thurrock Council and others as to the efforts that the Port will commit to in order to promote and facilitate good employer relationships by the Port's customers and tenants.</p> <p>The revised SES, which will be made available at Deadline 3 once it has been completed, will set out a number of commitments by the Port in relation to its customer base. Whilst it is difficult to forecast the behaviour of individual tenants, the Port will commit to continuing to work with the future supply chain to encourage 'good neighbour', such as providing local employment and training opportunities, and supporting local businesses where possible. These include commitments to:</p> <ul style="list-style-type: none">• Engage proactively with tenants, contractors and other relevant organisations to promote and support their involvement in local employment and training initiatives.• Encourage contractors to take on employees locally, and use local business.• Encourage tenants and customers to support local young people in accessing careers in the logistics industry.• Facilitate a shared forum with Thurrock Council, Gravesham Council, the Essex Employment and Skills Board and Port tenants and suppliers to encourage a joined up approach with wider initiatives across the authority areas.• Monitor and report the number of apprenticeships, proportion of local employment and training initiatives undertaken by tenants and suppliers.
Essex Council	County	RFWQ, ref 1.17.2	Emphasis should be placed on the use of the local supply chain and economy to realise these benefits	As set out in the response to RFWQ (p. 19), in line with views expressed by Thurrock Council and other stakeholders, draft amendments are being made to the Skills and Employment Strategy These changes are intended to set out the matters that the Port will commit to in order to promote and facilitate good employer relationships by the Port's customers and tenants.
Essex Council	County	RFWQ, ref 1.17.2	ECC considers the employment catchment for Tilbury does extend beyond Thurrock and that this should be considered when implementing the Skills and Employment Strategy. Furthermore, the strategy should take into account and refer to the Essex Employment and Skills Board, and the role that the Board can play in shaping local educational offers to meet employers requirements.	<p>As set out in the response to RFWQ (p. 19), in line with views expressed by Thurrock Council and other stakeholders, draft amendments are being made to the Skills and Employment Strategy [APP-029 Appendix A]. These changes are intended to set out the matters that the Port will commit to in order to promote and facilitate good employer relationships by the Port's customers and tenants.</p> <p>These amendments will include further specifying how the Port will support existing initiatives and explain that the Port will commit to continuing to work with the future supply chain to encourage 'good neighbour' behaviour, such as providing local employment and training opportunities, and supporting local businesses where possible.</p> <p>This includes facilitating a shared forum with Thurrock Council, Gravesham Council, the Essex Employment and Skills Board and Port tenants and suppliers to encourage a joined up approach with wider initiatives across the authority areas.</p>
Essex Council	County	RFWQ, ref 1.17.2	One thing that is evidently missing from the strategy and needs to be addressed is recognition of employees difficulties in accessing sustainable travel to and from work to facilitate shift working within the vicinity of the Port. There is also the potential for linkage with such schemes as Arriva click.	Please refer to the Applicants response to 1.18.6(d) and ECC's response to 1.18.6 (c) with reference to the content of the Framework Travel Plan [APP-073]. Discussions are continuing with ECC with a SoCG expected to be submitted at Deadline 3.
Essex Council	County	RFWQ, ref 1.17.2	ECC has reviewed the strategy and would endorse current activities towards community engagement particularly "local first" advertisement of opportunities, however taking on board the identified challenges in terms of local skills levels / aspiration ECC would urge a wider approach to take in Basildon Borough locality. Residents across South Essex do not recognise local authority boundaries.	The socio-economic impact assessment within the Environmental Statement [APP-031] outlines (within Figure 7.2 [AA-107]) the existing employment catchment which extends both north and south of the Port. This catchment therefore reflects the area within which the Port has interest as a current employer. As such, encouraging local employment opportunities, local advertising, along with greater connectivity across educational institutions

			and overcoming barriers to accessing employment and training would apply across the labour catchment. The SES refers to initiatives, both current and future, that relate to wider regional networks, such as Opportunity South Essex. Section 4.2.1 of the current version of the SES states that PoTLL will <i>"work with Opportunity South Essex to establish a local jobs brokerage service through which all job vacancies will be advertised first before being advertised regionally or nationally"</i> . Opportunity South Essex is part of the structure of the South East Local Enterprise Partnership (SELEP) to achieve ambitious growth plans, and includes Basildon.
Essex County Council	RFWQ, ref 1.17.2	ECC would also recommend enhanced activities with young people's prime influencers parent/carers/teachers to include expansion of awareness of opportunities both with Port of Tilbury and partner subsidiaries. There is a need to promote advanced apprenticeships and sponsored graduate schemes.	The SES is designed to support awareness raising across a range of institutions and prime influences. Section 3.1.2 sets out how the Port will continue to support the creation of appropriate training opportunities through graduate recruitment, apprenticeships, traineeships, internships and work placements. PoTLL currently engages with local education authorities, schools and colleges. Section 4.1 sets out how PoTLL <i>"...wishes to promote the Port activities and jobs to local teachers and tutors so that they, on PoTLL's behalf, pass on useful information to their respective students"</i> . This will help to influence the influencers, and ensure that local teachers are aware of the Port's role in the local economy, and potential opportunities for young people and students.
Thurrock Council	RFWQ, ref 1.17.2	ECC would anticipate an increased need for high level engineering/ construction/ digital technology skills to support expansion of the port itself, the Lower Thames Crossing, Bradwell B nuclear power station, housing/infrastructure/development plus the expected industry/employment migration from London, all of which will impact on available labour force.	Paragraph 7.113 of the socio-economic impact assessment within the Environmental Statement [APP-031] sets out the expected cumulative impacts at a regional level relating to the proposals and other developments. Table 7.23 outlines a number of development proposals considered in combination with Tilbury. These include the Anglian Water site, London Distribution Park, Oikos Storage LTD, Thames Enterprise Park, Tilbury B Power Station demolition, Goshems Farm Jetty, Land adjacent to Tilbury Power Station, West Thurrock Biomass CHP Plant. The Lower Thames Crossing has not been considered as part of the cumulative assessment as there is not considered to be sufficient detail on the scheme at this stage. This potential increased demand for labour is recognised and has been assessed within the socio-economic impact assessment. In combination, it is anticipated that the overall effect would be to create stimulus and critical mass for providers to offer appropriate courses and training. Thus the increase in demand supports the provision for upskilling of the community. The Port would continue to provide opportunities such as industrial placements, apprenticeships and local publishing of posts as set out in the SES.
English Heritage	Para 5.7	It is our view that this assessment and those included in tables 7.22 and 7.25 do not fully recognise the socio-economic value of Tilbury Fort nor do they appropriately mitigate the impacts. Tilbury Fort is an education facility, tourist attraction and filming location. As noted above, at section 4, and in Appendix E we include a breakdown of visitor numbers annual income that demonstrates the scale of economic investment and value that there is in the site. The value of this revenue is directly related to the continued preservation and enhancement of the scheduled monument, listed buildings and their setting.	Paragraph 7.101 of the socio-economic impact assessment within the Environment Statement [APP-031] sets out the consideration of the Tilbury Fort in relation to development proposals. The assessment acknowledges that there are current socio-economic effects from the existing longstanding operation of the Port. Whilst not quantitatively assessed, the assessment was informed by professional judgement, based on experience of similar 'heritage as a business' attractions elsewhere that, like the Fort, operate ably in economic terms whilst being in a 'modern' (non-original) setting. Nearby examples include Rochester Castle, Temple Manor and the Tower of London. The LVIA and Cultural Heritage chapters have stated that the Fort is expected to be affected indirectly from amenity and cultural heritage impacts. The potential further mitigation measures set out in Table 7.22 will seek to minimise residual effects to the point of not being significant.

English Heritage	Para 5.8	The landscape assessments have considered the significance of the setting of the heritage assets, but as is noted above at our section 4, the landscape (and seascape) setting is also directly related to the ability of the English Heritage to realise revenue opportunities from filming. Therefore, there are two elements that ought to be considered, mitigated and compensated as appropriate.	It is understood that in recent years the Fort has generated income from filming. The assessment of the impact has been taken into account through the landscape assessment process, and the heritage assessment has considered effects on the site itself. This business need of the Fort needs to be weighed against, as set out in the Outline Business Case, the compelling national and local policy case for supporting the Port as an existing and well-established business which contributes many thousands of jobs to the local and regional economy. The Port is also in a fixed location with the intrinsic requirements for riverside access.
English Heritage	Para 5.9	We contest the implication of the comment made at paragraph 7.101/7.100 that there are already impacts to setting and the Fort's viability. Our visitor numbers and filming opportunities are restricted in relation to existing port activities, and additional development at Tilbury2 would increase any adverse impacts.	Paragraph 7.101 of the socio-economic impact assessment within the Environment Statement [APP-031] sets out the consideration of the Tilbury Fort in relation to development proposals. The socio-economic assessment notes that as a receptor, the Fort is already affected from the existing and longstanding operation of the Port. The contention that visitor numbers are restricted by the Port implies a direct and/or physical limitation which is not the case. The existing influence of the Port operation on the Fort (and vice versa) is not disputed by PoTLL and forms part of the current operating context for both the Fort and the Port and any visitor experience or film set context. The LVIA and Cultural Heritage chapters have stated that the Fort is expected to be affected indirectly from amenity and cultural heritage impacts. The potential further mitigation measures set out in Table 7.22 will seek to minimise residual effects to the point of not being significant.
English Heritage	Para 5.11	We are not convinced by the statement that access to the fort will not be affected. A changed road alignment and increased HGV movements will change traffic flows, also there is a risk that lorries will park along Fort Road and create problems for access. We would like to see commitment to avoiding any adverse impacts to the access arrangements at the Fort and suggest that appropriate mitigation and compensation should be included in the Tilbury2 proposals, for example: <ul style="list-style-type: none"> prohibiting parking on the verges along Fort Road; traffic calming to reduce the desirability of Fort Road to HGV and make it more attractive to visitor traffic – this should not however restrict access for film crews; improvement to the driveway access to the Fort; and improvement to the northern car-parking arrangements at the Fort. 	As set out in the Landside Transport chapter of the Environmental Statement [APP-031], the creation of a new link road will remove traffic from Fort Road past the Fort. As part of the Active Travel Strategy (Document Reference 5.3 Appendix B) Fort Road will become a quiet way with HGVs diverted along the proposed Link Road and suitable measures along Fort Road to reduce vehicle speeds and deter through traffic will be provided.
Gravesham Borough Council	RFWQ 1.16.20	The PoTLL shared selected draft ES chapters with Gravesham BC before they were finalised and we provided comments on the draft noise and vibration document . Paragraph 17.164 of the draft ES onwards considered the “Operational Phase - CMAT and RoRo Terminal: Airborne Noise” and no hours of operation were given but it was assumed from other text, that the CMAT could operate 24/7, 363 days per year (NB. In the submitted ES, paragraph 5.59 explains that, for the purposes of environmental assessment, it has been assumed that CMAT could operate 24/7, 363 days per year). GBC flagged that to the PoTLL this is different to the operation of the CMAT proposed in the PEIR. The final PEIR issued on 13 June 2017 included: 5.44 The CMAT is envisaged to operate 312 days per year (six days per week), 7am - 7pm Monday – Friday and 7am – 12pm Saturdays. 8.79 During operation, the following measures are being considered as part of the scheme design, where operational parameters permit. <ul style="list-style-type: none"> Restricting CMAT activities working hours; 17.66 The following measures are being considered as part of the design process, subject to operational parameters: <ul style="list-style-type: none"> Placement of doors to limit noise breakout from the CMAT aggregates process buildings in the direction of the nearest NSR. Restricting CMAT activities to daytime hours only. This change is significant because of paragraph 17.174 in the ES, as highlighted by the Panel (FWQ 1.16.12.), which says “During the night the Rating level is more than 10dB above background and total noise levels would increase by at least 3dB, indicating that night time CMAT activities would be major	PoTLL wish to retract Paragraph 2.27 of the Outline Business Case [APP-166], and the corresponding text within Table 2, that relate to the operating hours of the CMAT. Paragraph 2.27 currently states that the CMAT is required to operate 312 days per year (six days per week), 7am to 7pm Monday to Friday and 7am to 12pm on Saturdays”. The commercial needs of a 24 hour working Port are dependent on responsive infrastructure, and therefore the CMAT will be required to operate on a 24 hour basis, 7 days a week. The Outline Business Case [APP-166] was used to help formulate the ‘case in principle’ for the Tilbury2 scheme, setting out the need for expansion. The detail provided in Table 2 was intended as an illustrative example of the nature of such activities. We appreciate that some stakeholders might have found this unclear and are happy to clarify and correct this text accordingly. This clarification ensures that the Outline Business Case reads clearly in alignment with (a) the Environmental Statement (Updated Section 5 document) [AS-006] where paragraph 5.67 confirms that the CMAT has been assessed as operating 24/7, 363 days per year, and (b) the Port's Response to Relevant Representations: The Need for 24/7 Working at Tilbury2 [PoTLL/T2/EX/32] (Appendix 2) which, at paragraphs 1.47-1.48 (and 1.59) reiterates that facilities such as the CMAT will want to be in operation 24 hours a day 7 days [per week] to have the flexibility to respond to market

	<p>and significant at those locations in Gravesend.”</p> <p>With the original hours suggested for the CMAT in the PEIR it appears that this impact would not occur and GBC has suggested to the PoTLL that those original hours should be taken forward.</p> <p>In response, the PoTLL has advised that the CMAT needs to be 24 hour operation for it to be commercially attractive and so GBC requested that this is evidenced. As explained in the PoTLL’s response to the relevant representations, PoTLL is currently in discussions with GBC on PoTLL’s requirement to operate Tilbury on a ‘24/7’ basis. A note appended to the response to the relevant representations document “Appendix 2 The Need for 24/7 Working at Tilbury2” sets out the PoTLL additional explanation and justification for the required 24 hour operation.</p> <p>GBC would appreciate the Panel’s consideration of whether it is reasonable to expect the PoTLL to have restricted hours of operation for the CMAT.</p> <p>(NB. Please note that the submitted outline business case (Document ref:7.1) includes “Table 2: Tilbury2 business scope and key operational requirements” advises “CMAT terminal operations: The CMAT is envisaged to operate 312 days per year (six days per week), 7am - 7pm Monday – Friday and 7am – 12pm Saturdays. There is potential for truck loading activities to occur outside of these hours.” And so the case for the CMAT is not clear)</p>	<p>demands and meet onward supply chain needs in a competitive and flexible way.</p> <p>For the avoidance of doubt, the Port confirms that the employment and GVA estimates identified within the Outline Business Case remain unaltered and in compliance with the Socio-economic Impact Assessment within the Environmental Statement [APP-031]. These estimates were produced based on the anticipated overall level of activity of 1.6m tonnes of aggregates per annum of bulk product taking place, alongside the role of the Ro-Ro facilities in also supporting employment and GVA effects. The entire Environmental Statement [APP-031], including the socio-economic assessment was prepared on the basis of 24/7 operation.</p>
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1.18. TRAFFIC AND TRANSPORTATION

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Amazon	TRO30003-000683 Written Representation - All Sections (Amazon Reference: TIL2_AFP005)	<p>Traffic Impact - confirmation that the appropriate time periods on the road network have been assessed is sought to fully understand the traffic impact of the Tilbury2 proposals, including consideration of peak hours and shift changeover times at Amazon.</p> <p>HGV Parking - An additional operational query relates to the ability of the Tilbury2 design to accommodate/hold traffic as it arrives.</p> <p>Construction Traffic - has consideration been given to the peak hours and shift changeover times of other local businesses including Amazon?</p> <p>Sustainable Travel - It is assumed that any Travel plan would cover the whole of the Port operation and not just the Tilbury2 site. A new bus stop for bus service 99 is suggested. However, there are no proposals to enhance existing public-transport provision for staff - bus, train, or ferry. This should be considered in more detail with the aim of working with other occupiers.</p>	<p>PoTLL has met (28 March 2018) with Amazon to understand their concerns and is working with them to provide additional information to enable a SoCG to be prepared.</p> <p>The time periods assessed have been agreed with the highway authorities Thurrock Council and Highways England.</p> <p>The General Arrangement drawings (Document Reference: APP-008) illustrate that the operational areas for the CMAT and Ro-Ro are circa 16 Ha and circa 26Ha respectively. The operational areas will be designed to cater for the required number of HGV's arriving at the Port.</p> <p>The CTMP is part of the CEMP. As noted at paragraph 2.7 of the CEMP, PoTLL will consult with a number named stakeholders including Amazon in relation to construction traffic matters. The Applicant also notes that the final CTMP is required by the CEMP (PoTLL/T2/EX/38) to be approved by Thurrock Council.</p> <p>The Framework Travel Plan (APP-073) has been prepared for Tilbury2. However, it is noted that the Framework Travel Plan requires the creation of a Sustainable Travel Group which will include, amongst others, Thurrock Council and Highways England. It will also include PoTLL, who, as noted in paragraph 5.13 of the FTP, are also present on the London Distribution Park Steering Group, and will therefore assist in providing a coordinated approach to travel planning within Tilbury.</p> <p>As well as the new bus stop secured through the Framework Travel Plan (APP-073), the s106 agreement with Thurrock Council includes funding to enhance the Ferry service, and improvements to Active Travel provision both at the Ferry terminal and Tilbury town train station.</p>
Highways England	Representations of Highways England in respect of the proposed Port Terminal at the Former Tilbury Power Station "Tilbury2": Paragraphs a1.1 – a1.7	<p>A1.1. It is of particular concern that, despite discussion having been underway since April 2017, the Applicant has not yet provided Highways England with persuasive evidence in respect of the amount of traffic generated by the Proposed Development. This means that Highways England is unable to advise the Secretary of State that the Proposed Development will not cause an unacceptable impact on the safe and effective operation of the SRN and/or that any mitigation proposed is adequate.</p> <p>A1.2. In the event that persuasive evidence is not provided Highways England submits that the Applicant should carry out sensitivity tests to identify mitigation requirements for a range of traffic generation. The draft DCO should then contain Requirements to monitor traffic once the Proposed Development is in operation and to implement the appropriate mitigation for the observed traffic level. As stated in 2.2.9 of the Transport Assessment the Ports National Policy Statement is supportive of this approach:</p> <p>"Obligations or requirements should be structured flexibly so as to keep to a reasonable minimum the risk that either applicants or network providers would be required to incur costs providing infrastructure that turned out to be under-used. Such measures might include various mechanisms, such as traffic-level triggers, shadow-tolling and/or escrow arrangements to guarantee funding."</p>	<p>A1.1 PoTLL continues to actively engage with HE, providing further supporting information. The Transport Assessment (Document Reference: APP-072) Section 7 demonstrates there is not a severe impact on the safe and effective operation of the SRN.</p> <p>A1.2 The sensitivity test in the Transport Assessment (Document Reference APP-072, Section 6.8) makes overly robust assumptions that all 1,600,000 tonnes from the aggregate distribution yard will be exported from Tilbury2 by road in 16-tonne vehicles. This sensitivity assumption would uplift total traffic generation by some 17%. Despite this uplift in traffic generation, the resultant impact is still demonstrated to be acceptable in highway terms (Document Reference APP-072, Paragraphs 7.2.4, 7.3.3, 7.4.38 – 7.4.40, 7.5.6 – 7.5.7, 7.6.6 – 7.6.7 and 7.7.5. Thus the impact of development is not severe and there is no need or justification for monitoring requirements.</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>A1.3. The Applicant proposes work to Asda roundabout but, as a result of the lack of evidence to support the traffic generation in the Transport Assessment the following items are still under discussion between the Applicant and Highways England:</p> <ul style="list-style-type: none"> i. The traffic generated by the Proposed Development ii. The points on the Strategic Road Network where mitigation is required iii. The mitigation required at those points iv. The design of mitigation works v. The timing of delivery of mitigation relative to the programme for delivery of the Proposed Development. <p>A1.4. In addition the draft DCO should be amended to include operational parameters for the Proposed Development above which further planning permission (whether by an amendment to the DCO or by a permission under the Town and Country Planning Act) including an assessment of the additional impact on the SRN would be required.</p> <p>A1.5. In respect of Asda roundabout Highways England has concerns that the proposed mitigation is insufficient to mitigate the additional traffic from the Proposed Development and does not provide suitable safe facilities for pedestrians and cyclists. Highways England also believes that a change to the speed limit at the roundabout may be necessary.</p> <p>A1.6. In respect of M25 Junction 30 it should be noted that the Section 106 agreement for the London Gateway Logistics Park Local Development Order (https://www.thurrock.gov.uk/sites/default/files/assets/documents/ldo_report_making_20131023_app3.pdf) sets out triggers for improvements to Junction 30 based on flows 'at the gate' of the Logistics Park, which is a similar distance from Junction 30 as the Proposed Development. In the absence of evidence to the contrary from the Applicant it appears likely to Highways England that the traffic generated by the Proposed Development will trigger the need for improvements at M25 Junction 30 over and above those</p>	<p>A1.3 PoTLL continue to engage with Highways England on their queries. With reference to each point raised in A1.3.</p> <p>i. A robust assessment of the traffic generated by Tilbury2 is set out in the Transport Assessment (Document Reference: APP-072, Section 6.5) which is consistent with that presented in the agreed Transport Assessment Scoping Report. HE has raised queries since submission which PoTLL has responded to and continues to actively engage with HE on the matter.</p> <p>ii. The TA demonstrates that mitigation on the SRN is not necessary with the exception of the ASDA roundabout</p> <p>iii. The TA provides details of the mitigation proposed at the ASDA roundabout. Ultimately Highways England will approve the final design of the works at Asda Roundabout pursuant to their protective provisions.</p> <p>iv. As set out in the SOCG (Document Reference PoTLL/T2/EX/54 SOCG009) it is agreed that the design of the mitigation works would be consistent with DMRB.</p> <p>v. The DCO requires the completion of the mitigation measures at the ASDA roundabout prior to opening of the RoRo and CMAT facilities. (Document Reference: APP-016)</p> <p>A1.4 As noted in the ES (Document Reference: AS-006, Paragraph 5.85) "nothing could in any event be permitted under PD rights as applied to Tilbury2 that has a likely significant effect on the environment beyond that of the 'envelope' of the assessed effects of the development permitted in, and subject to the constraints of the DCO". This would include new significant impacts on the SRN. As such anything outside the ES envelope would require planning permission.</p> <p>A1.5 The TA demonstrates that the operation of the ASDA roundabout is predicted to remain within acceptable levels with the proposed mitigation. A Walking Cycling and Horse-Riding Assessment of the scheme has been compiled based on the work done and explained in the ES and TA and submitted to HE is demonstrating how the proposed mitigation responds to the needs of pedestrians and cyclists. HE has confirmed the submitted Walking Cycling and Horse-Riding Assessment complies with the requirements of DMRB (HD42/17). This will be set out in the SoCG with HE at Deadline 3. PoTLL will continue to engage with HE and seek clarification of the suggestion that the speed limit should change.</p> <p>A1.6 The London Gateway Logistics Park is not a Port, therefore it is not appropriate to compare it to Tilbury2. In any event, the TA has clearly</p>

