Thurrock Flexible Generation Plant

Deadline 2 – Applicant's Response to the ExA's First Written Questions

Contents

New Documents Enclosed

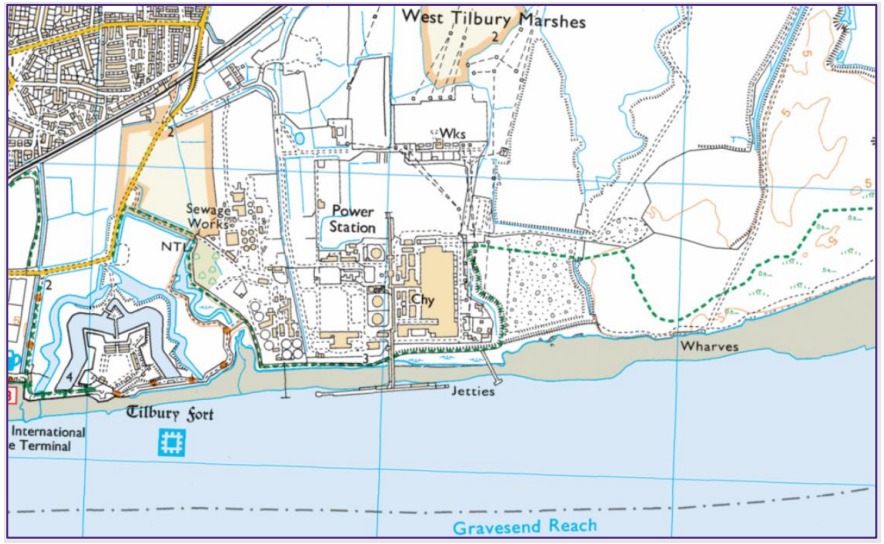
Reference	Question(s)	Title
AQ-1	1.1.1	Air Quality Baseline
AQ-2	1.1.10	Ecological Receptors
AQ-3	1.10.15	Nitrogen Dioxide Contours
CC-1	1.2.1	Hydrogen Combustion in Reciprocating Engines
CA-1	1.3.9	Compulsory Acquisition Schedule
CA-2	1.3.11	West Tilbury Common Byelaws
HER-1	1.4.9	Minutes of Meeting with HE and ECC 10 February 2021
HER-2	1.4.1, 1.4.9 and 1.4.10	Historic Environment Information
EIA-1	1.8.2	Comparison of Tilbury and Warley Sites
GEN-1	1.10.12	NGET Letter 23 February 2021
ECO-1	1.11.16	Biodiversity Net Gain Spreadsheet
N&V-1	1.14.2	Baseline Ambient Noise Levels
FR-1	1.16.7	Surface Water Map
FR-2	1.16.14	Environment Agency Letter 15 February 2021
TR-1	1.17.4	Lower Thames Crossing Comparison

Existing Documents Updated

Question(s)	Title
1.1.18, 1.8.3 and 1.16.16	Code of Construction Practice
1.1.18, 1.5.6, 1.8.5, 1.10.11, 1.15.6, 1.16.15, 1.16.16 and 1.16.17	Appendix 2.1: Mitigation, Enhancement and Monitoring Commitments
1.4.4 and 1.4.5	Outline Written Scheme of Investigation (note – now split into two parts for onshore and marine environment archaeological investigation)
1.5.5	Chapter 32: Summary of Cumulative Effects
1.5.10	Chapter 29: Geology, Hydrogeology and Ground Conditions
1.10.1	Other Consents and Licenses Statement
1.10.14	DCO Plans
1.11.7	Restrictions on Public Access to the Causeway (note – this has now been appended to the Design Principles Statement, so is no longer a standalone document)
1.11.15	Habitats Regulations Assessment Report
1.16.10	Chapter 31: Summary of Inter-Related Effects
1.17.6	Construction Traffic Management Plan
Various	Draft Development Consent Order