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		<p>agreed for the London Gateway Logistics Park.</p> <p>A1.7. Depending on the evidence of traffic generated by the Proposed Development mitigation may also be needed to other parts of the Strategic Road Network.</p>	<p>identified that increases in traffic through M25 Junction 30 would be <i>de minimus</i> (less than 2%) and have no measurable impact on the operation of the junction.</p> <p>It is worth noting that major improvements to Junction 30 and the A13 were completed in April 2017, which were designed to accommodate substantial increases in traffic. Highways England's website (http://roads.highways.gov.uk/projects/m25-junction-30a13-corridor-relieving-congestion-scheme/) notes in relation to the improvement scheme that traffic flows were predicted to increase by 25% by 2032 and that the junction <i>"directly services the Port of Tilbury and the Lakeside regional shopping centre and is regarded as the last major transport constraint to the development of the Thames Gateway area."</i></p> <p>A1.7 Within the agreed scope of the TA (as confirmed in the SoCG with HE SoCG009 Document Reference PoTLL/T2/EX/54), the SRN assessments included:</p> <ul style="list-style-type: none"> • ASDA roundabout; • A1089/A126 Interchange; • A1089/A13 Interchange; and • M25 Junction 30. <p>Response to A1.5 above relates to ASDA roundabout and A1.6 to M25 Junction 30. The remaining locations are noted in PoTLL's response to FWQ 1.18.5(b) (PoTLL/T2/EX/49) explaining HE have agreed there would be no impact at these locations (subject to agreement of traffic generation).</p>
Highways England	FWQ Responses Page 1 – 1.18.3	Highways England considers that any mitigation necessary at M25J30 as a result of the Proposed Development should be made a Requirement within the dDCO, rather than relying on any mitigation that might in due course be provided by Highways England at M25J30 as a result of LTC.	Refer to response to A1.6 above. No 'reliance' is placed on the LTC in this regard.
Highways England	FWQ Responses Page 5/6 – 1.18.6	c) HE is in discussion with the Applicant about amendments to both the Framework Travel Plan and the Sustainable Distribution Plan.	As noted in its response to FWQ 1.18.6 (d), PoTLL are in discussion with HE, TC and ECC on the content of these documents and revised versions will be submitted if necessary, once these discussions are concluded.
Thurrock Council	FWQ Responses Pages 26-28 – 1.18.10; and WR Page 7 - para 3.7	<p>a) TC's view is that there are three main areas of concern comprising</p> <p>(i) direct traffic impact on the Asda roundabout junction, which is Highway England's asset;</p> <p>(ii) the proposed Active Travel provision along the new port access road including onward links to Brennan Road; and</p> <p>(iii) the efficiency and resilience of the A1089 for planned maintenance and emergency road closures.</p>	<p>i) Refer to the Applicant's response to FWQ 1.18.10 (c) - 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>ii) Since Deadline 1 further discussions on the details of the Active Travel measures have taken place with amendments agreed to respond to the concerns of TC, with a meeting held on 14 March. At this meeting discussions included the location of the Toucan crossing and the form of the junction between St Andrews Road/Ferry Road and Link Road - it was agreed that a Toucan crossing will be placed on St Andrews Rd between the Hairpin bridge and Ferry Road but form of the St Andrews Road/Ferry Road and Link Road junction was acceptable. An updated version of this document will be submitted to the Examination once it is fully agreed.</p> <p>iii) The A1089 is and will remain part of the SRN the responsibility of HE. The effect of planned and/or emergency road closures was assessed in the TA (Document Reference: APP-072, Section 7.8), which concluded that it is an</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>b) TC is of the view that alternative mitigation measures should be advanced that do not affect the Dock Road, Tilbury and Thurrock Park Way arms of the Asda roundabout junction.</p>	<p>existing situation that will continue to occur at the same frequency regardless of the outcome of the Tilbury2 proposals. Planned maintenance only requires closure of one lane of the two lane carriageway (under existing arrangements closures are restricted to the period 22.00-05.30 hours) which does not necessitate crossovers between carriageways.</p> <p>Refer to the Applicant's response to FWQ 1.18.10 (c) - The TA demonstrates that the Tilbury2 development would not adversely affect the operation of the Local Road Network, including adjacent to Asda Roundabout (Sections 7.4 and 7.5 of the Transport Assessment (Document Reference: APP-072)).</p>
Thurrock Borough Council	LIR Page 49/50 – 7.8.4 – 7.8.8	<p>7.8.4 Core Strategy Policy PMD10: Transport Assessments and Travel Plans The application is supported by a Transport Assessment (TA) which identifies that there will be a significant increase in traffic flows as a result of the proposed Port expansion, particularly on the Asda roundabout junction and at junction 30 of the M25. The impact on junction 30 will not be commented on by TC as there is no local road network directly accessing this junction, which is within the remit of Highways England to assess and provide comment. However, comments are made in relation to impact on the Asda roundabout junction as Dock Road and Thurrock Park Way, both part of the local road network, directly access this junction. The evidence submitted identifies that the Asda roundabout junction is nearing capacity in peak periods. The increased traffic movements associated with the development proposal will likely trigger the requirement for improvement, to ensure that the network is not severely adversely affected.</p> <p>7.8.5 The proposed improvements seek to provide a lane segregation scheme on the A1089 St. Andrews Road arm of the junction, to improve lane discipline as a safety improvement. This scheme does not appear to address the capacity issues in the modelling, particularly with regard to traffic movement south from the A1089 Dock Road.</p> <p>7.8.6 The layout of the Asda roundabout junction is a five-arm roundabout, with adverse camber, with the A1089 Dock Approach Road at 12 o'clock, the London Distribution Park (Windrush Road) at 2 o'clock, Dock Road, Tilbury at 5 o'clock, A1089 St. Andrew's Road at 7 o'clock and Thurrock Park Way at 9 o'clock. The evidence of the TA identifies that the majority of traffic flow will be via the A1089 Dock Road and the A1089 St. Andrew's Road and vice versa.</p> <p>7.8.7 The traffic movement patterns of the London Distribution Park (Windrush Road), Dock Road and Thurrock Park Way identify that the traffic movements are mainly to and from the A1089 Dock Approach Road. Upon review of the TA RFCs for this junction, it is identified that the current morning peak hour flows show RFC rates that are below what the local highways authority would consider for intervention; save for the A1089 Dock Approach Road, which is at capacity and meets the criteria for intervention. When interpreting the RFC for the 2027 peak hour with the proposed development, there is a significant decrease in reserved capacity on Dock Road, which could require intervention.</p> <p>7.8.8 However, the TA suggests that drivers would "adjust their behaviour" accordingly (para. 7.4.13). This opinion is queried as it is not based on any empirical data that is provided within the TA. On this basis the proposed improvement is queried by the local highways authority and an improved junction enhancement should be investigated.</p>	<p>Refer to the Applicant's to FWQ 1.18.10 (c) - 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>
Thurrock Borough Council	LIR Page 50/51 – Paragraphs 7.8.9 – 7.8.14	<p>7.8.9 New Link Road to development proposals The proposals seek to provide a new distributor road that would run parallel to the LTS railway line into the site and includes two new junctions: one at the Fort Road railway over bridge; and another to the west, where it meets Ferry Road. The eastern access point is proposed as a priority junction with a spur road connecting this junction with Fort Road by way of a mini-roundabout junction. In general this is agreed, subject to further design work on the detail of the access arrangement and details of the railway over bridge extension being provided and agreed by the local highways authority. It is noted that Schedule 10, Part 7 of the Draft DCO comprises protective provisions for TC as local highways authority.</p>	<p>Refer to response to 1.18.10 a) ii) above</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>7.8.10 The western access is proposed as a ghosted right-turn lane, with Ferry Road as the minor arm, for access to Tilbury Port Gate 2, the London Cruise Terminal, the Tilbury-Gravesend ferry berth and other industrial sites. At the pre-submission stage, it was requested by the local highways authority that this junction be upgraded to a signalised junction, with Toucan crossing facilities, due to the traffic impact at this junction and the cycle path which crosses the road at this point.</p> <p>7.8.11 Unfortunately, at the time of writing there do not appear to have been any investigations into this suggestion which is disappointing, considering that this matter was raised before formal submission of the proposals. From the pre-submission discussions it emerged that the operation of Tilbury2 will include additional of Ro-Ro facilities to complement the existing facilities in the Port. It was identified that there will be an increase in traffic movements between the existing and proposed facilities which will generally utilise Gate 2, accessed from Ferry Road. As a result, there are likely to be a high proportion of left-turn movements into Ferry Road and right-turn movements out and it does not appear to be evidenced if this has been assessed as part of the proposals and whether a ghosted right-turn lane is appropriate.</p> <p>7.8.12 Additionally, the presence of the cycle path does raise a potential concern with safety at this junction. The applicant has stated the cycle path will help a modal shift away from private car trips, as this is a link from Tilbury railway station into the proposed development, as well as providing a facility for residents to access the riverfront from the cycle links to the east and west. It is agreed that the sensitivity test does not identify a RFC that would raise concern. However, when considering the importance of the cycle links to the riverfront and the potential routing of National Cycle Network 13 along this route, a case could be justified for the upgrading of this junction to a signalised junction.</p> <p>7.8.13 Furthermore, the applicant is proposing to install a Toucan Crossing to the west of this junction (Active Travel – Proposed Walking and Cycling Improvements). It is considered preferable to combine these two conflict points at the junction and provide a better arrangement that could improve safety at the junction and have a negligible impact on congestion in this area.</p> <p>7.8.14 Whilst the new junction of the Port access road and Ferry Road may not be contrary to Core Strategy policy PMD9 ((Road Network Hierarchy) in relation to congestion, it may not be appropriate in relation to highways safety and signalisation may be preferable.</p>	
Thurrock Borough Council	LIR Page 50 – Paragraphs 7.8.15 – 7.8.17	<p>7.8.15 Use of the A1089 for access to Tilbury2 The A1089 is the sole main access to the existing Tilbury Port and various logistics sites in Tilbury. Alternative access can only be made via local road network which is not considered suitable for any HGV movement. Currently, if there is an incident or if any planned maintenance on the SRN requires one direction or both directions to be closed, this causes significant impact on the local area and causes congestion. This potential congestion issue is not just local to Tilbury, but also impacts nearby residential conurbations, such as Chadwell St. Mary, East Tilbury/Linford and Grays.</p> <p>7.8.16 Incidentally, as part of the DP World London Gateway port development proposals (SI 2008 No. 1261: The London Gateway Port Harbour Empowerment Order), the port sought to use one means of access from the A1014 Manorway and this issue was identified. A solution was to provide maintenance crossovers at key points along the route. This system also allows for a quick deployment, so that the crossovers could be utilised in the event of a major incident. This enables the local highways authority to undertake maintenance works and maintain access to the port by introducing a contra-flow system to manage traffic flow, negating the need to divert traffic through residential areas; to the benefit of highways efficiency and amenity.</p> <p>7.8.17 On balance, it is considered that the development proposals will likely result in an increased impact at times when there is a lane closure and consideration should be made to providing maintenance cross-overs at key points along the A1089 dual carriageway to ensure that effective access along the SRN is maintained. It is accepted that this will be a matter for Highways England.</p>	Refer to response to 1.18.10 a) iii) above
Essex County Council	FWQ Responses – 1.18.3	a) To assist, the ECC request for clarification is to receive confirmation that Highways England as the responsible highways authority for the strategic road network (namely the M25 J30) are satisfied that the junction has been given due consideration and that the impact of traffic generated by Tilbury2 will either	Refer to response to HE at A1.6

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Essex County Council	FWQ Responses – 1.18.6	<p>not have an impact on the operation of the junction or that the impact can / will be mitigated.</p> <p>b) Please find below ECC's detailed comments on the Traffic Impact Assessment which need to be addressed. Please note the comments below informed ECC's Relevant Representation (RR0018):</p> <p>Section 7 Traffic Impact Assessment</p> <p>7.4 ASDA Roundabout</p> <p>Some concerns exist in relation to the operation of the ASDA roundabout, albeit that this is a Trunk Road roundabout, the modelling appears to indicate that the approach from the docks may experience congestion which may have a knock on effect on the local road network from Tilbury and ASDA. ECC acknowledges that mitigation for this junction is being developed.</p> <p>7.6 A1089/A13 Interchange (page 121)</p> <p>The assessment of the merge and diverge movements at the A1089 / A13 junction is considered adequate and it shows that movement will operate satisfactorily. We are however concerned that the impact on A13 link capacity is not considered and neither is detail of the impact at M25 Junction 30.</p> <p>7.7 A13 / M25 Junction 30 (page 116 of TA) and 6.11.10</p> <p>Operational (HGV) Routing of commercial traffic is generally based on existing port traffic distribution, it is felt that this could be further refined based upon the specific proposed port operations, Ro-Ro traffic will largely travel to/from junction 30, whereas CMAT traffic may be serving more local clients and a larger proportion may turn towards Essex. The use of the trip characteristic of the existing port and of journey to work data for employees, is a most appropriate approach.</p> <p>Impact of Lower Thames Crossing. It is noted that ECC is concerned that the impact of the proposed Lower Thames Crossing has not been covered in the transport assessment and it is not planned to do so. While the concern is understood, it needs to be considered that the Environmental Assessment and Transport Assessment for the Lower Thames Crossing is in Scoping Stage and that it may not be possible to incorporate its impact on the current Tilbury2 Transport Assessment. It falls to Lower Thames Crossing proposals to take account of Tilbury 2 as an existing development. However, based on all indications the presence of the Lower Thames Crossing would ease rather than worsen the impact on those roads that affect ECC and the county's residents and businesses. The Lower Thames Crossing may well add vitality to the Tilbury2 development, Thurrock and Southend, with positive transport impacts and little negative impacts.</p>	<p>Not part of ECC road network. Refer to the Applicant's response to FWQ 1.18.10 c) which responds to impact on local road network at ASDA roundabout.</p> <p>ECC have agreed that the Tilbury2 development would not impact on their road network. The A1089/A13 interchange is HE's road network. As set out in Section 7.6 of the Transport Assessment (Document Reference: APP-072), the merge and diverge assessments are link capacity assessments which include the A13 and connecting roads.</p> <p>Refer to response to HE at A1.6 in respect of M25 Junction 30.</p> <p>The distribution of traffic arising from Tilbury2 has been agreed with HE and TC (Document Reference: SOCG003). The methodology for the distribution was set out in the TA Scoping agreed with ECC. It was covered in the Development Traffic Profiles Technical Note which was submitted to ECC prior to the submission of the application and as noted in Response to Relevant Representations (Document Reference: PoTLL/T2/EX/32, page 92) was the basis of section 6.11 of the TA (Document Reference: APP-072).</p> <p>Please see HE's own response to FWQ 1.18.3(b) which confirms LTC will consider the cumulative impact of Tilbury2.</p>
Mick Lewis	WR – Whole Rep	The proposed link road is going to run very close to the rear of my property and although there is mention of sound barriers, estimates of number of vehicles and pollution none of this takes into account the possible link to the new crossing, which would have a huge effect to the numbers. With everything that is being proposed by Forth Ports, the new crossing and now RWE wanting to build a new power station I think our houses will be devalued and it will be not an ideal place to live for a number of residents. Maybe the position of the road if linked to the crossing should be assessed again and a route through the ports already owned land be considered to take it further away from residents.	Refers to "crossing" which is assumed to be LTC. See HE response to FWQ 1.18.3(b). It will be for the LTC scheme to assess the cumulative impacts of any T2 with LTC.
Colin Elliot	WR – Page 2 second and third sentences	"I am also concerned as to where traffic along the proposed route will be diverted if at all if there is an accident or incident on the A1089 or any other part of the road as I can not see suitable alternative routes other than through Tilbury Town or through the narrow roads through to West Tilbury and Chadwell St Mary and Linford."	The proposed link road will connect with Fort Road which will remain open to traffic. Fort Road would in an emergency provide an alternative route should the link road become impassable. During an incident as with existing roads the Police would manage traffic and as at present would liaise with Port Authority Police to minimise disruption.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Kent County Council	WR - Page 2 second and third paragraphs	KCC notes that PoTLL states that the Tilbury2 proposals will include sufficient areas within its boundary to accommodate parking of all vehicles associated with its operation. KCC awaits further discussion with PoTLL on this matter. KCC does request that the applicant sets out the increase in daily and peak hour numbers of car/HGV trips on the KCC highway network. This request is to enable KCC to fully understand the impact of the proposals on the local highway network and to establish whether any further mitigation measures are required.	The General Arrangement drawings (Document Reference: APP-008) illustrate that the operational areas for the CMAT and Ro-Ro are circa 16 Ha and circa 26Ha respectively. The operational areas will be designed to cater for the required number of HGV's arriving at the Port and will provide ample areas to be used for parking. Since receipt of the WR, PoTLL have been in contact with KCC and are preparing further information to respond to their request.
Thurrock Borough Council	SCISH Written Summary of Oral Representations Provided at the Issue Specific Hearing on the Draft Development Consent Order Q20, Q75 and Q88	Thurrock Council has not agreed to the classification of roads although initial discussions including with Highways England indicated that it was likely that the adoption of the new road would fall under the jurisdiction of Thurrock Council The Council has not yet agreed Schedule 8 as more detail is required. It is not clear how the proposed restrictions link into the existing restrictions and how the speed limits will be set. Details of street lighting have not been provided so it is not possible to set out which limits will be by Order and those by designate of street lighting. The Council also do not favour clearway restrictions as it is unable to enforce them.	The Applicant and Thurrock Council are discussing all of these issues and hope to have reached an agreed position by Deadline 3. .
Thurrock Borough Council	SCISH Written Summary of Oral Representations Provided at the Issue Specific Hearing on the Draft Development Consent Order Q76	The Council has not yet agreed Schedule 4 as there are still some questions over the diversion of the footpath. The Council has suggested that instead of a Toucan crossing a signalised junction including pedestrian and cycle facilities could be located at the junction of Fort Road and the new port road	Following the meeting with TC on 14 th March referred to above, it was agreed that a Toucan crossing will be placed on St Andrews Rd between the Hairpin bridge and Ferry Road but form of the St Andrews Road/Ferry Road and Link Road junction was acceptable. This will be dealt with as part of the update of the Active Travel Study to be submitted at Deadline 3.
Thurrock Borough Council	LIR 7.8.18 - 7.8.19	7.8.18 The public realm and sustainable transport proposals in principle align with TC's aims in this area and will assist with commuter and leisure route access to the riverside and improving walking and cycling links for the National Cycle Network and Thames trail links to Leigh-on-Sea. The proposals seek to close public footpath no.144 over the railway line; currently an at-grade facility with no pedestrian control mechanism. The proposals will stop this access up, as the new railway line will make this crossing significantly worse in terms of safety and security of the railway line. 7.8.19 In principle, the stopping up of public footpath no. 144 across the railway line is supported as part of this proposal. However, it should be progressed by diverting the public footpath so that it is re-aligned along the hairpin bridge crossing and the Fort Road over bridge	Any strategic cycle signing will be implemented as part of the Active Travel Strategy and therefore not presented under the DCO. It is not clear what is meant by the suggestion at paragraph 7.8.19, however we would note that the proposal here would involve the use of footways on existing/new public highway and so would not be a diversion of a public right of way. Pedestrian provision continues to be discussed as part of the Active Travel Study discussions, and will be considered by Thurrock Council on the infrastructure corridor within the Order limits pursuant to their DCO protective provisions.
Thurrock Borough Council	LIR 7.8.20 - 7.8.21	Toucan Crossing 7.8.20 This element of the proposals may not accord with Core Strategy policy PMD2 (Design and Layout), which states at (v. Accessibility) that development proposals must allow easy and safe access for all members of the community. As noted above, the location of this proposed crossing facility is in an isolated location. At the pre-submission discussions, this facility was debated and the local highways authority considered that it would be better located at the new Ferry Road/Tilbury 2 access road junction. 7.8.21 This suggested revised location would accord with Core Strategy policy PMD9, (Road Network Hierarchy) which refers to access on the road network and the suggested combination of two conflict points onto the network, would have a positive contribution to road safety and congestion. As such the cycle path from the hairpin bridge could be located on the northern side of the carriageway to the Ferry Road junction and then a signalised junction, with a Toucan Crossing phase included, could be installed. This would also remove the need for the cycle path that runs behind a drainage swale, along the current alignment of Ferry Road and provide a secure route to Tilbury Gate 2 and cruise terminal and link to the proposed cycle path on the south side of the new port access road to the east	Refer to response to SCISH Q76 above in relation to the toucan crossing location. The extent of footway and location of the cycle path is currently being discussed with TC as part of the Active Travel Study discussions. The proposed revised position is indicated on ATS drawing addendum...
Thurrock Borough Council	LIR 7.8.22 - 7.8.23	7.8.22 The proposed improvement to the footpath is queried. The local highways authority advised the applicant in pre-submission discussions that the Environment Agency may object to any works on the seaward side of the flood defence, as this may reduce flood capacity. In addition, it is not clear whether	PoTLL has agreed with Thurrock that further consideration would be given to the detail of the riverside improvement and these would be discussed with the Environment Agency (EA). The EAs Thames Estuary 2100 team has stated

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>the proposed resurfacing scheme will locate the footpath above the high water level, so that it can be utilised at any time.</p> <p>7.8.23 It is suggested that further investigation and clarification is required alongside review by the Environment Agency of this element of the proposals. Presubmission discussions with the applicant also raised the issue of whether a pontoon bridge could be investigated, to potentially remove any Environment Agency objection and to ensure that the route could be used at all times. Whilst this may be expensive to construct, it is likely that a facility of this nature would better enhance the leisure route between the two historic areas of Tilbury Fort and Coalhouse Fort. Officers are in dialogue with PoTLL regarding technical issues related to such a proposal given potential environmental and technical matters including a proposing a structure in proximity to the existing flood defence.</p>	<p>that this type of scheme would link to one of their shared aspirations to enhance public access to the estuary as a whole.</p> <p>During a meeting held with Thurrock on 14th March 2018 it was accepted by Thurrock that the suggestion of a 'pontoon' was unlikely to be technically or operationally feasible given the likely negative interaction with existing flood defences that would be caused and risks to adjacent ecology.</p>
Thurrock Borough Council	LIR 7.8.24	<p>The plans show a shared pedestrian / cycle surface along the re-aligned Fort Road to the railway over bridge, but stops short of the existing bridge location. No details of how a shared surface facility could be advanced past this point are provided. The applicant is encouraged to provide a shared facility to a likely connection point, such as the Brennan Road junction otherwise, the scheme will provide facilities with no onward connections; thus reducing its usefulness in terms of a cycling strategy. This element of the scheme could be expanded to include a link to Brennan Road junction with Fort Road; particularly considering TC's aspirations to extend National Cycle Network route 13 to Fort Road, via Brennan Road</p>	<p>This issue is being discussed between the parties as part of the Active Travel Study discussions referred to above with the aim of submitting an agreed position by Deadline 3.</p>

1.19. WATER QUALITY, FLOOD RISK AND WATER FRAMEWORK DIRECTIVE

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
Highways England	WR a1.8	In addition the Applicant has not completed the design of drainage and flood risk assessments to a stage where Highways England can be satisfied that the Proposed Development would not result in severe harm to the safe and efficient operation of the Strategic Road Network	Based on the preliminary design there will be a positive impact on the residual risk of flooding from a future tidal breach at the Tilbury2 site. There is a modelled decrease in the residual risk to the SRN when comparing the baseline to the proposed development scenario. The level of reduction is between 0.1 – 0.25m for the modelled breach flood events as shown in Appendix C of the FRA addendum. Further details providing an indication of flood depths close to the SRN for reference are included in Section 4 of the Level 3 FRA Addendum. The FRA addendum was submitted at Deadline 1 (PoTLL/T2/EX/46). No changes are proposed to the existing SRN drainage.
Environment Agency	WR Section 4	<u>Flood Risk On Site</u> 4.2 We have reviewed the submitted Level 3 flood risk assessment (FRA), by AECOM, referenced 6.2 16.B and dated 03.10.2017, and consider it does not comply with the requirements set out in the Planning Practice Guidance, Flood Risk and Coastal Change, Reference ID: 7-030-20140306. It does not, therefore, provide a suitable basis for assessment to be made of the flood risks arising from the proposed development. 4.3 Whilst the comments included in the following section relate to our current position, we did receive an addendum Flood Risk Assessment from the developers on 15 March 2018. Due to the late submission of this document and the complex information it contains, it has not been possible to provide an update on flood risk to meet this submission deadline. We will review the submitted addendum Flood Risk Assessment and be in the position to submit further comments in relation to flood risk in the near future. 4.7 We have had discussions with the applicant and they have confirmed that they will obtain the new flood levels and breach guidance and will undertake a comparison with the current modelling. This information was sent to the applicant during January 2018. They have stated they will remodel if they consider the new information would result in higher breach flood levels, or will provide a comparison table to demonstrate why they consider the new information will not result in higher breach flood levels. This approach has been agreed through the statement of common ground.	A comparison table to demonstrate that the new information will not result in higher breach flood levels than those reported in the Level 3 FRA (Document Reference APP-087) has been included in the FRA addendum submitted at Deadline 1. This approach was agreed in Section 4.4 of the SoCG between the Application and the Environment Agency. A teleconference was held with the Environment Agency on 29 th March 2019 and although they were unable to comment in detail on the FRA addendum it was indicated that it appeared that the addendum appears to have addressed their concerns. The Applicant and the EA will continue discussions on this matter and record the outcome in a SoCG to be submitted at Deadline 3.
Environment Agency	WR Section 5	5.1 Section 6.2 of the FRA states that it is recommended that the proposed new culverts for the Chadwell Cross Sewer and East Tilbury Dock Sewer will be 'suitably sized, so they can accommodate peak flows, including allowances for climate change in accordance with our latest guidance'. However Section 3.3.1 on climate change states that the FRA will not undertake any fluvial modelling of the existing surface water drainage network as there is no history of fluvial flooding in the area for development, and that reference has therefore been made to the Tilbury Integrated Flood Strategy. Therefore it is unclear how the culverts will impact on flood risk. 5.2 The applicant will need to provide cross sections of both the existing and proposed culverts to show that they are using the largest possible diameter of culverts that will fit the watercourse. There should be no reduction in the size of the culverts to ensure that the capacity to carry peak flow is maintained and where possible enhanced. Further the applicant will need to show where water will flow if capacity is exceeded or if the culvert becomes blocked. They need to clearly show that the proposed culverts will not increase flood risk to people and property both on and off the development site 5.3 Since the submission of the DCO application we have discussed this issue with the applicants. These discussions will continue with a view to resolving this issue. If the applicant is unable to demonstrate that the proposed culverts would not increase the risk of flooding, they may need to undertake modelling so that the 1% (1 in 100 chance) annual probability flood flows (including 35% climate change allowances) are determined and the culverts are sized to contain the required flows as stated in the FRA. 5.4 We had discussions with the applicants, where they suggested that the culverts should be sized to be no smaller than existing culverts on the watercourses. We informed them that the culverts should be the largest size that can be accommodated within the watercourse, as an existing inadequately sized culvert should not be used as a reason to allow further inadequately sized culverts, as they can increase	An illustrative design of the proposed culverts is included in Appendix B of the FRA addendum submitted at Deadline 1. This has been discussed with the Environment Agency (telecon 29 th March 2018) and PoTLL have agreed to provide further clarification regarding the proposed design approach. Please also refer to section 4.5.4 of the SoCG (PoTLL/T2/EX/54) and the Applicant's response to FWQ 1.19.8 (PoTLL/T2/EX/49) which deal with this issue.

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		the risk of blockage as well as reducing the usual capacity of the watercourse and so increasing offsite flood risk. Also since runoff may enter the watercourse between the inadequately sized culvert and the proposed culvert, the inadequately sized culvert should not act as justification for further similar sized culverts downstream. We also reiterated that the FRA should show the location of exceedence flow paths should there be a blockage of the culvert, and demonstrate that the exceedence flows would not increase flood risk to property. If this cannot be demonstrated then the proposed culvert should be modelled. We are willing to review any plans related to the culverts as they are produced.	
Environment Agency	WR Section 6.1-6.5	Flood risk to the development and Flood Emergency Plans 6.4 The FRA should specifically state the proposed finished floor level for each building, and so specify whether they will be raised above the flood levels or whether the alternative measures of flood resistant/resilient construction will be used, detailing what measures will be implemented within each building, and the resulting flood depths within each building. The FRA should not contain alternatives, but should detail exactly what is proposed for each building. The Planning Inspectorate will need to determine whether the specific proposed measures are acceptable to manage and mitigate residual breach flood risk to the development. 6.5 The FRA should provide details of where the refuge will be located, what it will contain, and its finished floor level. The examining authority will need to be satisfied that the Flood Emergency Plan is sufficient. Whilst we will review the recently submitted addendum FRA and comment on issues of flood risk management, the local authority emergency planners are the competent body on matters of evacuation and rescue. The examining authority may wish to contact the emergency planners in order to clarify the suitability of the flood emergency plan	Please refer to the Applicant's response to FWQ 1.19.9 and 1.19.10 and the FRA Addendum. A teleconference was held with the Environment Agency on 29 th March 2019 and although they were unable to comment in detail on the FRA addendum it was indicated that it appeared that the addendum appears to have addressed their concerns. The Applicant and the EA will continue discussions on this matter and record the outcome in a SoCG to be submitted at Deadline 3.
	Section 6.7	6.7 The retaining wall of the East Dock Sewer, where the road corridor meets the existing road infrastructure at the western extent of the site boundary, is a third-party asset that will need to be repaired/refurbished/replaced in order to permit the required highway works for the development, but also to allow us to safely exercise our permissive powers to restore an appropriate bed level to the watercourse and undertake intermittent maintenance activities to ensure a uniform bed level to aid conveyance. These works will need to be included within the environmental permit applications for the works to the main rivers in order for us to issue a future environmental permit (or consent under the protective provisions).	Please refer to the Applicant's response to FWQ 1.19.12
	Section 7.1-7.2	7.1 The application proposes to construction a link bridge over existing flood defences. The design will need to allow for sufficient space for future maintenance and upgrades of the defences, ensuring they continue to provide sufficient protection to the site. In addition three crossings of main rivers on the site are proposed and as already stated there are plans to culvert and re-route rivers to enable the development of the infrastructure corridor. 7.2 Whilst some pre-application discussions have taken place with regards to the works proposed for the flood defences, we are yet to receive detailed plans. Following these discussions we understand that the design will need to consider the feasibility of the port's operations, but the applicant will need to demonstrate how protection will be maintained for the site and show how access will be maintained to allow us to carry out maintenance to the defences under our permissive powers. The defences will need to be raised to a future height of 8MAOD.	Please refer to the Applicant's response to FWQ 1.19.14 and 1.19.8
Environment Agency	WR 9.1	The construction of the development and dredging works will need to demonstrate compliance with the Water Framework Directive (WFD). Priority and priority hazardous (WFD) substances are not set down in scoping or impact assessment matrices and appear to be missed off the initial scoping assessment. Some broad term reference to the treatment of these chemicals is included within the impact assessment sections with the inference being they will not leave the sediment and thus levels of transfer to water are largely assumed to be minimal.	A specific assessment of priority substances and priority hazardous substances was not included in the scoping or impact assessment since the scheme does not include the release of chemicals and a mixing zone like a discharge pipeline or industrial outfall ^{13, 14} . Given the difficulty to assess the exact transfer coefficient for each chemical contained in sediments towards the water column, the assessment for priority and priority hazardous substances is normally limited to those projects which have an industrial outfall where the release of chemicals can be quantified. As the EA rightly noted, the potential increase in chemical concentrations in water locally, and in the waterbody as a whole (for classification purposes)

¹³ <https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters>
¹⁴ <https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			can be difficult to predict in relation to meeting or exceeding the Environmental Quality Standards for each chemical. As there are both short-term (maximum allowable concentration) and long term (annual average concentration) standards to comply with, the impact upon a waterbody of a discreet, temporary duration activity such as a dispersive dredge is difficult to assess objectively and requires in-depth understanding of the behaviour and fate of each chemical within the waterbody under study.
Environment Agency	WR 9.7	The WFD assessment is satisfactory from a terrestrial habitat perspective. Natural channel design is to be specified, and designs of diverted ditches will need to be provided before the application is determined. This approach has been agreed through the statement of common ground (section – 5.). Compensation is provided matching watercourse length and number of ponds, but ideally enhancements should be sought for a development of this scale with greater length of watercourse and number of ponds established. The design of watercourses and ponds should also be exemplary and provide better habitats than those destroyed to aid with offsetting. This approach is agreed in the statement of common ground (section - 5). With regards to the proposed culverts, mitigation measures are proposed and these are acceptable. We require further detail on fish passage measures, the applicant should consider the use of flaps which don't restrict fish and eel passage in the same way as other sluice designs. We are willing to comment on any plans regarding eel passages as plans become available	<p>Pincocks Trough 'main river'. We have specified that the realigned existing ditches will be undertaken using natural channel design and this is detailed in the Statement of Common Ground with the Environment Agency. The details will be agreed within the detailed design phases of the project pursuant to the Environment Agency's protective provisions, but it is anticipated that this can be undertaken by incorporating a low flow channel in a wider one to ensure habitat diversity is enhanced.</p> <p>'Wildlife ditch' creation. The watercourses for the on-site ecological mitigation area (i.e. the concentric rings of ditches) have been designed to be suitable for wildlife, and specifically for water voles. For more information, please refer to the Applicant's response to FWQ 1.2.17 and 1.2.20, and to the information submitted to Thurrock Council in respect of planning application reference 18/00448/FUL (submission documents include illustrative ditch profiles and written details of how the design has been optimised for water voles). The design of the ponds in this area will also be developed specifically to provide wildlife habitat, in line with available best practice guidance.</p> <p>As set out in the Applicant's response to FWQ 1.2.20, additional ditches would be constructed within the infrastructure corridor to provide further water vole habitat, for which details will be developed during the detailed design phase. However, design profiles are anticipated to be broadly similar to those within the on-site ecological mitigation area, i.e. channel depth sufficient to hold water all year, and banks steep sided to deter terrestrial predators.</p> <p>Compensation. As set out at para 1.266-1.267 of the WFD assessment (Document Reference 6.2, 16C [APP-088]) and reproduced in the Applicant's tabulated response to FWQ 1.2.10, the calculated ditch loss of 4,567m (which includes 3,015m wet/seasonal ditches and 1,642m dry ditches) will be replaced by 5,614m of new ditches (of which 3,922m will be wet and 1,622m dry). This represents a habitat enhancement of net gain in watercourse length. For ponds, the quantum of existing pond area to be lost (217m²+1,932m²) will be exceeded by the replacement pond areas (876m²+1,941m²). As the larger gatehouse pond (formerly measuring 1,932m²) is becoming increasingly dry (to the point of no longer being considered a pond), the baseline has decreased such that the replacement pond provision will represent a considerable enhancement over the existing.</p> <p>Fish passage. We welcome the EA's acceptance of the culvert mitigation measures. Fish and eel passage will be retained under any watercourse crossing installed as part of the works. The Environment Agency will have the opportunity to approve the detailed design for both the culverts and the proposed Thames outfall, including any potential need for fish/eel passage measures, pursuant to their protective provisions in the DCO.</p>
Environment Agency	WR Section 11	<p>Drainage Strategy</p> <p>11.2 The Drainage Strategy also states that a new foul SPS will be constructed. We suggest the applicant discusses this proposal with RWE and their plans for waste water disposal from the new Tilbury Power station. The SPS could be sized to accommodate waste water flow from the new power station or provide ability to increase capacity at a later date</p> <p>11.3 The mitigation route map indicates that permeable pavements are being considered as part of a drainage strategy. The permeable pavements should be used as attenuation storage and treatment, and</p>	<p>Please refer to the Applicant's response to FWQ 1.19.16, 1.19.17 and 1.19.18</p> <p>In addition to the response to 1.19.18, below are some additional details regarding green roofs:-</p> <p>Details of green roof design</p> <p>This will be determined during the detailed design phase including the potential of reusing Lytag material as a substrate. A typical design includes:</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
		<p>have their bases lined where there may be an unacceptable impact to water quality via leaching of contaminants. Permeable pavements are acceptable for some forms of drainage but where pollution incidents may occur, they may be inappropriate due to not being able to isolate any pollution.</p> <p>11.4 We welcome the inclusion of green roofs into the development to assist with drainage but more detail is needed on their design and construction to show the impact these would have on the overall drainage at the site</p>	<ul style="list-style-type: none"> • a 50mm soil base and lightweight construction. • vegetation - generally limited to sedum, grasses, and mosses, but could include lichen. • minimal maintenance requirements, although an irrigation system may be required for use in dry weather as the shallow soil base could be prone to drying out during warm weather <p>Details of Construction A typical build-up of a green roof would potentially entail the use of:</p> <ul style="list-style-type: none"> • Substrate/vegetation layer and growing medium, • Filter layer, to prevent fine particles being washed into the drainage layer, • Drainage layer (water storage can be achieved using crushed gravel or reservoir board of HDPE), • Protection layer to prevent damage to waterproofing • Separation layer(waterproofing) • Structural support and • Drainage outlet and perimeter. <p>Impact of these on drainage over the site. Green roofs can be used for the initial storage of storm water runoff. Rainwater is stored in the substrate and vegetation reducing the volume of rainwater runoff from the roof which provides a more natural drainage process for storm water. This does not lead to any changes to the drainage scheme as proposed in the Drainage Strategy (Document Reference APP-090)</p>
Environment Agency	RFWQ 1.19.2 + 1.19.3	<p>Our Thames Estuary Asset Management (TEAM) 2100 programme, delivering the first 10 years of capital works to the defences in the Thames Estuary as recommended by the Thames Estuary 2100 Plan, has assessed these defences as requiring significant remedial works or replacement within 3 years.</p> <p>.....We are looking to work in partnership with beneficiaries throughout the Thames Estuary, to explore potential contribution options. Therefore, we will be seeking to work in partnership with the applicant to determine the most cost-effective means of delivering the required repairs to these assets as part of our TEAM2100 programme</p>	Please refer to the Applicant's response to 1.19.3 and 1.19.4
Environment Agency	RFWQ 1.19.23	<p><i>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 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?</i></p> <p>The assessments provided suggest that the development would suggest the development would be WFD compliant. Whilst we accept it is unlikely that extensive maintenance dredging will take place across the Thames at the same time, as mentioned in our previous response to question 1.9.3, dredging between June and August should be avoided, to maintain both water quality and safeguard fish. We are yet to see detailed plans in relation to the linkspan and would expect any scheme to show that there is no net loss of habitat or appropriate mitigation. Further information is provided in our written representations (section 8).</p> <p>We agree that with the use of appropriate requirements and mitigation the development at Tilbury should not cause a deterioration to water body status or critical habitats.</p>	<p>PoTLL has committed to the mitigations measures of excluding WID dredging during the months of June – August, and undertaking dredging during ebb tide only, which will be secured through the operation of the DML.</p> <p>The worst-case scenario for the linkspan was assessed as part of the ES. The ES assessed losses of priority mudflat habitat from piling and concluded that there would be no net 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 details of the effects from the linkspan on the relevant habitats are available in PoTLL's response to FWQ 1.11.7</p> <p>Regarding the installation of the surface water drainage outfall, 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. This would be secured through the operation of the Agency's protective provisions in respect of that outfall.</p> <p>Based on the EIA undertaken and the proposed mitigation measures, the</p>

Interested Party	Source Reference	Interested Party Comment	PoTLL Response
			proposed activities will have negligible to minor impact on the water body quality elements, and will not reduce the status of any quality elements or critical habitats, and thus, do not pose a risk for status deterioration.
Thurrock Borough Council	LIR 7.10.7 +7.10.8	<p>TC is satisfied that all elements relating to surface water flood risk have now been addressed. However, there are currently a number of outstanding points in relation to water quality, particularly with regard to the proposed Ro-Ro terminal and the access road. TC believes that it will be possible to address these concerns in relation to the access road. However the applicant's current position is that this particular element of the site should be designed to DMRB standards. The CIRIA SuDS manual addresses water quality from this type of road and requires more exacting standards which TC would like to see met if at all possible. The need for robust pollution management associated with this part of the site is heightened by the likelihood of the Ro-Ro area potentially underperforming in terms of pollution control.</p> <p>7.10.8 POTLL has undertaken a substantial review of the pollution controls available for use in the Ro-Ro area and have ruled out the majority of treatment methods as not being deliverable based on technical limitations. TC generally agree with the results of the applicant's assessment but is discussing the detail of potential feasible treatment methods with POTLL. TC understands that the applicant will be undertaking further assessment in relation to the costs of delivering such a system. Subject to the resolution of these outstanding matters, the TC is satisfied that the proposals with associated mitigation will not impact negatively on surface water drainage</p>	<p>These outstanding points relate to water quality for the RoRo terminal and the infrastructure corridor (referred to as the access road in the LIR). This is currently under discussion with the Lead Local Flood Authority (LLFA) and progress of these discussions will be reflected in future updates of the SoCG. The LLFA has been provided with explanatory information in relation to drainage (27th March 2018) which is summarised below:</p> <p>Infrastructure corridor It was agreed that further investigation would be undertaken by PoTLL to further mitigate the impact on water quality from the Tilbury 2 infrastructure corridor using guidance from the CIRIA 753 SuDS Manual. The existing design is compliant with DMRB, however if further mitigation is required to comply with CIRIA 753, then additional Micro Pollutant Filters could be provided. This would need to be agreed with the local highways authority pursuant to their highways protective provisions, as the system will be adopted as part of the adoption of the highway.</p> <p>RoRo Terminal The RoRo Area is deemed to be 'high risk' land usage. Hazardous material containers will be identified and inspected on a regular basis to identify any leaks / spills as soon as possible; if any leaks are found then a bunded trailer (or similar device) will be immediately be deployed to contain any spillages. This is secured via the OMP (Document Reference POTLL/T2/EX/41).The drainage design proposes to maintain and widen the existing ditches around the perimeter of the site. These will offer some mitigation. The RoRo pavement is also proposed to be divided into 10 subzones, which will each have an oil interceptor (which will offer mitigation against hydrocarbons and provide some capture of sediment) and pollution shut-off valves to isolate areas. This will provide a secondary line of defence to shut off the drainage system if an accidental spillage occurred. Fuelling areas will be provided with full retention oil interceptors. Permeable paving will be provided to the General Storage / Ancillary and Welfare Areas, and green roofs to the Welfare buildings. Other treatment systems outlined in CIRIA have all been considered and discounted. Sediment tanks and vortex grit separators were considered. However, even the largest unit available would result in over 30 units being required for the RoRo Terminal. It is considered impractical to divide the RoRo Terminal into so many zones, which would result in significant amounts of extra pipework and will be difficult to control any pollution incidents/maintain due to the large number of sub-zones (which would not line up with the container storage zones). The devices would also only provide marginal water quality improvements. Permeable paving was considered however this is not suitable for the port loading and heavy usage. The use of ponds/basins/wetlands are also impractical in this location due to the size that they would need to be, potentially affecting operational capacity. No other means of removing small diameter Total Suspended Solids (TSS) or Metals for such a large catchment are deemed practical. It is therefore considered that the system presented in the drainage strategy is in accordance with CIRIA 753 Water Quality as far as reasonably practicable.</p>