1. AIR QUALITY

ExQ.	Question	Response
1.1.1 Applicant	Please explain how the baseline NO_2 concentrations from the Tilbury 2 Air Quality Assessment were determined and for which year they are for? Please also explain what comparison has been undertaken between recent monitoring data and the concentrations taken from the Tilbury 2 Air Quality Assessment. Do they confirm that a conservative approach is being undertaken?	The baseline concentrations for the applicable receptors (receptors 14 to 40, named R1 to R27) were taken from Table 18.44 of the Tilbury2 Volume 6 Part B ES Appendices 18.A – 18.E. This was for the 2020 Do Something scenario and therefore includes the predicted Tilbury2 Process Contribution (PC). Supporting document AQ-1 provides a comparison of recent monitoring data and the concentrations taken from the Tilbury2 Air Quality Assessment. In the AQ-1 document, a further sensitivity analysis has been undertaken to confirm that a conservative approach has been taken. Both the assessment in the ES and the sensitivity test incorporate several conservative assumptions, whether that is in the baseline concentration used or the significance criteria used. Both assessments have concluded that the resulting air quality effect of the proposed Thurrock Flexible Generation Plant is 'not significant' overall and both approaches are conservative.
1.1.2 Applicant	Paragraph 4.1.16 of ES Chapter 12 states that receptors have been included at distances within 20m, 50m, 100m, 200m and 350m of the site boundary (excluding Zone E). However, Figure 4.1 shows that other Zones have been excluded. Please confirm the study area used and provide justification for any other development zones excluded.	Figure 4.1 shows the study area used for the assessment of potential effects from dust during construction. Paragraph 4.1.16 should have also mentioned that earthworks and construction activities are not expected at Zone H (existing private road for access). Similarly for Zone F (area for habitat creation) the works would be limited to topsoil strip and some pond/hummock digging within agricultural land. These areas were therefore excluded from the assessment of dust during the construction phase. The buffers shown in Figure 4.1 are correct.
1.1.3 Applicant	As described in Table 2.3 of ES Chapter 12 the hourly-mean NO_2 objective applies at any outdoor locations to which the public might reasonably be expected to spend 1- hour or longer. However, the descriptions in Table 2.4 of ES Chapter 12 of the ES do not adequately describe the receptors or enable the identification of any short-term receptors that have been modelled. Please confirm how receptors relevant to short term exposures have been considered.	The receptors that were modelled are representative of either residential properties or schools. At residential properties and schools, both the annual mean NO_2 objective and the short-term (1 hour) NO_2 objective apply. Receptors at which only the short-term objective applies are locations where the public might reasonably be expected to spend 1-hour or longer; few such receptors were present at locations where concentrations could reasonably be expected to be higher than for residences and schools. The only areas nearby where the short-term objective only could apply, that are nearer to the stacks than the receptors which have been modelled, are Parsonage Common to the north, Tilbury Fort and the footpath to the south (see figure below showing footpath). Figure AQ-2 (see response to Q1.1.15) shows the hourly mean NO_2 process contributions (PCs) from the proposed development. Figure AQ-2 shows that the PCs at Parsonage Common, Tilbury Fort and the footpath are below 120 $\mu g.m^{-3}$. If the PC is conservatively assumed to be 120 $\mu g.m^{-3}$ at the nearest areas where the public might reasonably be expected to spend 1 hour or longer, as long as the ambient concentration (AC) is less than 80 $\mu g.m^{-3}$ the Air Quality Assessment Level (AQAL) of 200 $\mu g.m^{-3}$ will be met. This can be checked from of the results of the RPS Project Specific Monitoring survey in Appendix 12.2 (APP-102): the nearest locations where NO_2 was monitored were Location 1, 2 and 4. Table 1.3 of Appendix 12.2: Baseline Air Quality Conditions (APP-102) shows that NO_2 concentrations of 21.2, 19.5 and 18.3 $\mu g.m^{-3}$ were measured. A factor of 2 is used to estimate the short-term (e.g. hourly) baseline concentration from the longer-term period mean baseline concentration: when the maximum PC of 120 $\mu g.m^{-3}$ is added to 2 x the annual-mean baseline of 21.2 $\mu g.m^{-3}$, the resulting predicted