PLANNING ACT 2008
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)
RULES 2010

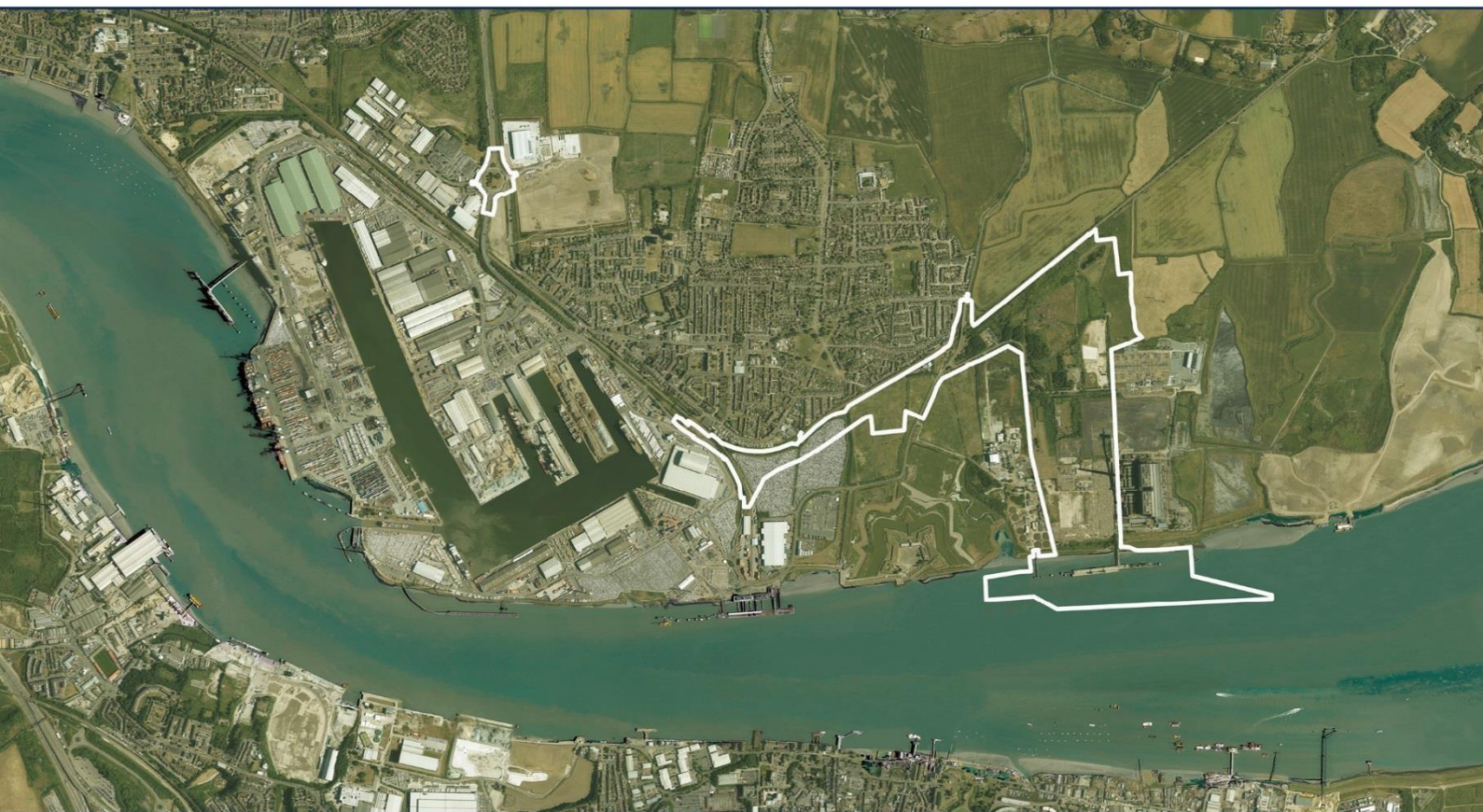
PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

TILBURY2

TR030003

APPENDIX A: EXPLANATORY INFORMATION - HEALTH ASSESSMENT

TILBURY2 DOCUMENT REF: PoTLL/T2/EX/60



Contents

Introduction	3
Health Profile	18
Discussion of Air Quality Assessments	25
Mitigation	27
Recommendations	29

INTRODUCTION

- 1.1 This report provides explanatory information that supports Chapter 8 (Health) of the Environmental Statement (ES) submitted as part of the Tilbury2 Development Consent Order (DCO) application.
- 1.2 This report is intended to direct the reader to information contained within the DCO application documents in relation to health, to describe how the health assessment was undertaken and how the conclusions were drawn. This information is provided following discussions with the Public Health Team at Thurrock Council relating to issues raised in the Council's First Written Questions (FWQ) and the Local Impact Report (LIR).

Public Consultation within the DCO Process and its role in the Health Assessment

- 1.3 Large development schemes, including Tilbury2, are classified as a Nationally Significant Infrastructure Project (NSIPs). Planning permission for an NSIP is given by the Secretary of State by what is known as a 'Development Consent Order' (DCO). The DCO sets out the powers that PoTLL is seeking to enable it to construct, operate and maintain the proposal, and sets out the parameters for what development would be permitted.

What is a Development Consent Order?

The Planning Act 2008 (as amended) ('PA 2008') defines certain types of nationally significant infrastructure projects (NSIPs) for Energy, Transport, Water, Waste Water, Waste, and Business or Commercial developments.

A statutory timetable for decision making by the Secretary of State is set out in the PA 2008 and secondary legislation. Pre application consultation is an important and a statutory part of this "frontloaded" process.

The process is managed by the Planning Inspectorate rather than the local planning authority. A Development Consent Order can confer much wider ranging powers than a planning permission including compulsory acquisition.

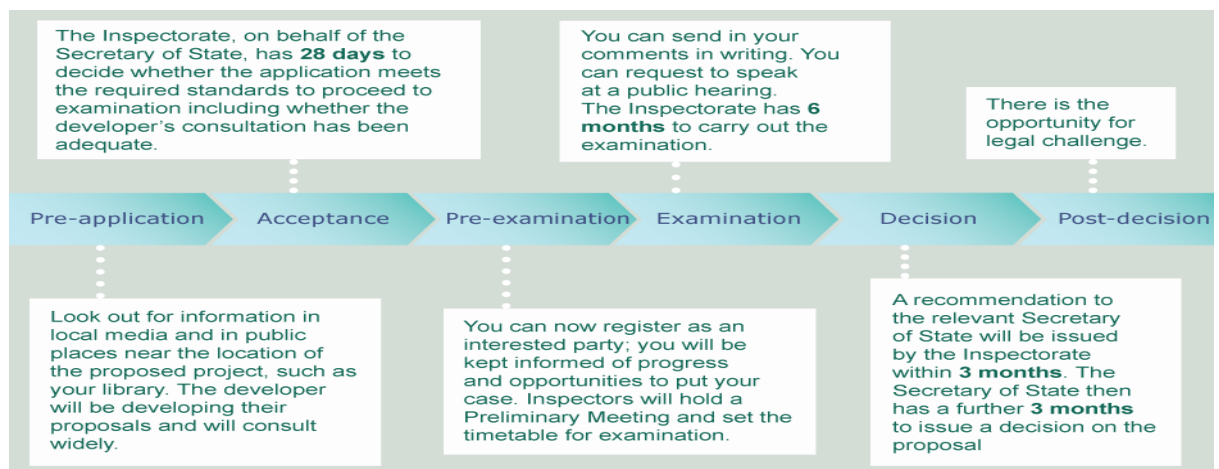
<https://infrastructure.planninginspectorate.gov.uk/>

- 1.4 A DCO requires substantial pre-application consultation, which occurs throughout the whole DCO process. In this way, engagement seeks to inform the final design and ensure that all perspectives are considered. Figure 1 below provides an overview of the DCO process. There are three main points where consultation is undertaken. Firstly, extensive consultation is undertaken when pre-application advice is sought at the very start of the process, with a range of stakeholders including the Government, Local Authorities, environment groups and affected communities. Although optional, developers are also encouraged to undertake initial 'non-statutory' consultation as soon as there is sufficient detail to allow local communities a real opportunity to influence the proposed development – this was undertaken for Tilbury2. This early engagement considers the suitability of the development, the public acceptability, and the technical compliance of the proposed scheme. Consultation seeks to inform and shape the design proposals to ensure they are acceptable in planning terms before submission, including consideration of alternatives.
- 1.5 Prior to the DCO being submitted, there is a formal statutory consultation stage. Before commencing this statutory consultation, the developer must prepare a consultation strategy known as the Statement of Community Consultation. The content of this statement is discussed and agreed with local authorities (and in the case of Tilbury2 was agreed with Thurrock, Gravesham, and Essex Councils) and the public is then notified of

where they can view the statement. The statutory consultation must then be carried out in accordance with that statement and the requirements of the PA 2008 and its associated regulations.

- 1.6 All applications must be accompanied by a Consultation Report. In this document the developer (now applicant) must show that they have complied with the statutory pre-application consultation requirements, and that they have had regard to the responses received during consultation.
- 1.7 After the DCO application has been accepted by PINS (on behalf of the Secretary of State), members of the public can register with PINS as an Interested Party, so that they can represent their own views, or those of a group, during the Examination. Those registered as an Interested Party are invited to provide more details of their views in writing, known as a Written Representation, and in person at the various hearings including issue specific hearings.
- 1.8 Careful consideration is then given to the application by the Inspector/panel of Inspectors (the latter in the case of Tilbury2) appointed by the Secretary of State through the Examination process, bearing in mind section 104 of the PA 2008, which sets out the matters that must be taken into account by the Secretary of State in making his/her decision. The Examination is a predominantly written process, supplemented by hearings and site visits. Once the panel of Inspectors has considered the application and all of the relevant comments from stakeholders, it will make a recommendation to the Secretary of State, saying whether it believes that the application should be approved or not. A decision is then made by the Secretary of State.

Figure 1: Stages of the development consent regime. Source: The Planning Inspectorate¹



- 1.9 The Scheme is an EIA development (i.e. a development for which an Environmental Impact Assessment must be carried out) under the terms of the EIA Regulations. As such an Environmental Statement (ES) was required to be submitted with the application for development consent. EIA consultation requirements have been carried out in preparation of the PoTLL DCO application.²
- 1.10 PoTLL has undertaken an extensive period of consultation over time. This included:

¹ <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/03/Application-process-diagram2.png>

² Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended)

- Scoping of EIA consultation; including initial interactions with key stakeholders, including introductions to the project and the submission of the Scoping Report to the Secretary of State.
- Non-statutory consultation between 6th March and 21st April 2017; which aimed to publicise the project to the local community, gain an understanding of issues of concern to input these concerns into the development of the proposals, and to inform the development of statutory consultation materials.
- Statutory consultation between 19th June and 28th July 2017.

1.11 The Public Health team at Thurrock Council has been engaged throughout the pre-application period when preparing the DCO application. This engagement informed the development and content of the ES Health Chapter and assisted in highlighting the existing health concerns in the local population. The Public Health team at Thurrock Council also submitted a formal response during the Statutory consultation period in Summer 2017. Some concerns were raised during this consultation and as such, individual meetings have been arranged between the consultant team and the Public Health team at Thurrock Council to discuss the submission. In response to the Council's Written Representation and subsequent meetings with the applicant, this report seeks to respond to some of the queries and issues raised.

1.12 The table below sets out all health concerns that were raised during the consultation periods. A description of the concern raised is provided, alongside the response from PoTLL to the issue raised and any further actions taken. The full responses can be found in Consultation Report (Document Reference 5.1) and supporting appendices. The table seeks to show how the health concerns have robustly and comprehensively been considered in the air quality and health assessments in the ES, which has since been accepted by PINS on behalf of the Secretary of State.

Table 1: Summary of consultation responses received in relation to health and how actioned in the health assessment

Consultation Period	Theme	Concerns Raised	Response	Action Required
Section 42; Section 47	Air Quality: Ship Emissions	Respondents questioned the environmental impacts of emissions (particularly sulphur) arising from ships utilising the new port facilities – both when stationary and when moving.	Sulphur content of fuels used by ships is regulated by the Merchant Shipping Regulations 2008. As is set out in the Air Quality Chapter of the ES (document reference 6.1), the number of additional shipping movements has been evaluated in line with DEFRA guidance. This considers the size and type of ships and distance of the RoRo berth and shipping channel to sensitive receptors. As there is no relevant exposure, there is no requirement for detailed modelling either of stationary or moving ships and the impact can be determined as not significant. The SoS agreed with this conclusion in the Scoping Opinion	No change - concern already addressed.
Section 42; Section 47	Air Quality: Dust	Respondents were concerned about the impacts of dust emissions from operation of Tilbury2, particularly the CMAT facilities and conveyor belts. Respondents sought confirmation that dust controls will be used, and that dust impacts will not be constant.	As is set out in the Air Quality Chapter of the ES (document reference 6.1), an assessment of dust emissions during operation of Tilbury2 has been undertaken. The assessment has followed Institute of Air Quality Management (IAQM) guidance. The Air Quality Chapter also describes the mitigation measures that will be used to control operational dust emissions. These will be introduced either as a result of the environmental permitting regime, or are included within the Operational Management Plan (OMP) facilities. This plan includes a mechanism for recording and responding to complaints.	No change - concern already addressed. Dust is included in the assessment. An Operational Management Plan will be developed to ensure that any dust impacts are mitigated.

Section 47	Air Quality: HGVs	Respondents were concerned about dust emissions and pollution arising from lorries (including emissions arising from their exhausts).	The ES Air Quality Chapter (document 6.1) describes the assessments of dust and exhaust emissions from heavy goods vehicles (HGVs) during construction and operation of Tilbury2. The ES also describes the mitigation measures that will be used to control dust and exhaust emissions. These will be implemented as a result of compliance within the CEMP (document reference 6.9) and OMP (document reference 6.10).	No change - concern already addressed. Dust is included in the assessment. An Operational Management Plan will be developed to ensure that any dust impacts are mitigated.
Section 47	Air Quality: Traffic Infrastructure Corridor	Respondents set out that they were worried about air pollution arising from traffic using the proposed infrastructure corridor.	The ES Air Quality Chapter (document 6.1) contains a combined assessment of road vehicle and rail freight emissions, using a reasonably likely worst case assumptions, for operation of Tilbury2. The assessment considers the future concentrations of pollutants at sensitive receptors and compares these to the national air quality objectives. The receptors closest to the infrastructure corridor were selected to give a robust answer. The assessment of operational traffic emissions has found no exceedances of air quality objectives and there are slight to negligible impacts at all but one receptor.	No change - concern already addressed. Assessment included in the ES
Section 47	Air quality: RoRo Terminal	A concern was raised about emissions arising from operation of the RoRo terminal.	The additional shipping movements have been evaluated in line with DEFRA guidance, which considers the size of ship and distance of the RoRo berth to sensitive receptors. This concluded no requirement for detailed modelling as the potential for significant impacts is low. The SoS agreed with this conclusion in the Scoping Opinion. Dust emissions from unloading have been assessed in line with IAQM guidance and	No change - concern already addressed. Emissions from the RoRo terminal have been assessed. An Operational Management Plan will be developed to

			suitable mitigation has been included in the OMP.	ensure that any dust impacts are mitigated.
Section 47	Health: Air Quality	A number of concerns were raised that Tilbury2 will affect Air Quality in the local residential area which is already perceived as bad, leading to negative health impacts, particularly to children, asthma and COPD sufferers (such as through silica dust).	The ES Air Quality Chapter (document 6.1) contains an assessment of transport emissions during operation of Tilbury2. The assessment considers the presence of existing air quality management areas, the future concentrations of pollutants when Tilbury2 will be operational and compares the assessment findings to the national air quality objectives.	No change - concern already addressed. In undertaking the air quality assessment, the location of the most sensitive receptors was considered, including local schools. Mitigation measures have been developed and form part of the Operational Management Plan, compliance with which is secured by the DCO.
Section 47	Socio-Economic: Air Quality	Respondents queried what would be done to protect properties from Air Quality pollution and dust, and ensure a good standard of living.	As is set out in the Air Quality Chapter of the ES (document reference 6.1), there will be a number of controls on dust emissions both during construction and operation. These will be introduced either as a result of the environmental permitting regime, or as a result of compliance with the CEMP (document reference 6.9) in construction and the OMP (document reference 6.10). The CEMP and OMP require monitoring to be undertaken to check for any unacceptable dust deposition beyond the site boundary.	No change - concern already addressed. Dust included in the assessment and an Operational Management Plan will be developed to ensure that any dust impacts are mitigated. Ongoing monitoring.

Section 42; Section 47	Amenities: Other footpaths, cycleways and cycle tracks	Respondents were concerned that existing footpaths and cycle tracks should not suffer and should be improved, maintained, and be as safe as possible; ensuring they are not used for other uses such as lorry parking, and that any new paths should be sufficiently wide, especially to avoid risks from HGVs, and have sufficient waymarking	The proposed S106 Agreement with Thurrock Council (document reference 5.4) includes an Active Travel Strategy which comprises a package of measures to improve access to the river, the Two Forts Way itself and footpaths/cycleways in the vicinity generally. Those measures of that strategy that fall within the Order limits have been incorporated within the proposals sought to be consented through the DCO, and will be 'signed off' by Thurrock pursuant to the protective provisions for their benefit in the DCO. The Tilbury2 proposals include sufficient space for HGV parking which should help to prevent parking outside of the site.	No change - concern already addressed. Provided for in S106 agreement and DCO.
Section 47	Amenities: Green Space	Concerns were raised by respondents about the impact on green areas of land that would be affected by the Tilbury2 proposals.	There will be some loss of undeveloped land in the infrastructure corridor. Common land affected by the infrastructure corridor is to be re-provided, and the infrastructure corridor design includes landscaping and ecological mitigation, as shown illustratively on the General Arrangement Plans (document reference 2.2).	No change - concern already addressed. Inclusion of infrastructure corridor mitigation areas and the provision of replacement common land within the proposals. Access to green space is included as one of the health determinants in the health assessment.
Section 47	Amenities: Local Services	A respondent suggested that more local services (housing, hospitals) etc would be	The health assessment considers health impacts associated with access to housing and other services. Table 8.11 summarises that the health assessment identified	No change - concern already addressed.

		needed to meet the needs of locally sourced labour.	negligible effects on housing provision and access to services during construction and operation. The provision of some local services such as housing and hospitals are the responsibility of the local council. This is not within the scope of these proposals, nor would they be considered appropriate for a section 106 agreement.	Access to housing and services are included as one of the health determinants in the health assessment.
Section 42; Section 47	Socio-Economics: Nature of jobs	Respondents were concerned that jobs should be high quality, and go to local people.	The socio-economic assessment identifies predicted effects on employment, setting out anticipated jobs that can be sourced from the local labour market. These include temporary jobs during the construction phase and permanent jobs throughout the operational phase. A skills and employment strategy to be agreed by Thurrock Council forms part of the DCO application and will be secured through the section 106 agreement.	No change - concern already addressed. The health assessment uses the socio-economic assessment to consider the health impact of employment and training associated with Tilbury2 on the local population. An Employment and Skills Strategy has been developed in consultation with Thurrock Council.
Section 42	Socio-Economics: Interaction with Local Economy	Thurrock Council suggested that the socio-economic and health facilities information in the PEIR needs to be updated, and that more focus should be on how the proposals could support and build upon existing initiatives to support employment and	Paragraph 7.83 of the ES states that proposals for Tilbury2 are expected to build upon existing initiatives, current partnership working across a range of sectors and link up with existing community funds to overcome barriers to employment in Tilbury. POTLL have existing links with the local community in supporting a number of training programmes, notably the Logistics Academy,	No change - concern already addressed. The health assessment uses the socio-economic assessment to consider the health impact of employment

		skills for local people, linking with the community, training providers, skills and economic growth teams. Essex County Council also wanted more information on the wider impacts to employment from the proposals.	and a relationship with the Gateway Academy School. It is expected that these links could be built upon as part of the Tilbury2 proposal to support further opportunities for local people. Furthermore an Employment and Skills Strategy has been developed, which is secured by the section 106 agreement with Thurrock Council.	and training associated with Tilbury2 on the local population. An Employment and Skills Strategy has been developed.
Section 47	Health: Quality of life	Respondents were concerned that both the proposed port and the proposed infrastructure corridor would affect quality of life due to air, noise and visual impacts of the project.	The health assessment undertaken as part of the application has specifically considered health and quality of life impacts of the proposal on air quality, noise and the visual quality of the neighbourhood, and is set out in the ES (document reference 6.1). This has concluded that the proposals could have a negligible to moderate effect on health in respect of noise and an negligible/minor effect on health in respect of visual impacts, which has been assessed as part of neighbourhood quality. The impact on air quality was concluded to be negligible/minor. A range of mitigation measures has also been proposed as part of this assessment, and are set out in the ES chapter.	No change - concern already addressed. The health assessment, which forms part of the ES for the Tilbury2 ES, considers each of these issues with respect to their effects on quality of life.
Section 47	Health: Quality of Life	To avoid prolonged impacts, a respondent suggested that the project should be built as briskly as possible.	The Health Impact Assessment details health impacts specifically associated with the construction of the proposal, based on a construction period of 1 year (Q1 2019-Q1 2020). Construction will take place 7 days a week during this period. Therefore, the construction period has been minimised. The Construction Environmental Management Plan (document reference 6.9)	No change - concern already addressed. The proposals include measures to minimise the construction period.

			sets out mitigation measures in respect of noise during construction.	
Section 47	Health: Pollution	Respondents were concerned that the infrastructure corridor will bring increased pollution.	The noise and air quality related health impacts of the operation of the infrastructure corridor have been considered in the Health Impact Assessment. The Health Impact Assessment suggests that the noise effects of the infrastructure corridor would be negligible: this rating is made by evaluating the noise levels against established guidelines/standards and takes into account the provision of noise barriers on the infrastructure corridor. The effect of the infrastructure corridor on air quality was evaluated as negligible/minor based on annual mean concentrations of NO2.	<p>No change - concern already addressed.</p> <p>The Health Impact Assessment for the Tilbury2 proposals set out that there will not be a significant impact of pollution on quality of life as a result of the Tilbury2 proposals, following the mitigation measures developed as part of the CEMP and OMP.</p>
Section 47	Health: Waste	A respondent was concerned that the project could lead to discharge of health damaging waste materials such as liquid or solid substances.		<p>No change - concern already addressed.</p> <p>Potential contaminated land risks in relation to the development have been assessed in the Hydrogeology & Ground Conditions chapter of the Environmental Statement. With the adoption of the proposed mitigation measures, negligible effects are generally</p>

				predicted during the construction phase and negligible or minor beneficial effects (associated with the removal / mitigation of any on-site contamination sources) are anticipated.
Section 42	Health: NHS	NHS England made clear their view that health impacts would need to be mitigated. They also specifically suggested that PoTLL should give a contribution towards the planned integrated health centre in Tilbury.	Mitigation has been proposed to address the health impacts identified in the Health Impact Assessment, as set out in the ES (document reference 6.1). No residual health impacts have been identified as part of the Health Impact Assessment undertaken for the scheme. The Integrated Healthy Living Centre is planned to open in Tilbury in 2019. The Socio-economic Assessment has estimated that Tilbury2 will support 57 local jobs during construction and 138 jobs locally during operation. These are evaluated as moderate increases in employment in the socio-economic assessment, that would not impact significantly on demand for the Integrated Healthy Living Centre, which is designed to accommodate a significant increase in population by 2025 or 2030 of an additional 1,000 new homes in Tilbury: an estimated population increase of 2,650 individuals. PoTLL therefore does not consider that a funding contribution is appropriate in this regard.	None required.
Section 47	Location Elements of the Proposal:	Respondents queried the location of the infrastructure	The Masterplanning Statement and its appendices Document reference: 6.2 5.A)	None. The DCO application explains

	Infrastructure Corridor	corridor, and suggested it is too close to housing and uses green land.	explain the detailed alignment optioneering that has taken place for the infrastructure corridor, taking account of environmental and engineering considerations, and explaining why it has been taken forward rather than upgrading Fort Road.	the reasons for the location of the infrastructure corridor.
Section 47	Noise: Working Hours	Concerns were raised by respondents about the potential for operations being 24/7 and 365 days a year, and that this would cause a constant supply of noise.	Tilbury2 will need to be operational 24/7 to facilitate vessels. This is the same as the main Tilbury1 Port, Purfleet and London Gateway.	No change - concern already addressed. Health effects associated with 24/7 365 days a year operation have been assumed in the health assessment, where relevant.
Section 47	Noise: Noise from Construction	Respondents were concerned about the noise impacts to local properties from the construction phase.	A construction noise assessment has been undertaken and the results are presented in the ES. The construction activities will result in temporary, direct, adverse effects at receptors in Tilbury overlooking the proposed road and rail link. As a result, a package of measures has been included within the Construction Environmental Management Plan to mitigate against these effects. The impacts due to construction noise are considered temporary and further mitigated by the CEMP and therefore are not significant.	No change - concern already addressed. A construction noise assessment is included within the ES, and noise as a determinant of health is included in the Health Assessment. Mitigation measures are included within the Construction Environmental Management Plan.

Section 42, Section 47	Noise: Noise from Operation of Port Facilities	Respondents were concerned about noise impacts to properties arising from operation of the port facilities, such as the dropping of materials.	An operational noise assessment has been undertaken using plant noise levels measured at Tilbury to inform the Tilbury2 noise assessment and the results are presented in the ES. This has identified that there will be noise impacts from the operation of the port facilities on nearby noise sensitive locations. As such a number of mitigation measures have been included within the Operational Management Plan, as well as a requirement for a monitoring and mitigation scheme to be developed (pursuant to a requirement in the DCO) further to detailed design of the proposals to provide at-receptor mitigation at locations where this becomes necessary.	<p>No change - concern already addressed.</p> <p>An operational noise assessment is included within the ES, and noise as a determinant of health is included in the Health Assessment. A package of mitigation measures forms part of the DCO application.</p>
Section 42, Section 47	Visual Impact: Views from Properties	Respondents were concerned that views from their homes to green fields, the river and the Fort would be disrupted and replaced with an eyesore by Tilbury.	Views from residential properties have been taken into account and mitigation measures to reduce or eliminate potential adverse effects on visual amenity are being incorporated into the scheme design.	<p>No change - concern already addressed.</p> <p>Neighbourhood quality as a determinant of health was included in the Health Assessment, which includes assessment of visual impacts of Tilbury2. A package of landscape measures has been included within the DCO design and their long term management is secured by a DCO requirement.</p>

Section 42, Section 47	Traffic and Rail: Increased Traffic	Respondents were concerned that traffic is already bad in the Tilbury area (including on the Asda roundabout) and that the Tilbury2 proposals could make this worse.	A Transport Assessment (document reference 6.2) has been carried out and has established that the Tilbury2 proposals (including proposed improvements to the Asda roundabout) will have an acceptable impact on traffic conditions in the Tilbury area.	No change - concern already addressed. A transport Assessment has been carried out and 'transport, traffic, connectivity' is included as a health determinant in the health assessment.
Section 47	Traffic and Rail: Safety	Respondents were concerned that the proposals would lead to increased risks to road safety.	A review of the road safety impacts is included in the Transport Assessment. It is concluded that the proposed development will have a negligible impact upon accidents and safety.	No change - concern already addressed. Road safety impacts have been included within the Transport Assessment for the Tilbury2 proposals and 'transport, traffic, connectivity' is included as a health determinant in the health assessment.
Section 47	Traffic and Rail: Safety	A respondent raised concerns about what the consequence would be of rail accidents on the new rail link.	This risk of a rail accident on the new rail link is considered low.	None required. Track alignment/design in accordance with best practice, RSSB Railway Group Standards and also Network Rail Line Standards. Approved safety case in place. The proposed line speed is relatively low

				(15mph max) and the track will be new infrastructure (good/new condition), hence minimal risk of derailments. Hence, this was not scoped into the health assessment.
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HEALTH PROFILE

- 1.13 The health assessment presented in the ES was carried out to inform and influence decision making in relation to the Tilbury2 proposals. The aim of a health assessment is to identify any impacts of the proposed development on local residents' health and wellbeing, to consider health inequalities and to identify opportunities for mitigations and enhancement measures to improve the health outcomes.
- 1.14 There is no prescriptive or statutory guidance on how to assess the health effects of development projects. The health assessment for Tilbury2 was undertaken in accordance with IMPACT Urban Health Impact Assessment (UrHIA) methodology³ and the Rapid Health Impact Assessment Tool⁴ (Chapter 8 ES, paragraph 8.10) . A review of publicly available evidence was used to establish the links between the identified health determinants and the potential health outcomes. Secondary evidence such as other literature reviews and UK Government policy was also drawn upon. The health determinants scoped into the report were informed by these methodologies (UrHIA and Rapid Health Impact Assessment Tool) as well as responses received through consultation with local stakeholders.
- 1.15 The health assessment carried out for the Tilbury2 ES is considered to be a comprehensive health assessment and it covers the same ground as a stand-alone Health Impact Assessment (HIA). The aspects of the ES Chapter 8 (Health), are in line with the 'normal' approach for a stand-alone HIA and a comprehensive health assessment:
- 1.16 Office for National Statistics (ONS) Census 2011 data for Chadwell St Mary's, Tilbury St Chads, Tilbury Riverside and Thurrock Park, East Tilbury, Thurrock, Dartford, Gravesham and England were reviewed as part of the health assessment to give an overview of the health of communities in these areas. This was supplemented by data from other Government sources such as HMRC and the ONS. Some data reviewed was shared between health and the socioeconomic assessment (Chapter 7 ES) and may only be presented in the socioeconomic chapter (Chapter 7 ES) for brevity. Levels of health are fairly consistent across the area, as presented in Table 2 below.

Table 2: Health profiles (ONS, 2011)

Health	Tilbury Town (%)	Thurrock (%)	Gravesham (%)	Essex (%)	Kent (%)	TG LB (%)
Very good health	46.2	48.2	46.5	47.1	46.7	48.6
Good health	34.4	34.7	35.0	34.9	34.9	34.0
Fair health	13.2	12.3	13.4	13.1	13.3	11.9
Bad health	4.9	3.7	4.0	3.7	4.0	4.1
Very bad health	1.2	1.0	1.1	1.1	1.1	1.3

³ Urban Health Impact Assessment Methodology (UrHIA), Impact, University of Liverpool, 2015.

⁴ HUDU Planning for Health. Rapid Health Impact Assessment Tool. London: NHS, London Healthy Urban Development Unit., 2013.

- 1.17 Data from the Association of Public Health (AOPH) 2016 was used in the preparation of the health chapter in the ES. Subsequent to the submission of the ES, updated AOPH health information has been released for 2017. Despite the new data releases, the changes show no substantial changes in the health and poverty profile of the local area which would render the conclusions reached in the health chapter obsolete or inaccurate.
- 1.18 When undertaking the health profile for the ES health assessment, ward level indicators were used to establish the levels of health and poverty in the local area, specifically in the two wards that cover the proposed development (Tilbury Riverside & Thurrock Park and Tilbury St Chads). For the purposes of the ES Health chapter, the health profile has been presented at Local Authority level, but it was informed by ward level indicators. The ward data used was released in 2016. There are no more recent datasets which would supersede the data used or invalidate the conclusions reached in the ES regarding the local population health profile.
- 1.19 Table 3 below sets out the health indicator changes in 2016 and 2017 at Local Authority level. Where a comparator data set is available for Local Authority level and ward level, these are also presented. Professional judgement has then been used to evaluate the magnitude of the changes. It is concluded that most of the indicators, with the exception of the number of obese children which rose by 2% in 2017, reported a negligible or minor change, which is not substantial enough to affect the conclusions of the ES Health chapter. It is noted that the health profile of the two Tilbury wards is very similar, and the sensitive receptors and impacts from the Tilbury2 development is likely to be very similar.
- 1.20 The table also compares the local authority data to the ward level data. On occasion, the data is only reported at the local authority in the ES Health chapter, for brevity. Data at both levels, where available, informed the health assessment. The health assessment considered: the levels of deprivation and poverty in the area, the higher rates of mortality at younger ages, the poor levels of existing health problems (particularly cardiovascular, cancer and respiratory), as well as high rates of obesity for children and adults in the Tilbury wards. The focus for the health assessment is whether these issues are present or absent in the local area, making the local population more vulnerable or susceptible to impacts on the health determinants. These factors were also described by local stakeholders to the health assessment team, as shown in ES Table 8.3 "Consultee comments on the health assessment."

Table 3: Health indicators at local authority and ward level in the development area

Health Indicator	Thurrock 2013	Thurrock 2016	Thurrock 2017	Ward – Tilbury Riverside and Thurrock Park 2016	Ward – Tilbury St Chads	Notes
Life expectancy at birth (male)	-	79.3	78.9	75	76.3	Reflected in ES at LA level – para 8.51. Insufficient difference at ward level to affect assessment. Ward level has been considered in baseline health profile.
Life expectancy at birth (female)	-	82.6	82.6	79	80	Reflected in ES – para 8.51. Insufficient difference at ward level to affect assessment. Ward level has been considered in baseline health profile.
Infant mortality	-	3.5 per 1,000 live birth	3.2 per 1,000 live birth	No data	No data	Baseline info. Not in ES.
Long term unemployment	-	4.6 per 1,000 population	3.9 per 1,000 population	No data	No data	Reflected in ES at LA level. No ward level data available.
Income deprivation	15.2 % (2015)	-	-	28.1%	27.5%	Reflected in ES at LA and ward level – para 8.39
GCSEs achieved (5A*-C)	-	53.8 pupils at end of stage 4	55.8% pupils at end of stage 4	47.5%	47.5%	Reflected in ES – para 8.40. Lower educational achievement at ward level not considered to affect assessment which profiled low educational achievement in the local population. This does not affect the conclusions of the health assessment.

Percentage of children living in poverty	21.8% (2015)	No more recent dataset.	No more recent dataset.	40.2%	38.6%	Prevalence of child poverty is reflected in ES – para 8.39. The significant difference between LA and ward level is noted in the ES, “In Tilbury Town and the surrounding wards of Chadwell St Marys and East Tilbury, the proportion of children in low income families is higher than in Thurrock and England as a whole. In Tilbury St Chads and Tilbury Riverside & Thurrock Park the proportion of children in low income families (36.8-40.4%) is nearly twice the Thurrock and national average.” The health assessment took the high levels of child poverty in the local wards into account.
Index of Multiple Deprivation	21.6	No more recent dataset.	No more recent dataset.	40.1 %	36.6%	IMD data, across all domains was reviewed for the profile of the local area at both the LA and ward level and informed the health assessment. The ES describes high levels of deprivation reporting on health– para 8.45 at LA and ward level/Figure 8.2 and crime – para 8.49 Figure 8.3. The IMD data was used across the socioeconomic and health assessments, so data that is reported in the socioeconomic chapter of the ES (Chapter 7) was not repeated in the health chapter of the ES (Chapter 8); e.g. see Figure 7.3. The socioeconomic profile in Chapter 7 of the ES informs the health profile. Ward level IMD data was reviewed and has informed the profile and assessment. The health assessment took the high levels of deprivation in the local wards, across the different indices of the IMD, into account.
Obese children (Reception year)	-	10.3%	-	13%	13%	Thurrock PH suggest that this should be reported in the ES. The overall health profile of the area was considered in the assessment even if this data is not specifically reported. The

						new data is noted but not considered to alter the assessment (ES para 8.55) which had assumed local populations to have high levels of child obesity and adult obesity and low levels of physical activity.
Obese children (year 6)	-	21.3%	-	26.2%	26.2%	Reflected in ES at LA level – para 8.55. The new data is noted but not considered to alter the assessment (ES para 8.56) which had assumed local populations to have high levels of child obesity and adult obesity and low levels of physical activity.
Smoking prevalence in adults		21.3%	20.8%	No data	No data	Reflected in report – ES para 8.56
Premature mortality rates for deaths from all causes- the Standardised Mortality Ratio for under 75s	-	-	103	145.4	148.7	Thurrock PH suggest that this should be reported in the ES. The under 75 mortality rates for cardiovascular and cancer (two of the largest causes of early mortality) were reported (Table 8.5): The new data is noted but not considered to alter the assessment, as the health profile assumes premature mortality in the local populations.
Deaths and early deaths that could be prevented – respiratory	118.8	-	-	206.9	174.7	Thurrock PH suggest that this should be reported in the ES. Paragraph 8.59 reports data on deaths from respiratory disease at the LA and ward level. The new data is noted but not considered to alter the assessment.
Deaths and early deaths that could be prevented – circulatory	108.4	-	-	194.4	237.4	Thurrock PH suggest that this should be reported in the ES. Early mortality from cardiovascular disease (Table 8.5) was reported, along with other predictors of circulatory disease such as smoking (8.57). The overall health profile of the area was considered

						in the assessment although this data is not specifically reported. The new data is noted but not considered to alter the assessment.
Premature deaths from Coronary Heart Disease (all ages)	114.9	-	-	150	223.2	Cardiovascular disease was considered in the assessment using under 75 mortality rate for cardiovascular disease as a marker. Thurrock PH suggest that this should be reported in the ES. The overall health profile of the area was considered in the assessment although this data is not specifically reported. The new data is noted but not considered to alter the assessment which assumes a very high level of cardiovascular ill-health in the local populations.
Under 75 mortality rate: cancer	-	155.4 per 100,000 population aged under 75	153.5 per 100,000 population aged under 75	127.6	117.2	Reflected in ES – para 8.52. The ward level data suggests a slightly lower mortality rate than assumed using the Thurrock data.
Limiting long term illness or disability	15.6%	-	-	15.7%	18.4%	Para 8.55/Table 8.6 in the ES describes LA and ward level data relating to long-term health problems of disabilities.
Deaths from stroke (all ages)	103.0	-	-	173.1	86.6	Cardiovascular disease was considered in the assessment using under 75 mortality rate for cardiovascular disease as a marker. The new data is noted but not considered to alter the assessment, which assumes a very high level of cardiovascular ill-health in the local populations.
Hospital admission for Chronic Obstructive Pulmonary Disease	118.6	-	-	209.0	209.9	Thurrock PH suggest that this should be reported in the ES. The overall health profile of the area was considered in the assessment even if this data is not specifically reported. Para 8.59 describes respiratory health and 8.57

						smoking behaviours (which are strongly associated with COPD). The new data is noted but not considered to alter the assessment which assumed high levels of smoking and poor respiratory health in the local populations.
Incidence of lung cancer	105.1	-	-	122.9	122.9	Thurrock PH suggest that this should be reported in the ES. The overall health profile of the area was considered in the assessment even if this data is not specifically reported. Para 8.59 describes respiratory health and 8.57 smoking behaviours (which are strongly associated with COPD). The new data is noted although not considered to alter the assessment which assumed high levels of smoking and poor respiratory health in the local populations.
Social isolation	31.9	-	-	39.1%	32.1%	Thurrock PH suggest that this should be reported in the ES. The new data is noted but not considered to alter the assessment. Populations who may be socially isolated, such as the elderly, were identified as part of the health assessment and social capital was assessed as a health determinant.

Health assessment criteria/process

- 1.21 Thurrock Council's public health team has requested further explanation of how the magnitude of health effects was assessed for the purposes of the health assessment presented in ES Chapter 8 (Health).
- 1.22 The following was assessed for each impact/determinant: (ES paragraphs 8.18 to 8.21).
- Description of the change (beneficial/adverse)
 - Extent of population exposure (low-local, medium-local, high-local, regional national – see ES Table 8.2)
 - Duration of change (temporary/permanent)
 - Intensity of exposure with mitigation (low, medium, high – see ES Table 8.2)
 - Guideline values (if available)
 - Vulnerabilities of population impacted
 - Strength of evidence
 - Assessment (summary provided in ES - Table 8.11)
- 1.23 The magnitude of effects was based upon Table 8.2 Impact Significance Matrix which takes population exposure to any health effect identified into account. For health, the magnitude is determined by the numbers impacted at the local or regional level as well as vulnerability within that population.
- 1.24 The health aspects/impacts matrix (Health Impacts Matrix) accompanying this report provides the detailed information supporting the assessment undertaken for the health determinants. It illustrates how the assessment criteria in ES Table 8.2, and population vulnerability, were considered.
- 1.25 When interpreting the findings of the health assessment it is worth noting that the underlying assessments undertaken for other topics that feed into the health assessment, e.g. noise, air quality, transport, are based on reasonably likely worst case assumptions and that guidelines for these topics, where they exist, are often set to account for effects on more sensitive populations.
- 1.26 The health assessment takes into account mitigation incorporated into the scheme design through the DCO process, as it is important to assess the health effects after the mitigation, so that the residual health effects are properly evaluated (see paragraph 8.17 of the ES Chapter 8 (Health)). The health assessment compiles the information listed above to make a qualitative judgement about the health effects of Tilbury2.

DISCUSSION OF AIR QUALITY ASSESSMENTS

Approach to Assessment

- 1.27 Following discussions with the Public Health team at Thurrock Council, further detail about the approach to the air quality assessment is provided.
- 1.28 An assessment of air quality impacts was undertaken for the ES (Document Reference 6.1, Chapter 18). This assessment 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). All assumptions are laid out in ES Table 18.2 - Parameters defining the “reasonably likely worst case scenario” for air quality assessment.

- 1.29 Regarding the receptors in Tilbury which are understood to be of most concern to Thurrock Council’s Public Health team, owing to the reported magnitude of change with the development:
- Emissions from off-site transport of materials by road were estimated based on the number of movements associated with maximum 500,000 unit capacity site with minimum export by rail. The number of heavy vehicle movements was estimated by the transport team based on a maximum 750,000 tonnes per annum (tpa) of aggregate transported by road using 16 tonne trucks. This generated a higher number of heavy vehicle movements than should be experienced, as trucks typically will be at least 20 tonnes. This maximum flow was applied in the air dispersion modelling to estimate emissions in the opening year of 2020, whereas in reality, the development will increase in capacity over time up to this maximum. As vehicle emissions are expected to continue to improve in future this was deemed to be a robust and conservative approach to assessment.
 - Emissions from off-site transport of materials by rail were estimated based on the highest number of rail movements (700,000 tonnes per annum of aggregate). It was assumed that all movements would be an older locomotive engine type (Class 66) which has the highest emission rates of NO_x and PM₁₀ amongst those on the market that may be used (see Table 18.10 of the ES, which shows the emission factors for different locomotives). This was a conservative approach since prospective tenants have suggested that some of the movements may be powered by the newer Class 70 diesel locomotives (the expectation is that, over time, Class 66 locomotives will be replaced).
- 1.30 Having set these worst-case parameters, a detailed assessment of the impacts of combined road and rail emissions was undertaken for 27 sensitive receptors. These were carefully selected to represent worst-case exposure (Document Reference 6.1, paragraph 18.313), focusing on locations closest to the transport routes that will be used by road vehicles and rail locomotives accessing the Tilbury2 site. The receptors selected included those closest to the new Infrastructure Corridor and the A1089 St Andrews Road. The future concentrations of air pollutants were compared against national air quality strategy (AQS) objectives (2007 – see ES Chapter 18, paragraph 18.20), which are consistent with the European Directive air quality limit values, themselves based on the World Health Organisation (WHO) guidelines set to protect human health (including individuals with existing health conditions such as respiratory disease).
- 1.31 The air quality assessment identified (ES paragraph 18.323), that there will be no exceedances of AQS objectives in the opening year. The magnitude of change was negligible to slight impact at most receptors. A moderate increase in annual mean NO₂ of 4.4 µg/m³ was identified at one receptor, R10, the closest of the properties on Nairn Court to the railway line. It is estimated that this receptor is representative of the impact at fewer than 10 properties. The modelled increment at this receptor is mostly influenced by the rail locomotive emissions, which as described above are based on a reasonably likely worst case. As distance from the railway increases, there will be a rapid reduction in the modelled increment such that at adjacent properties the magnitude of impact would be slight.
- 1.32 Concentrations will generally be lower in future years both with and without the proposals than presently. In 2020 with the development, NO₂ concentrations at R10 will be almost 10 µg/m³ below the AQS objective of 40 µg/m³, which is considered a comfortable margin

given the robust approach applied in the assessment. The modelled changes in PM₁₀ and PM_{2.5} were negligible at all receptors.