ExQ.	Question	Response
		environmental concentration (PEC) is 162.4 µg.m^{-3}. This is below (81%) of the hourly-mean NO_2 AQAL of 200 µg.m^{-3} and the impacts are considered to be not significant. 
1.1.4 Applicant	Table 2.4 and Figure 1.1 of ES Chapter 12 display the modelled sensitive receptors. Please explain why only two receptors (Receptor 22 and 32) have been modelled within Thurrock Council's Air Quality Management Area (AQMA) 24 and why the eastern extent of the AQMA does not have a receptor despite it being the closest part of the AQMA to the Proposed Development.	Unless there are very few receptor locations in an assessment study area, it is not usual or realistic to assess every discrete receptor location that could potentially be affected; it is therefore usual to choose a limited number of receptor locations that are broadly representative of the general characteristics of particular areas, in locations where people are exposed for the relevant periods and where the normal day-to-day background influences for the area can be expected. This pragmatic approach is robust provided that the chosen receptor locations encompass the major factors that make them suitable for characterising exposure in their immediately-surrounding areas. That is the case in this study: it is not possible to model every receptor so representative sensitive receptors were selected at properties where pollutant concentrations and/or changes in pollutant concentrations were anticipated to be the greatest. Receptors 3 and 32 are within the Tilbury AQMA and are located closer to the roads used by the Tilbury2 development than the eastern part of the AQMA. It was expected that at this distance from the stacks, the road contribution would be higher than the stack contribution (Receptor 22 is located approximately 60 m west of the AQMA).
1.1.5 Applicant	Paragraph 1.1.2 of Appendix 12.1 lists the nationally and locally designated ecological receptors within 15km of the Proposed Development. However, there is no inclusion of	There are no ancient woodland, local nature reserves or national nature reserves within 2 km of the stacks The Environment Agency's online guidance *Air emissions risk assessment for your environmental permit* [https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit], which is

ExQ.	Question	Response
	ancient woodland, local nature reserves or national nature reserves and no justification is provided for their exclusion. Please explain why these have not been included in the assessment.	referenced in the Institute of Air Quality Management (IAQM) 2020, *A guide to the assessment of air quality impacts on designated nature conservation sites*, recommends screening distances of 15 km and 2 km for designated nature conservation sites. The guidance recommends an assessment at European designated sites within 15 km and local nature sites (ancient woods, local wildlife sites and national and local nature reserves) within 2 km. For larger emitters (greater than 50 megawatt) the screening distance for SSSI is 15 km. Paragraph 1.1.2 of Appendix 12.1 (APP-101) provides a list of nationally and locally designated sites within 15 km and 2 km, respectively. This includes seven LWS within 2 km of the proposed development. We could have perhaps been clearer and included these in a separate paragraph stating that local nature sites within 2 km of the proposed development were assessed.
1.1.6 Applicant	Table 1.1 of Appendix 12.6 shows the traffic data used within the assessment of construction traffic emissions. The traffic speeds displayed in Table 1.1 are high on several road links, especially for heavy duty vehicles (HDVs). Please explain how the traffic speeds have been determined and confirm if different speeds have been used for HDVs and light duty vehicles.	The traffic speeds used were the speed limit and speeds were assumed to be the same for HDVs and LDVs. This is a generally conservative approach. If the speeds were reduced by 20 kmph, the emissions would decrease on all road links except links 17 and 18. Table 2.1 of Appendix 12.6: Assessment of Traffic-related Emissions (APP-106) shows the predicted annual-mean NO_2 concentrations. When using the speed limits, there was one receptor (named R21) where the impact descriptor was 'moderate adverse'. At all other receptors the impact descriptors were 'negligible' or 'slight adverse'. If it is assumed that the speeds were 20 kmph below the speed limit, the impacts descriptors would range from 'negligible' at all receptors except R21, where the impact descriptor would be 'slight adverse'. At all receptors the predicted annual-mean concentrations would be below the air quality objectives. On that basis, the use of the speed limit in the original assessment is conservative.
1.1.7 Applicant	As stated in paragraph 2.2.7 of ES Chapter 12, emissions of Carbon Monoxide (CO), Sulphur Dioxide (SO_2) and Particulate Matter (PM) have not been included within the operational assessment of stack emissions. Please provide a justification for the exclusion of these pollutants.	The Industrial Emissions Directive provides emission limits for gas engines for NO_x and CO, because these are the relevant pollutants emitted when combusting natural gas. There are no limits for SO_2 or PM because these are not emitted in significant quantities. On that basis, SO_2 and PM were not included. Whilst the IED does include an emissions limit of 100 mg/Nm^3 for CO, it was not originally included in the assessment because NO_2 and ammonia (NH_3) were considered to be the main pollutants of local concern. This was because the AQMAs were designated due to ambient concentrations of NO_2. NH_3 was also modelled because of its potential for impacts on ecological receptors and for completeness it was also included in the assessment of human-health receptors. Furthermore, CO is usually effectively controlled at source so is not considered to be a major local pollutant at ground-level, ambient concentrations. Nevertheless, the PC for CO can be calculated from the PC for NH_3 as outlined below. The NH_3 emission rate at source used in the assessment was 3 mg/Nm^3 (note that emissions of ammonia would be from an SCR system (so-called ammonia slip) used for the purpose of abating NOx emissions, so including this is a conservative approach) wh The CO IED emission limit at source is 100 mg/$Nm^{3,}$ which is 33.3 times higher than the modelled NH_3 emission rate of 3 mg/Nm3. Turning to the ground-level ambient concentrations, when the maximum hourly mean NH_3 PC of 15.8 µg.m^{-3} (paragraph 4.2.14 of Chapter 12: Air Quality) is multiplied