- 1.33 Overall, given the robust nature of the approach to assessment, including the worst-case parameters for road and rail emissions described above and the selection of worst-case receptors closest to source, the effect of the proposals on local air quality - and subsequent effect on human health - was concluded to be not significant.

MITIGATION

Overview

- 1.34 Mitigation measures identified in an ES are designed to avoid, reduce and offset the significant adverse effects of the development. Mitigation measures have to be implementable in order for them to be effective, and they can be enforced through the DCO and its accompanying documents or other regimes such as Section 106 agreements.
- 1.35 Mechanisms available for securing the implementation of mitigation measures include the use of 'Requirements' in Schedule 2 to a DCO – these are akin to planning conditions under the Town and Country Planning Act 1990 regime. Requirements are used to secure the delivery of mitigation measures and their timely implementation. This can be done by specifying which detailed approval is required before the development can commence (e.g. submission of a detailed landscaping scheme) or putting code of construction practices or management plans in place. This also sets out who the appropriate body is from whom the approval is required.
- 1.36 The mitigation measures can then be introduced either as a result of the Environmental Permitting regime, for regulated activities, or are included within the Construction Environmental Management Plan (CEMP)⁵, or the Operational Management Plan (OMP)⁶, compliance with which is secured by a DCO Requirement. These plans will ensure adequate mitigation of emissions for all sensitive receptors, and provide a mechanism for recording and responding to complaints.
- 1.37 The proposed Section 106 agreement with Thurrock Council (Document Reference 5.3) will contain obligations that will mitigate the impacts that have been identified. For example, an Active Travel Strategy is required as part of the Section 106 agreement which comprises a number of measures to improve access and conditions generally. A Skills and Employment Strategy will be agreed by Thurrock Council to ensure, amongst other commitments, that new jobs created can be sourced from the local labour market.

Air Quality Mitigation

- 1.38 This section describes the mitigation specifically relevant to air quality, focusing on transport emissions.
- 1.39 The Operational Management Plan (OMP) (Document Reference 6.10) that was submitted as part of the DCO application also includes mitigation measures for inter alia "cleaner and greener vehicles". A Framework Travel Plan (FTP) (Document Reference 6.2.13B) and Sustainable Distribution Plan (SDP) (Document Reference 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

⁵ https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000665-PoTLL_Construction%20Environmental%20Management%20Plan%20v1%20-%20Clean.pdf

⁶ https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000668-PoTLL_Operational%20Management%20Plan%20v1%20-%20Track%20Changes.pdf

sustainable new development, whilst helping to resolve existing transport issues in the area.

- 1.40 The OMP (Document Reference 6.10) will be certified through the DCO process and as such will require compliance both for PoTLL's own operations and any tenants that operate any of the facilities within Tilbury2. CMAT production facilities will be subject to the conditions set out within an Environmental Permit, where the facility is a permitted activity under the Environmental Permitting Regulations 2016. The tenants will be responsible for ensuring compliance with the conditions set therein to control emissions such that emission standards and limits are respected and statutory nuisance is not caused.
- 1.41 A dust monitoring programme is proposed in the OMP (Section 7.9). POTLL intends to agree the number and type of monitoring locations with Thurrock Council, and share with them the results of the dust monitoring.
- 1.42 Compliance with the OMP, FTP and the SDP is secured by requirements in Schedule 2 to the DCO.

Design and layout of the development

- 1.43 The proposals include embedded mitigation within the design of the infrastructure corridor, as set out at paragraph 13.70 of the ES (Document Reference 6.1).
- 1.44 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.
- 1.45 The 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.

Promoting infrastructure to promote low impact modes of transport

- 1.46 The Sustainable Distribution Plan (SDP) (Document Reference 6.2.13C) sets out proposals for distribution of materials handled by the proposed development.
- 1.47 The SDP proposals include a substantial investment in a new rail link to promote modal shift:
- - 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.

Reducing emissions

- 1.48 The Framework Travel Plan (FTP) (Document 6.2.13 B) will deliver benefits to the local community and environment, reducing CO₂ emissions through fewer car journeys (paragraph 4.2.5).
- 1.49 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.

- 1.50 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 of the FTP).
- 1.51 An Active Travel Study, agreed with Thurrock Council, whose measures are secured within the Order limits by inclusion through the DCO, and through a Section 106 agreement for those measures outside the Order Limits (Document Reference 5.3 B) includes:
- 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.
- 1.52 Section 7.4 of the Operational Management Plan (OMP) (Document Reference 6.10) 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:
- - 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. "A requirement will be placed on PoTLL and the tenant's plant suppliers, who maintain the plant, to ensure that when plant is replaced the latest low emission engines are made available." The latest low emissions engines' would be Euro VI (or any later standard at the time).
- 1.53 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.

RECOMMENDATIONS

- 1.54 The health assessment presented in the ES assessed the effect of Tilbury2 on each of the health determinants on the local population, after taking the above mitigation into account. Recognising that some health effects may remain even after taking mitigation into account, recommendations were made to further protect or promote the health of the local population (ES Chapter 8).
- 1.55 The table below collates the recommendations made within the ES health chapter, which include plans for further monitoring (e.g. noise, air quality), where necessary.

Table 3: Recommendations from the health assessment

Topic	Recommendations for health based mitigation
Noise and Vibration	<p>Mitigation of noise impacts associated with construction are secured by the CEMP, and includes the introduction of temporary noise screening for the construction of a permanent noise barrier for the Infrastructure corridor; restrictions to working hours during the weekdays and weekends; and the implementation of a community awareness campaign.</p> <p>Mitigation of noise impacts associated with operation are secured by a requirement in the DCO and will include the installation of a noise barrier, noise reassessment to determine if residents may be eligible for the installation of noise insulation or improved glazing in their home, as well as an on-going monitoring and mitigation regime that will be agreed with Thurrock and Gravesham Council; and an Operational Management Plan.</p> <p>Some health effects will remain after the mitigations given the nature of the exposure.</p>
Lighting	<p>Several proposals for the mitigation of lighting impacts have been made including all high output floodlights and streetlights to be fully cut-off meaning there would be no direct upward light from their mounted location; rear spill baffles and glare guards to be added to lights where practical, and to be added to lights on RoRo Berth and link bridge as essential; all high mast lights (at heights greater than 30m) to be mounted horizontally and other light tilt angles to be kept as low as practically possible (<20° above horizontal); control regime with lights only active during hours of darkness.</p> <p>These mitigations describe what can realistically be done to mitigate the lighting impacts and will be finalised in detailed design as part of the finalised lighting strategy to be approved by Thurrock Council in consultation with Gravesham Council. . Some health effects are likely to remain taking this mitigation into account.</p>
Air Quality	<p>Construction dust emissions to the atmosphere will be managed following 'highly recommended' measures for dust mitigation as set out in IAQM guidance for 'high risk sites' and as secured through the CEMP. This includes dust monitoring; measures specific to earthworks and construction; measures specific to trackout.</p> <p>Construction traffic emissions will follow the IAQM guidance relating to 'highly recommended' measures for vehicle machinery and sustainable travel, which includes switching off vehicle engines when stationary; avoiding the use of diesel and petrol powered generators and using electricity or battery powered equipment where practicable; imposing speed limits on haul roads and work areas; as well as provision of a Construction Traffic Management Plan (CTMP Chapter 5).</p> <p>Operational dust emissions are addressed by the Operational Management Plan (OMP Document 6.10) which is secured by the DCO.</p>

	<p>This sets out the responsibilities of personnel, specific measures for the RoRo and CMAT facilities, and details of a monitoring scheme.</p> <p>The Framework Travel Plan (ES Appendix 13A) and the Sustainable Distribution Plan (ES Appendix 13B) (secured by a DCO requirement) set out the promotion of sustainable travel modes for onsite staff during operation which will help to minimise traffic movements and their associated impacts.</p>
Transport, Traffic and Connectivity	<p>Appropriate management of demolition and construction traffic will be undertaken as described in ES Chapter 13 Land Side Transport, and these are included in the draft CTMP (Document Reference 6.9 appendix), which will be finalised in detailed design and approved by Thurrock Council. . These proposals for mitigation should be effective in mitigating the negligible negative health effects identified above.</p> <p>No negative effects on health have been identified during operation.</p>
Neighbourhood Quality	<p>ES Chapter 9 on Landscape Character and Visual Amenity sets out a range of avoidance and mitigation measures designed to address visual amenity impacts of the proposal, captured in the Landscape and Ecological Management Plan which is secured in the DCO (Document Reference AS-013). These mitigation measures should address some of the health effects of the proposals and describe what can reasonably be achieved to address the visual impacts. However, some health effects of the proposals will remain, even after mitigation.</p>
Open space, and active travel incorporating physical activity	<p>The Skills and Employment Strategy (Document Reference 5.3 Appendix A) sets out the Ports strategy for achieving increased levels of employees both on-port and off-port from the local area, as well as educational opportunities for the local population including youth employment opportunities, apprenticeships, traineeships, school educational visits, veteran recruitment proposals, and graduate recruitment programmes. These initiatives have successfully been used already to engage with the local population to increase employment and education. This strategy will maximise the health benefit for the local population and will be secured through a section 106 agreement with Thurrock Borough Council.</p>
Housing	<p>None proposed as the effects are thought likely to be negligible.</p>
Social Capital	<p>The health effects of the severance impacts associated with the infrastructure corridor between the residential areas of Tilbury to the north and riverside to the south will in part be mitigated by the embedded pedestrian and cyclist facilities provided as part of the infrastructure corridor including new crossings and footways/cycleways (see the Active Travel Study (Document Reference 5.3 Appendix B) for further details). These measures should address the health effects identified.</p>

- 1.56 The Equalities Impact Assessment (EqIA) (ES Chapter 12, Document Reference 6.1) also made recommendations for mitigation, aimed at protecting the health of the local populations.

- 1.57 Paragraph 12.28 states that additional EqIA mitigation measures included in the CEMP include consultation with affected sensitive receptors located within the air quality impact buffers. This could include consultation, through the Tilbury Community Forum, with primary schools, care facilities, and surrounding residential communities, including travelling showpeople, prior to the construction and operational activity. This could help maintain ongoing dialogue with key equalities receptors throughout the duration of the proposals, and ensure that appropriate mitigations minimise the localised impact on these facilities.”

Project aspect	Impact description	Impact pathway	Temporary/permanent	Beneficial / adverse	Health determinant	Extent of population exposure (low/moderate/high)	Vulnerable groups	Impact magnitude - Intensity of exposure with mitigation	Effect on population health	Notes
Construction of the road/railway	Noise- road and rail transport corridor including bridge	Increased noise leading to increased annoyance, loss of sleep and physiological effects.	Temporary	Adverse	Sound, noise and vibration	High local	Children, older people, disabled people	Moderate	Adverse on sleep, physical and mental health	
Construction of rail - vibration	Vibration - rail	Increased vibration leading to annoyance and stress	Temporary	Adverse	Sound, noise and vibration	Moderate local	Children, older people, disabled people	Minor	Adverse effect on physical and mental health	
Construction of the main site	Noise- construction transport	Increased noise leading to increased annoyance, loss of sleep and physiological effects.	Temporary	Adverse	Sound, noise and vibration	Moderate local	Children, older people, disabled people	Minor	Adverse on sleep, physical and mental health	
Operation of the road	Noise- road transport corridor	Increased noise leading to increased annoyance, loss of sleep and physiological effects.	Permanent	Adverse	Sound, noise and vibration	Moderate local	Children, older people, disabled people	Negligible	Adverse on sleep, physical and mental health	
Road impact on wider road network	Noise - roads	Increased noise leading to increased annoyance, loss of sleep and physiological effects.	Permanent	Adverse	Sound, noise and vibration	High local/regional	Children, older people, disabled people	Minor/moderate	Adverse on sleep, physical and mental health	
Operation of the railway link	Noise- rail transport corridor	Increased noise leading to increased annoyance, loss of sleep and physiological effects.	Permanent	Adverse	Sound, noise and vibration	Low local	Children, older people, disabled people	Negligible	Adverse on sleep, physical and mental health	
Operation of the main site	Noise- operation of site	Increased noise leading to increased annoyance, loss of sleep and physiological effects.	Permanent	Adverse	Sound, noise and vibration	High/moderate local	Children, older people, disabled people	Moderate	Adverse on sleep, physical and mental health	
Dust during construction	Air quality - dust	Increased air quality issues in existing AQMA -impact on respiratory health	Temporary	Adverse	Air quality	Moderate local	Children, older people, disabled people/schools, existing disease (respiratory)	Negligible	Adverse on respiratory health	
Increased road traffic during construction of the road/railway & main site	Air quality- road traffic	Increased air quality issues in existing AQMA -impact on respiratory health	Temporary	Adverse	Air quality	High local	Children, older people, disabled people/schools, existing disease (respiratory)	Negligible	Adverse on respiratory health	
Increased road traffic during operation of the road	Air quality- dust	Increased air quality issues in existing AQMA -impact on respiratory health	Permanent	Adverse	Air quality	High/moderate local	Children, older people, disabled people/schools, existing disease (respiratory)	Negligible	Adverse on respiratory health	
dust and particulate matter from the aggregates processing facility/ Emissions from operation of the main site - machinery/on site generators etc	Air quality - operation	Increased air quality issues in existing AQMA -impact on respiratory health	Permanent	Adverse	Air quality	Moderate local	Children, older people, disabled people/schools, existing disease (respiratory)	Negligible	Adverse on respiratory health	
shipping emissions from operation of the main site	Air quality- rail and shipping	Increased air quality issues in existing AQMA -impact on respiratory health	Permanent	Adverse	Air quality	Moderate local	Children, older people, disabled people/schools, existing disease (respiratory)	Negligible	Adverse on respiratory health	
Railway emissions from the new rail access corridor	Air quality- rail	Increased air quality issues in existing AQMA -impact on respiratory health	Permanent	Adverse	Air quality	Low local	Children, older people, disabled people/schools, existing disease (respiratory)	Negligible	Adverse on respiratory health	
Presence of construction workers	Social capital- severance	Social capital - local demographic changes resulting from construction and operational workers, potential impacts on crime & anti-social behaviour, opportunities and impacts in relation to social infrastructure and community facilities. Congestion on local roads leading to increased journey times to neighbouring communities and facilities (TBC).	Temporary	Adverse	Social capital	High local	Older people, disabled people /schools/dog walkers etc	Negligible	Impact on wellbeing	

Project aspect	Impact description	Impact pathway	Temporary/permanent	Beneficial / adverse	Health determinant	Extent of population exposure (low/moderate/high)	Vulnerable groups	Impact magnitude - Intensity of exposure with mitigation	Effect on population health	Notes
New infrastructure corridors etc	Social capital- severance	Social capital - local demographic changes resulting from construction and operational workers, potential impacts on crime & anti-social behaviour, opportunities and impacts in relation to social infrastructure and community facilities. Congestion on local roads leading to increased journey times to neighbouring communities and facilities (TBC).	Permanent	Adverse	Social capital	High local	Older people, disabled people /schools/dog walkers etc	Minor	Impact on wellbeing	
Presence of construction workforce	Housing	Increased demand for accommodation affecting local rental market and potentially driving up rental values. Impacts on local community in rented accommodation.	Temporary	Adverse	Housing (also deprivation)	High local	Low income groups	Negligible	Adverse effect on wellbeing	
Presence of operational workforce	Housing	Increased demand for local accommodation affecting local housing market - private and rented. Could drive up prices excluding local people. Also potential stimulus for housing regeneration.	Permanent	Adverse	Housing (also deprivation)	High local	Low income groups	Negligible	Adverse effect on wellbeing	
Operation of the main site	Social capital- access to services Transport, traffic, connectivity	Access to services - businesses benefit from workers at new site	Permanent	Beneficial economic impact of new workers on local businesses	Access to services/social capital	High local	Older people	Minor/negligible	Adverse effect on wellbeing/positive effect on wellbeing	
Residence of construction workers in local area	Social capital- access to services	Poorer GP access for residents (already v. poor)/local business may benefit from increased trade etc	Temporary	Adverse/beneficial	Access to services/social capital	High local	Older people, children, disabled, long-term illness	Negligible	Adverse effect on wellbeing/positive effect on wellbeing	
Residence of construction workers in residence	Social capital- access to services	Poorer GP access for residents (already v. poor)/local business may benefit from increased trade etc	Permanent	Adverse/beneficial	Access to services/social capital	High local	Older people, children, disabled, long-term illness	Negligible	Adverse effect on wellbeing/positive effect on wellbeing	
Presence of workforce during construction and operation	Social capital- increased use of local businesses	Improved incomes for local businesses	Temporary/permanent	Beneficial	Employment and income		None identified	Minor/Negligible	Beneficial effect on wellbeing through increased incomes	
Construction of road/railway and site	Open space, active travel	Temporary closure or changes in access to the countryside/footpaths etc.	Temporary	Adverse/beneficial	Access to green space and physical activity or is this active travel?	High local	Socially disadvantaged	Negligible	Impact on wellbeing	
New road/site operation	Open space, active travel Social capital- access to services	Reduction in ease of access (two footpaths diverted - one is part of Thames Path. Impacts on amenity value, discouraging physical activity and access to the countryside. Impacts and opportunities in relation to the provision of open space and active travel routes	Permanent	Adverse/beneficial	Access to green space and physical activity or is this active travel?	High Local	Socially disadvantaged	Negligible	Impact on wellbeing	
Construction employment	Employment- additional jobs Employment- reduce local unemployment Qualifications	Improved education/employment opportunities for local people	Temporary	Beneficial	Employment and income	Regional	Socially disadvantaged	Moderate	Impact on wellbeing.health	
Opportunities for apprenticeships	Employment- additional jobs Employment- reduce local unemployment Qualifications	Improved education/employment opportunities for local people	Permanent	Beneficial	Education and training opportunities	Regional	Socially disadvantaged	Moderate	Impact on wellbeing.health	
Reduced local unemployment	Employment- additional jobs reduce benefit claimants Employment- reduce local unemployment	Improved education/employment opportunities for local people	Permanent	Beneficial	Education and training opportunities	High/moderate local	Socially disadvantaged	Minor	Impact on wellbeing.health	
qualification levels	Provision of skilled jobs	Improved education/employment opportunities for local people	Permanent	Beneficial	Education and training opportunities	Regional/high local	Socially disadvantaged	Negligible	Impact on wellbeing.health	
Diet - impacts on availability and choice of food retail	Social capital- access to services		Permanent	None	Diet - impacts on availability and choice of food retail	n/a		Negligible	None	Scoped out at early stage

Project aspect	Impact description	Impact pathway	Temporary/permanent	Beneficial / adverse	Health determinant	Extent of population exposure (low/moderate/high)	Vulnerable groups	Impact magnitude - Intensity of exposure with mitigation	Effect on population health	Notes
Construction traffic	Traffic, transport and connectivity	increased or decreased journey times/better or worse connectivity, safety etc	Temporary	Adverse	Traffic, transport, connectivity	High local		Negligible	Adverse effect on wellbeing	does not differ for driver delay, ped delay, ped amenity, safety
Operational traffic	Transport, traffic, connectivity- driver delay Transport, traffic, connectivity- road safety	increased or decreased journey times/better or worse connectivity, safety etc	Permanent	Beneficial	Traffic, transport, connectivity	High local		Minor	Adverse effect on wellbeing	does not differ for driver delay, ped delay, ped amenity, safety
Construction process	Neighbourhood quality Transport, traffic, connectivity	Poorer visual quality in the neighbourhood/traffic impacts leading to reduced satisfaction with local environment.	Temporary	Adverse	Neighbourhood quality	Moderate/high local	Those with existing mental ill-health (high levels in Tilbury)	Negligible/Minor	Adverse effect on mental wellbeing	
Operation of site	Neighbourhood quality Transport, traffic, connectivity	Poorer visual quality in the neighbourhood/traffic impacts leading to reduced satisfaction with local environment.	Permanent	Adverse	Neighbourhood quality	High/moderate local	Those with existing mental ill-health (high levels in Tilbury)	Minor	Adverse effect on mental wellbeing	
Lighting - operation	Lighting/visual	impacts on sleep, mood, cognition	Permanent	Adverse	Lighting	High local	existing poor health	Minor	Adverse effects on sleep, mood, cognition	
Lighting - transport infrastructure corridor	Lighting/visual	impacts on sleep, mood, cognition	Permanent	Adverse	Lighting	Moderate local	existing poor health	Negligible	Adverse effects on sleep, mood, cognition	

PROPOSED PORT TERMINAL AT
FORMER TILBURY POWER STATION

TILBURY2

TRO30003

APPENDIX B: NIGHT-TIME VISUALIZATIONS

TILBURY 2 DOCUMENT REF: PoTLL/T2/EX/60



The following images have been produced to support requested from Gravesend Borough Council with regards to the nighttime appearance of the proposed development of Tilbury 2.

The images have been produced based on the application of the generic lighting, developed as part of the Lighting Impact Assessment scheme to a simple model of the application site and immediate surrounds. These renders have been composited into baseline images captured from the requested viewpoints.

It is recognised that the development is being considered with a future baseline allowing for the demolition of Tilbury B Power Station. It has not been possible to simulate the future baseline within the scope of these works as this would either entail either

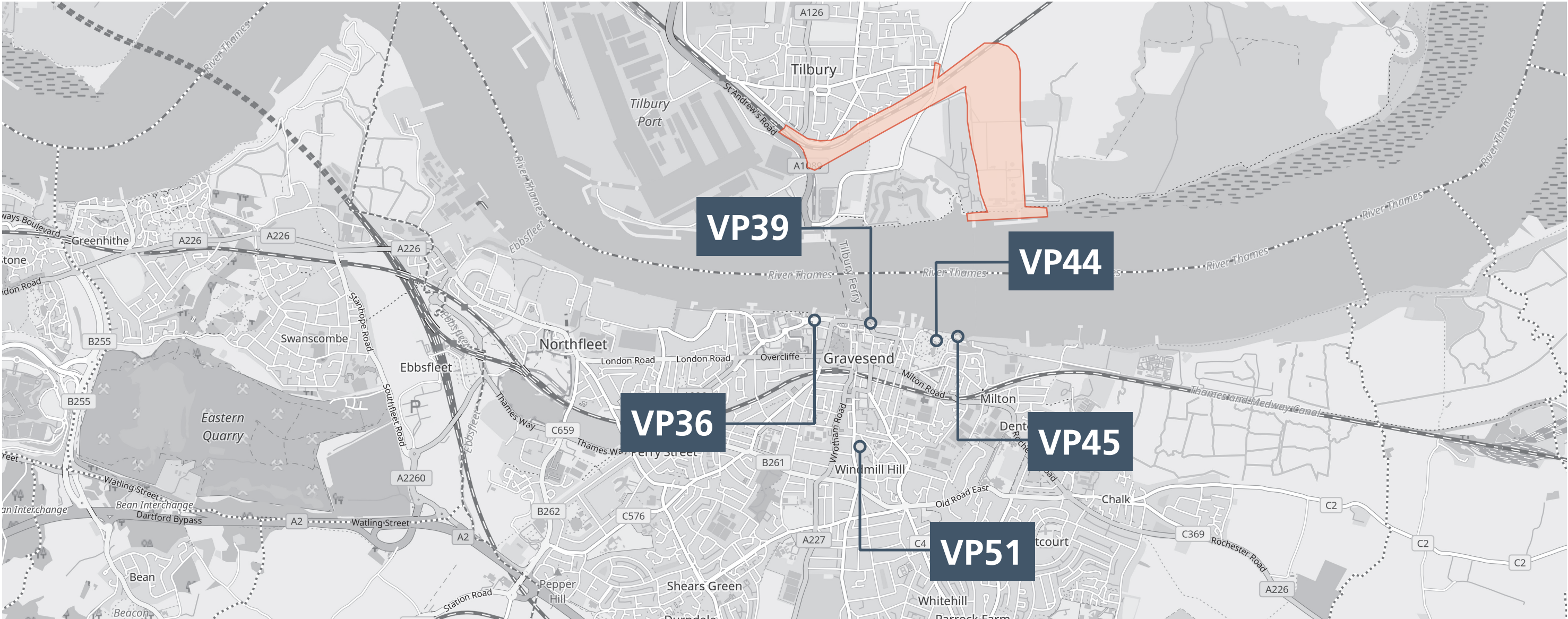
Significantly larger areas to be rendered than proportionate to the request to allow for the background to be appropriately mapped and geolocated into the images. This would require data on the location, orientation and type of every luminaire for considerable distance beyond the power station which is not feasible and is not predicted to be significant in terms of obtrusive light to the affected receptors.

or

Application of 'Photoshop' to estimate future baseline through importing and manipulating other portions of the baseline images as proxies for the future baseline. This is not felt to be appropriate and is detrimental to the quality of the images produced.

Consequently the nighttime visuals are offered on the available nighttime photography (captured November 28th 2017) with commentary on the expected future baseline conditions by reference to other portions of the image or other images.

Viewpoints Overview



Viewpoint 36

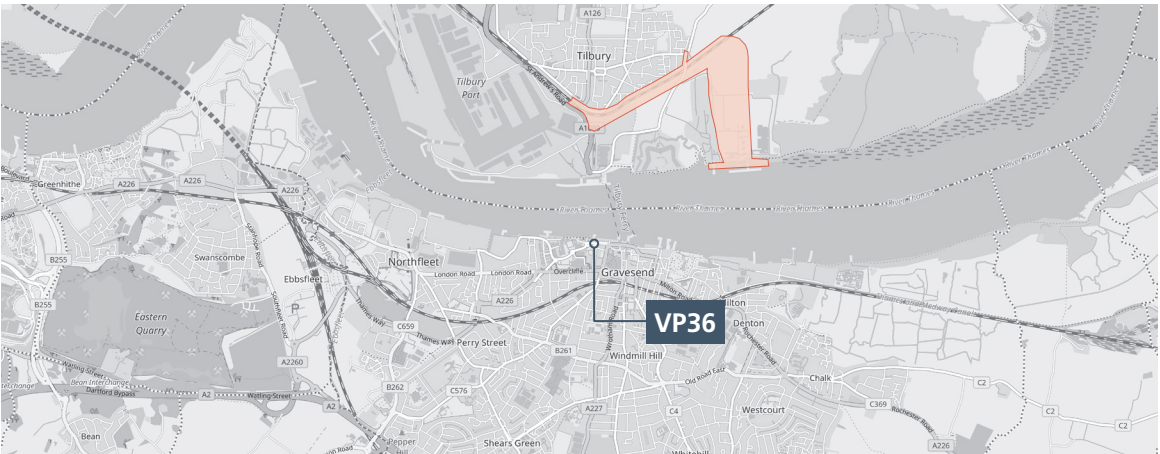
The main body of the application site is approximately 1500 metres from this viewpoint.

With luminaires at horizontal mounting points and using full cut-off luminaires the visibility of point sources of light is limited. The primary impact is through the illumination of the facilities, storage containers etc. Moisture or air particulates will make the application site more apparent as illumination from high masts creates an ‘ambience’ immediately below. Vessells at the RoRo berth will form a strong illuminated feature in the scene periodically.

At present a portion of London Gateway is obscured by the power station. London Gateway (Approximately 9500 metres away) will become more prominent with the future baseline excluding the power station. Consequently a portion the proposed development will be read against this industrial background.

From the simulations undertaken it is expected that the limited high rise structures (silo and high masts) combined with the high optical cut-off of the luminaires will result in London Gateway as the more prominent feature, viewed across the proposed development. There are potentially times when moored vessels at the RoRo berth will screen views of London Gateway.

There is limited visibility direct to the illuminated areas of the infrastructure corridor. In these instance the proportion of increase in lighting is negligible when read against the background condition of Tilbury, and with the proposed screening as mitigation.



Baseline view

Moving vessel over multiple exposures resulting in extended



Proposed development view



Viewpoint 39

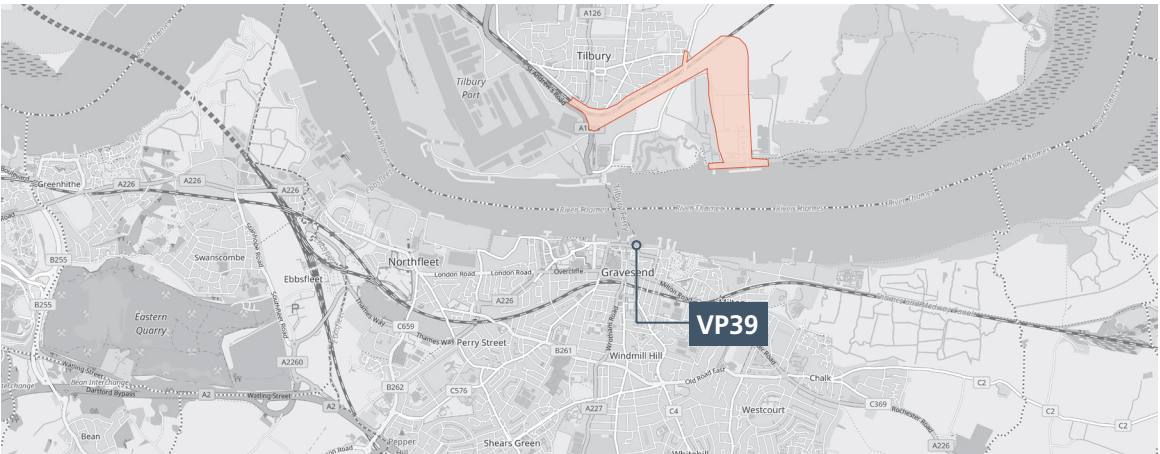
The main body of the application site is approximately 1300 metres from this viewpoint.

With luminaires at horizontal mounting points and using full cut-off luminaires the visibility of point sources of light is limited. The primary impact is through the illumination of the facilities, storage containers etc. Moisture or air particulates will make the application site more apparent as illumination from high masts creates an ‘ambience’ immediately below. Vessells at the RoRo berth will form a strong illuminated feature in the scene periodically.

At present a portion of London Gateway is obscured by the power station. London Gateway will become visible within the future baseline, and a prominent feature in the distance. The typical condition of this can be partially viewed adjacent to the power station in VP36 and fully in VP44.

From the simulations undertaken it is expected that the limited high rise structures (silo and high masts) combined with the high optical cut-off of the luminaires will result in London Gateway as the more prominent feature, viewed across the proposed development. There are potentially times when moored vessels at the RoRo berth will screen views of London Gateway.

There is limited visibility direct to the illuminated areas of the infrastructure corridor. In these instance the proportion of increase in lighting is negligible when read against the background condition of Tilbury, and with the proposed screening as mitigation.



Baseline view



Proposed development view

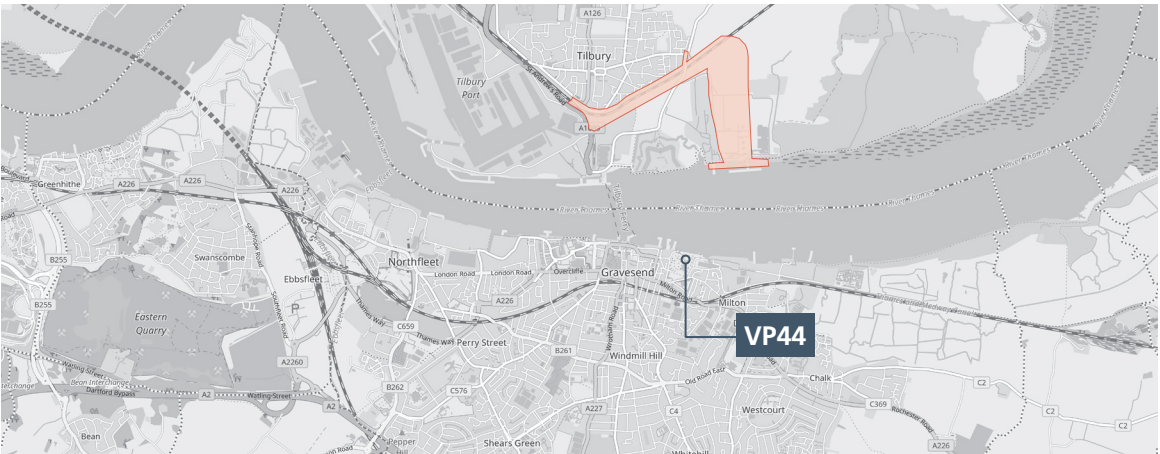


Viewpoint 44

The landside portion of the proposed development is approximately 1100metres from the viewpoint, with the marine works and moored vessels bringing the nearest point of the proposed development to approximately 900 metres distance

Within this view the proposed development site sits between the clear visibility of the existing Tilbury Docks to the West and London Gateway to the East. There is existing poorly controlled industrial lighting from the Anglian Water site adjacent to the proposed development, however the application site currently sits in predominant darkness. With the loss of the power station as future baseline there will be the introduction of light to the horizon, as opposed to the current dark massing, this is expected to be consistent or slightly greater than the nature of lighting immediately to the east of the power station in the current baseline.

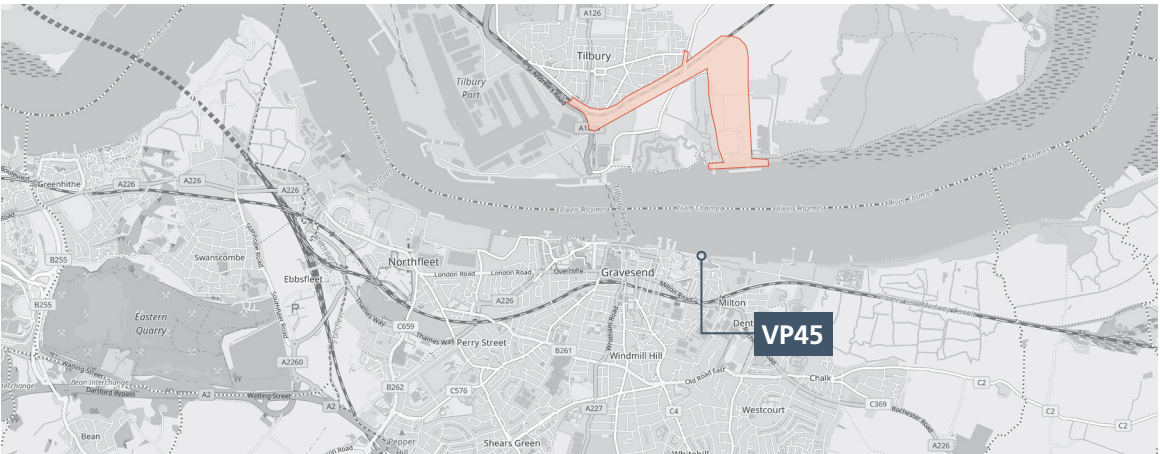
The proposed development by virtue of stored containers and maritime building are expected to shield views to any lighting on the horizon equivalent to the left hand side of the power station at present, with temporary shielding of any lighting on the horizon equivalent to the right hand side occurring from moored vessels.





Viewpoint 45

Within this view the proposed development site falls into a predominantly dark area. The removal of the power station is not expected to significantly increase the background illuminance based on the low elevation of the viewpoint although an ambience from Linford and Stanford Le Hope will become apparent.



Baseline view



Proposed development view

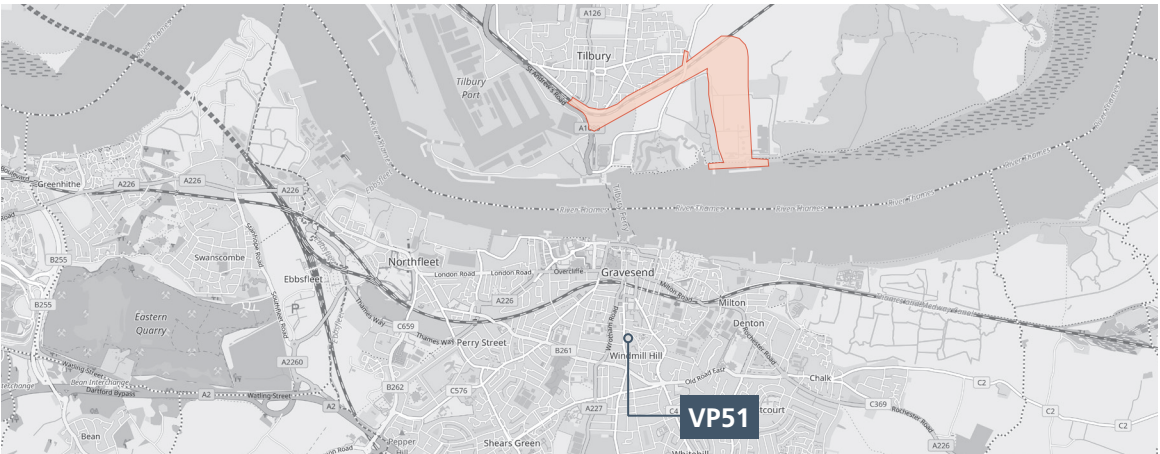


Viewpoint 51

This view looks down onto the proposed development site, although is at approximately the same elevation as the height of the high mast luminaires.

The power station currently obscures views of Linford and portions of Stanford Le Hope therefore future baselines are expected to see a rough consistency of lighting condition equivalent to the area immediately adjacent on the right of the power station.

The view 'down' onto the proposed development means that the majority of change in the nighttime view will be of the illuminated surfaces within the proposed development as opposed to views of the luminaires and light sources.



Baseline view



Proposed development view



PROPOSED PORT TERMINAL AT
FORMER TILBURY POWER STATION

TILBURY2

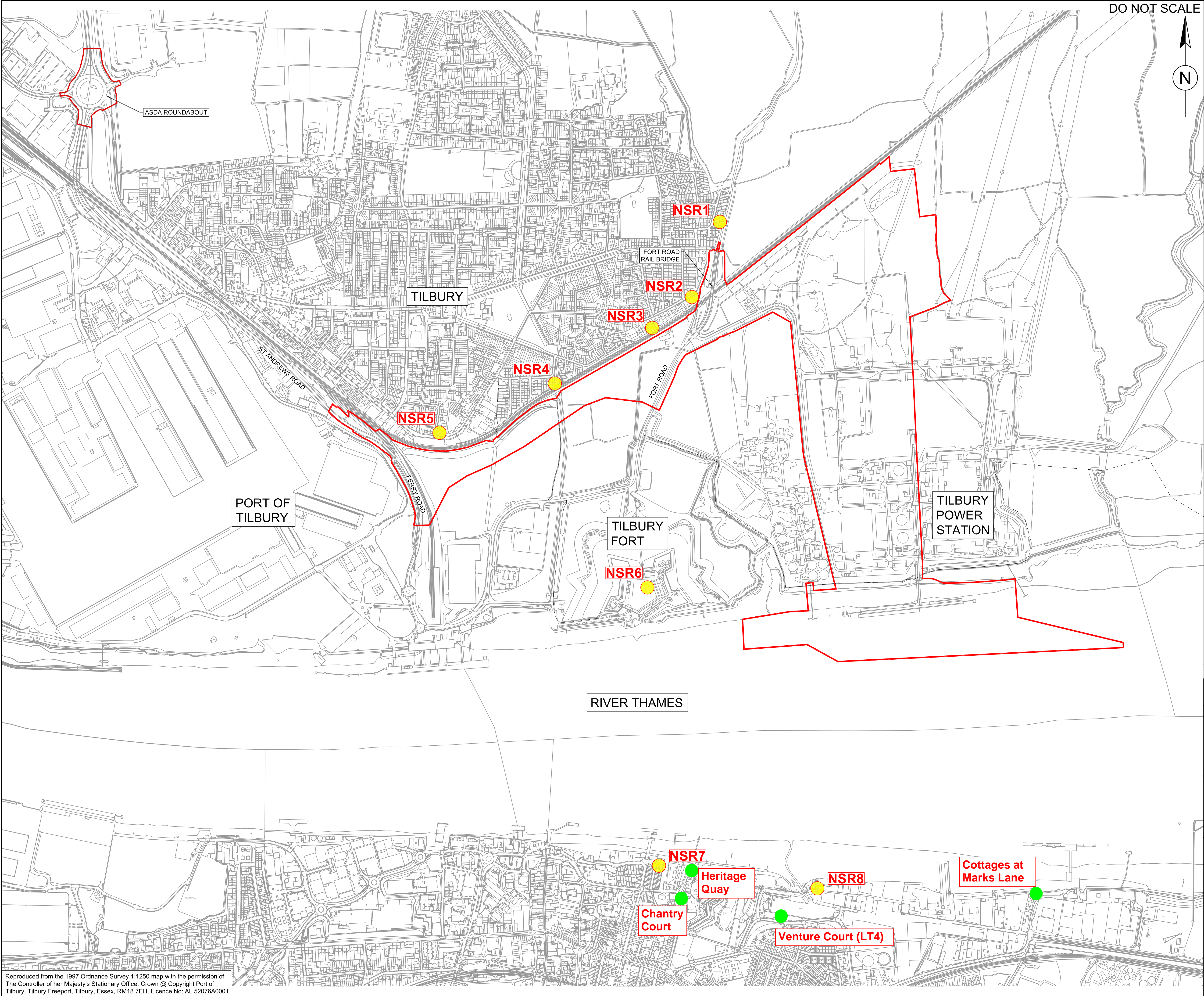
TRO30003

APPENDIX C: GRAVESHAM NOISE MONITORING LOCATIONS

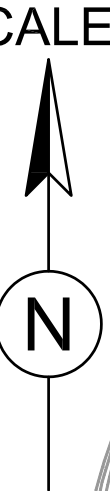
TILBURY 2 DOCUMENT REF: P0TLL/T2/EX/60



100
0 10
Millimetres



DO NOT SCALE



KEY:

Rev.	Date	Description	By	Chk'd	App'd
Drawing Status					Suitability
PLANNING					■
ATKINS		Western House (Block C) Peterborough Business Park Lynch Wood Peterborough PE2 6FZ Tel: +44 (0)1733 366900 Fax: +44 (0)1733 366999 www.atkinsglobal.com			
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		 PORT OF TILBURY LONDON			
Project Title					
Drawing Title		NOISE ASSESSMENT LOCATIONS			
Scale	Designed	Drawn	Checked	Authorised	
N.T.S.		MT	PJ		
Original Size	Date	Date	Date	Date	
A3		Sept '17	Sept '17		
Drawing Number				Revision	
FIGURE 17.2				1	

Reproduced from the 1997 Ordnance Survey 1:1250 map with the permission of The Controller of her Majesty's Stationary Office, Crown © Copyright Port of Tilbury, Tilbury Freeport, Tilbury, Essex, RM18 7EH. Licence No: AL 52076A0001

PLANNING ACT 2008
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)
RULES 2010

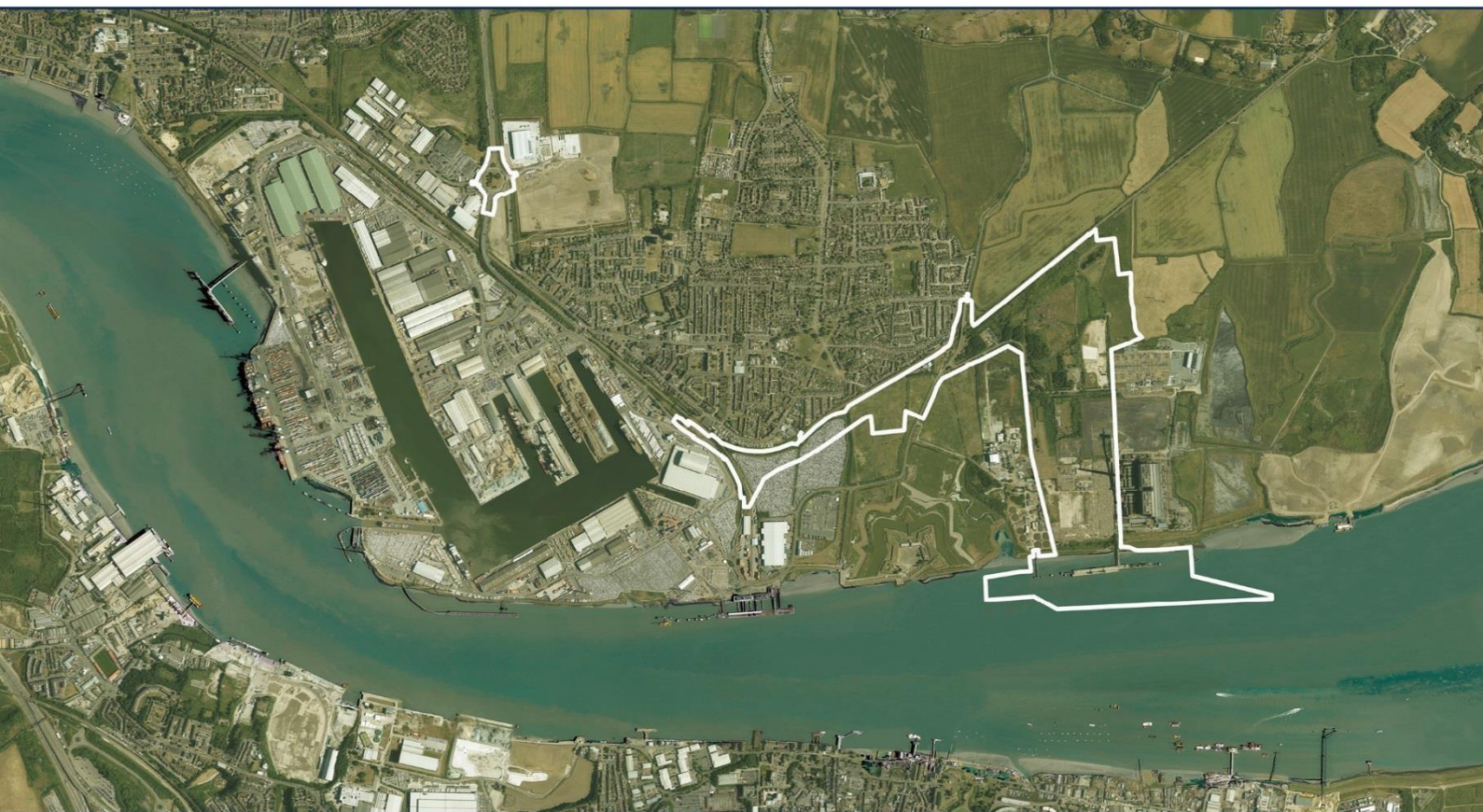
PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

TILBURY2

TR030003

APPENDIX D: HISTORICAL AND PUBLIC PHOTOGRAPHS OF TILBURY AT NIGHT

TILBURY2 DOCUMENT REF: PoTLL/T2/EX/60



T2 D2 Response to First Written Questions 1.15.5 b)

Appended copies of night time images of Tilbury Power Station obtained from internet sources.

<http://www.flickrriver.com/groups/2128962@N24/pool/random/>



<https://hiveminer.com/Tags/night,tilbury>





Viewpoint 6

Continued below ►



Viewpoint 6 Continued

LAND AT TILBURY

Night-time Photographic Field Survey Record
December 2009 - January 2010

PLANNING ACT 2008
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)
RULES 2010

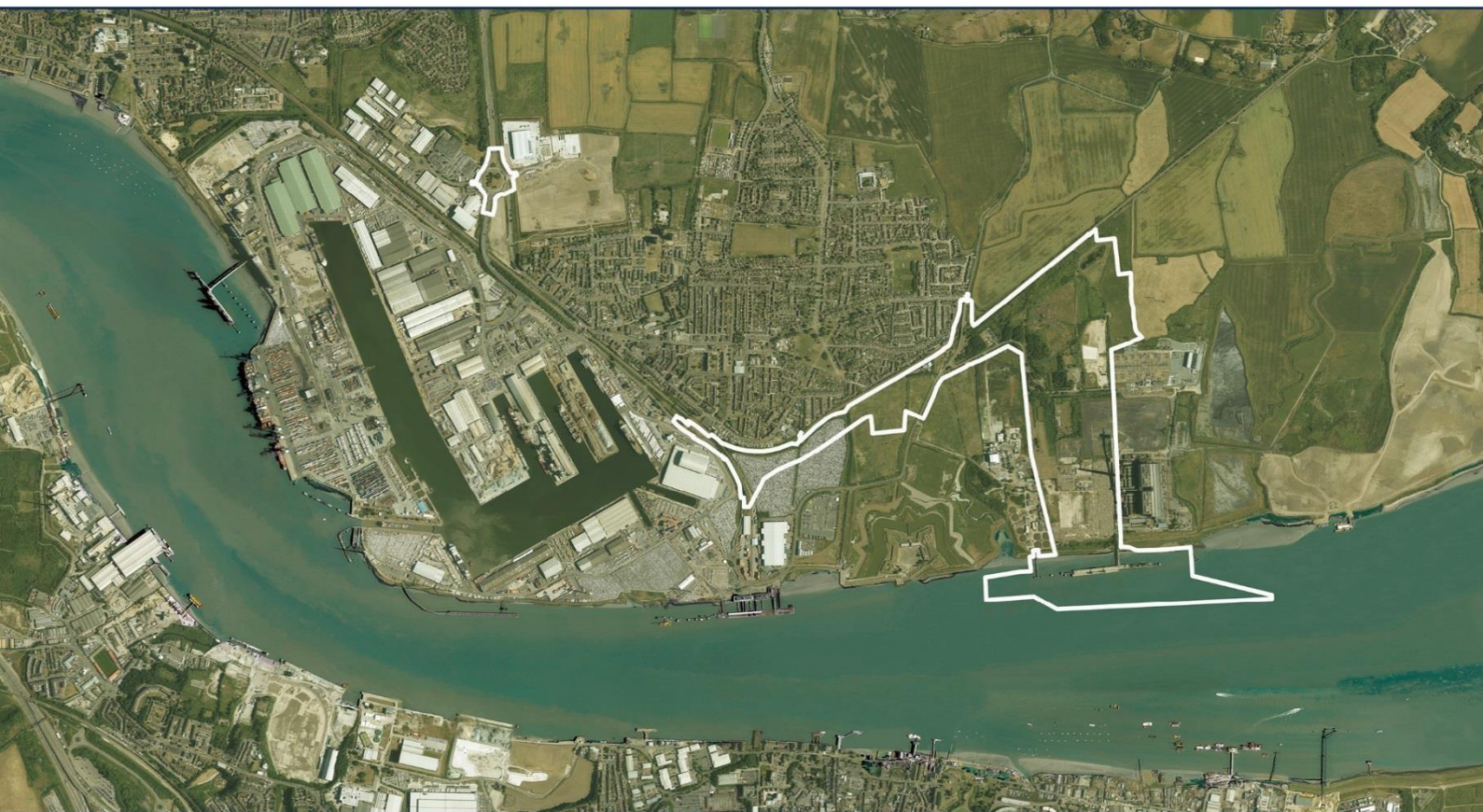
PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

TILBURY2

TR030003

APPENDIX E: WASTE: THURROCK DATA SENSITIVITY TEST

TILBURY2 DOCUMENT REF: PoTLL/T2/EX/60



Project:	Tilbury2 Environmental Impact Assessment	To:	Thurrock Council
Subject:	Waste Thurrock Data Sensitivity Test	From:	Atkins (on behalf of the Port of Tilbury London Limited)
Date:	April 2018		

The purpose of this Technical Note is to identify the baseline waste capacity and waste arisings within Thurrock for the purposes of the Environmental Impact Assessment for Tilbury2.

1. Background to the technical note

The approach used in the ES, and prior deliverables (i.e. the PIER), to undertake the Environmental Impact Assessment (EIA) was to assess the potential impacts of waste arisings during both the construction, demolition and excavation (CD&E) and operational phases on a set of defined receptors. For the purposes of the assessment the receptors were defined as:

- The waste arisings within the study area; and
- The capacity of waste infrastructure within the study area.

With regards to waste, the study area was considered to extend outside of the area of the Scheme proposals and includes CD&E (non-hazardous and inert waste) and operational (commercial and industrial (C&I)) waste arisings and waste infrastructure within Essex and hazardous waste arisings and waste infrastructure nationally (i.e. within England).

During the consultation process Essex and Thurrock identified concerns regarding the use of Essex data as a proxy for the capacity baseline. A meeting was held between POTLL, Atkins, Essex County Council and Thurrock Council on 18th January to discuss the approach used regarding capacity and agree a way forward. During further meetings and teleconferences an approach to deriving a baseline capacity for Thurrock was agreed with Richard Hatter at Thurrock Council in conjunction with his appointed consultant, Deborah Sacks, of Sacks Consulting.

2. Methodology used to derive baseline waste infrastructure capacity within Thurrock

A request was issued to the EA for a list of sites in Thurrock that are permitted to accept CD&E waste. The list of sites received from the EA was shared with Richard Hatter at Thurrock Council who reviewed and provided feedback on sites to be removed from the list (i.e. site closed, not able to accept CD&E waste etc.) and additional sites to be included. A teleconference was held to agree a final list of sites to be used to derive the baseline capacity for CDE waste in Thurrock. The list of agreed sites is presented in Tables 1-4.

EA Waste Data Interrogator (WDI) database was downloaded from the Environment Agency website for the years 2014, 2015 and 2016.

The WDI data was filtered using the agreed list of sites and a check made to confirm that sites on the list had received CD&E wastes (by filtering waste received by EWC chapter heading 17). Tonnages received were extracted and totalled to provide the total CD&E tonnage received by that site for the year. This process was repeated for each site on the agreed list. Tonnages of waste received by each facility on the agreed list were then collated by year to provide an estimate of the capacity within Thurrock for each year from 2014 to 2016.

For sites where WDI data was available, an average received tonnage was calculated for years 2014, 2015 and 2016 to forecast CD&E capacity for 2018.

For sites where WDI data was not available in 2014/2015/2016 (i.e. sites commencing operations in 2017/18) the 2018 forecast capacity was derived by using permit capacities available on the EA public register, applying local knowledge held by Richard Hatter and Sacks Consulting, contacting sites directly and professional judgement

Tables 1-4 detail the sites on the agreed list, segregated by facility type.

Table 1: Agreed list of treatment facilities

Site Operator	Address	Permit number	Average capacity 2014-2016 / tonnes	Forecast capacity 2018 / tonnes
Recycled In Orsett Ltd	Dansands Quarry, Stanford Road, Orsett, Grays, Essex, RM16 3BB	NP3696EG/A001	69,103	69,103
Hadfield Wood Recyclers Ltd	Tilbury Docks, Tilbury, Essex, RM18 7HB	BB3332AE/A001	13,186	13,186
Seales Road Haulage Limited	20 Juliette Way, Purfleet Ind Park, South Ockendon, Essex, RM15 4YD	AB3408HK/A001	87,027	87,027
G F Gordon (Plant Hire) Ltd*	19 Juliette Way, South Ockendon, Purfleet, RM15 4YD	FB3302XE/A001	-	-
Clearserve Ltd	Rainbow Shaw Quarry, Holford Road, Linford, Stanford Le Hope, Essex, SS17 0PJ	ZP3598NX/A001	52,228	52,228
Brocks Haulage Ltd	Land/ Premises At, Watson Close, West Thurrock, Grays, Essex, RM20 3EF	WP3994NL/A001	45,588	45,588
Total			267,133	267,133

*Included in agreed list of sites

Table 2: Agreed list of landfill / deposit facilities

Site Operator	Address	Permit number	Average capacity 2014-2016 / tonnes	Forecast capacity 2018 / tonnes
Clearserve Ltd	Rainbow Shaw Quarry, Holford Road, Linford, Essex, SS17 0PJ	XP3430LS/A001	27,367	27,367
Ingrebourne Valley Ltd	Moor Hall Paddocks, Kennington's Cottages, Romford Road, Aveley, Essex, RM15 4UU	CB3103TX/A001	29,940	29,940
Ingrebourne Valley Limited	Orsett Quarry Ecological Park, Buckingham Hill Road, Stanford-le-hope, Thurrock, Essex, SS17 0PP	DB3102UX/A001	-	125,000
S Walsh & Son Limited	Bluelands Quarry, Stonehouse Lane, Purfleet, Essex, RM19 1TD	JB3535AT/V004	145,864	75,000
Rural Arisings Ltd	Little Belhus Restoration, Arisdale Avenue, South Ockendon, Essex, RM15 5DP	AB3331RU/V002	415,896	415,896
R J D Limited	Mill House Farm Agricultural Reservoir, High House Lane, Chadwell St Mary, Thurrock, Essex, RM18 8TP	AB3604FS/V002	13,912	13,912

Site Operator	Address	Permit number	Average capacity 2014-2016 / tonnes	Forecast capacity 2018 / tonnes
S. Walsh & Son Limited*	East Tilbury Flood Bund, East Tilbury Quarry, Princess Margaret Road, East Tilbury, Essex, RM18 8PH	CB3609HV/V002	-	-
S Walsh And Son Limited	East Tilbury Quarry, Princess Margaret Road, East Tilbury, Essex, RM18 8PH	SP3439LE/V007	467,274	467,274
Ingrebourne Valley Limited	Land East of Tilbury Power Station		-	1,000,000
Enovert South Limited	Mucking Landfill Site, Mucking Wharf Road, Stanford-Le-Thorpe, Essex, SS17 0RN	QP3730DW	-	100,000
Total			1,100,253	2,254,389

*Included in agreed list of sites

Table 3: Agreed list of transfer stations including asbestos

Site Operator	Address	Permit number	Average capacity 2014 -2016 / tonnes	Forecast capacity 2018 / tonnes
S Walsh And Son Limited	Berth 5, Port of Tilbury London Ltd, Leslie Ford House, Tilbury Freeport, Tilbury, Essex, RM18 7EH	PB3933DJ/V002	43,111	43,111
Killoughery Waste Management Ltd	Botany Quarry, Botany Way, Beacon Hill Ind Estate, Purfleet, Essex, RM16 0AA	PP3494NH/A001	3,633	3,633
Sims Environmental & Recycling Services Ltd	Burrows Farm, Brentwood Road, Bulphan, Essex, RM14 3TL	AB3600TK/V002	13,900	13,900
Total			60,644	60,644

Table 4: Agreed list of metal recycling facilities

Site Operator	Address	Permit number	Average capacity 2014 -2016 / tonnes	Forecast capacity 2018 / tonnes
Benfleet Scrap Co Ltd	Units 1 & 2, Globe Industrial Estate, Grays, Essex, RM17 6ST	NB3433RP/T001	321	321
Total			321	321

3. Waste baselines

3.1. Waste arisings baseline

3.1.1. Thurrock

The baseline for CD&E waste managed in Thurrock was provided by Thurrock (email from Richard Hatter, Strategic Planning Manager, Thurrock, dated 14/02/2018). Table 5 details the waste managed for the years 2014 to 2016.

Table 5: CD&E waste managed per year in Thurrock

Year	2014	2015	2016
Waste arisings / tonnes per annum	2,700,000	2,300,000	2,300,000

The average tonnage of waste managed over the three-year period, 2.4 million tonnes, has been used as the 'arisings' baseline for the purposes of the impact assessment.

3.1.2. Essex

Waste arisings for non-hazardous and inert CD&E waste in Essex in 2014 were 3,620,000. The data has been taken from the Replacement Waste Local Plan Pre-Submission Draft (2016) (see the Environmental Statement¹ for further information).

3.2. Waste infrastructure capacity

3.2.1. Thurrock

The 2018 capacity baseline has been derived using the average tonnage of waste received by sites on the agreed list over the period 2014-2016 and capacity data for sites that started accepting waste after 2016 (e.g. Ingrebourne Valley, Land East of Tilbury Power Station), as detailed in tables 1-4.

The total forecast capacity for 2018 for Thurrock is 2,582,487 tonnes.

3.2.2. Essex

The total non-hazardous and inert CD&E waste capacity for Essex as detailed in the Essex and Southend Replacement Waste Local Plan (2016) is 10,024,957 tonnes per annum.

4. Waste produced by the Scheme

Waste to be produced during the construction, demolition and excavation phases of the Scheme has been estimated and detailed in the SWMP for the project (presented in Appendix A). The forecast CDE waste for the Scheme is 185,375 tonnes.

¹ Proposed Port Terminal at Former Tilbury Power Station, Volume 6 Part A, Environmental Statement, Chapter 19 (Waste and Materials)

5. Revised impact assessment

Table 7 details the revised impact assessment for the waste produced by the Scheme against both Thurrock and Essex baselines using the criteria defined in the Environmental Statement².

Table 7: Revised impact assessment

Region	Estimated Waste Arisings from scheme (tonnes)	Waste 'Arisings' Baseline (tpa)	Percentage Change	Waste Infrastructure Baseline (tpa)	Percentage Change	Significance
Thurrock	185,375	2,400,000	7.7%	2,582,487	7.2%	Moderate
Essex	185,375	3,620,000	5.1%	10,024,957	1.8%	Minor/Moderate

6. Summary

Following consultation with Thurrock, an exercise was undertaken to determine waste capacity within Thurrock for 2018, using publicly available EA data via the Waste Data Interrogator, local knowledge and professional judgement. This exercise has identified a baseline non-hazardous and inert CD&E waste capacity for Thurrock of 2,582,487 tonnes for 2018. The impact assessment has been revisited and the impact of non-hazardous and inert waste produced by the Scheme is considered to be moderate when compared to the Thurrock baselines.

7. Appendix

CD&E Waste Forecast as extracted from the SWMP.

² Proposed Port Terminal at Former Tilbury Power Station, Volume 6 Part A, Environmental Statement, Chapter 19 (Waste and Materials)

C, D or E Activity	Waste Stream	Material Type	Further description of waste - optional	Suggested LOW Code	Waste or Re-Use	(m3)	(tonnes)	(m3)	(tonnes)
Demolition	Inert - mixture of concrete, bricks, tiles	concrete	Concrete, Rubble, Bricks, Tiles and Glass etc	17 01 01	Off-site segregated		1803	1419.685039	1803
Demolition	Gypsum (17 08 02)	gypsum-based construction materials other than those	Plasterboard	17 08 02	Off-site segregated		56	169.6969697	56
Demolition	Metals	mixed metals	Metal	17 04 07	Off-site segregated		429	1021.428571	429
Demolition	Wood	wood	Timber	17 02 01	Off-site segregated		97	285.2941176	97
Excavation	Non Haz (Non Inert) - Dredgings	dredging spoil other than those mentioned in 17 05 05	Marine Dredging	17 05 06	Off-site segregated	110000		110000	56177
Excavation	Inert - Soil & stones	soil and stones (inert) other than those mentioned in 17 05 03	Terrestrial Excavations	17 05 04	Off-site segregated		53200	42560	53200
Construction	Other C&D segregated waste	track ballast other than those mentioned in 17 05 07	Aggregates	17 05 08	Off-site segregated		49200	45253.86313	49200
Construction	Other C&D segregated waste	bituminous mixtures other than those mentioned in 17 03 01	Asphalt	17 03 02	Off-site segregated		2190	2670.731707	2190
Construction	Inert - mixture of concrete, bricks, tiles etc.	bricks	Bricks	17 01 02	Off-site segregated		4.8	4	4.8
Construction	Other C&D segregated waste	track ballast other than those mentioned in 17 05 07	Cement	17 05 08	Off-site segregated		4230	3890.728477	4230
Construction	Inert - mixture of concrete, bricks, tiles etc.	concrete	Concrete paving	17 01 01	Off-site segregated		14340	11291.33858	14340
Construction	Inert - mixture of concrete, bricks, tiles etc.	concrete	Concrete structural	17 01 01	Off-site segregated		380	299.2125984	380
Construction	Other C&D segregated waste	textiles	Geotextile	20 01 11	Off-site segregated		1	3.703703704	1
Construction	Other C&D segregated waste	household plastics	Plastic	20 01 39	Off-site segregated		4.88334	34.881	4.88334
Construction	Other C&D segregated waste	track ballast other than those mentioned in 17 05 07	Sand	17 05 08	Off-site segregated		645	593.2671082	645
Construction	Metals	mixed metals	Metal	17 04 07	Off-site segregated		670.210953	1595.740363	670.2109525
Construction	Wood	wood	Timber	17 02 01	Off-site segregated		200	588.2352941	200
Construction	Packaging	plastic packaging	Packaging	15 01 02	Off-site segregated		140	636.3636364	140
Construction	Segregated Haz Waste	packaging containing residues of or contaminated by dangerous	Hazardous Packaging	15 01 10*	Off-site segregated		1	4.761904762	1
Construction	Mixed C&D waste (17 09 04)	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09	General waste	17 09 04	Off-site mixed		104	119.5402299	104
Construction	Segregated Haz Waste	absorbents, filter materials, wiping cloths, protective clothing contaminated by dangerous	Haz waste	15 02 02*	Off-site segregated		1	2.392344498	1
Construction	Other C&D segregated waste	septic tank sludge	Welfare waste	20 03 04	Off-site segregated		104	112.7982646	104
Demolition	Inert - mixture of concrete, bricks, tiles etc.		Gothard - Concrete, Rubble/Hardcore, Brick/Blockwork, Tiles and	17 01 07	Off-site segregated		680	548.3870968	680
Demolition	Inert - Glass		Gothard - Glass	17 02 02	Off-site segregated		0	0	0
Demolition	Metals		Gothard - Metals	17 04 07	Off-site segregated		681	1621.428571	681
Demolition	Gypsum (17 08 02)		Gothard - Gypsum	17 08 02	Off-site segregated		23	69.6969697	23
Demolition	Wood		Gothard - Timber	17 02 01	Off-site segregated		13	38.23529412	13
							Totals	224,835.41	185,374.89