<table>
<tr><th>ExQ.</th><th>Question</th><th>Response</th></tr>
<tr><td></td><td></td><td>by a factor of 33.3, the estimate of hourly-mean CO PC is 526.7 µg.m^{-3}. This is 2% of the hourly mean CO AQAL of 30,000 µg.m^{-3}.

The Environment Agency's online guidance <i>Air emissions risk assessment for your environmental permit</i> [https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit] provides a factor of 0.7 to convert from hourly mean concentrations to an 8-hour running mean. If the hourly mean CO PC of 526.7 µg.m^{-3} is multiplied by 0.7, the resulting 8 hour running mean CO PC is 368.7 µg.m^{-3}. This is 4% of the 8-hour running mean CO AQAL of 10,000 µg.m^{-3}.

As the CO PCs are less than 10% of the AQALs, the impacts are considered to be not significant.</td></tr>
<tr><td>1.1.8

Applicant</td><td>In the assessment of acid and nutrient nitrogen deposition on ecological receptors provided in Appendix 12.1 it is not clear if the nitrogen component of the ammonia (NH3) contributions from the Proposed Development have been included within the calculations of acid and nutrient nitrogen deposition or whether only the nitrogen component of the NOx concentrations have been used. Please confirm whether the ammonia contributions from the Proposed Development have been included in the calculations of acid and nutrient nitrogen deposition.</td><td>The nitrogen component of NH_3 was included in the calculations of nutrient nitrogen and acid deposition. The methodology section should have included the following.

Nutrient nitrogen deposition has been calculated in the following way:

1. The dry deposition fluxes (µg.m^{-2}.s^{-1}) has been calculated by multiplying the ground level NO_2 and NH_3 concentrations (µg.m^{-3}) by their deposition velocities set out in the table below.

<table>
<tr><td>Deposition Velocity</td><td>Grassland</td><td>Woodland</td></tr>
<tr><td>NOx</td><td>0.0015</td><td>0.003</td></tr>
<tr><td>NH_3</td><td>0.02</td><td>0.03</td></tr>
</table>
2. Units of µg.m^{-2}.s^{-1} have been converted to units of kg.ha^{-1}.year^{-1} by multiplying the dry deposition flux by the standard conversion factor of 96 for NO_2 and 259.9 for NH_3. (AQTAG06, Technical Guidance on detailed modelling approach for an appropriate assessment for emissions to air, November 2013). The total N deposition flux has then been calculated as the sum of the contribution from NO_2 and NH_3.

The acid deposition rate, in equivalents keq.ha^{-1}.year^{-1}, has been calculated by multiplying the dry deposition flux (kg.ha^{-1}.year^{-1}) by a conversion factor of 0.071428 for N. (AQTAG06, Technical Guidance on detailed modelling approach for an appropriate assessment for emissions to air, November 2013).</td></tr>
<tr><td>1.1.9

Applicant</td><td>Please explain why the receptors identified as sensitive for the consideration of stack emissions also represent worst case exposures to construction traffic emissions.</td><td>Receptors have been selected at properties representative of where pollutant concentrations and/or changes in pollutant concentrations were anticipated to be the greatest. Not all receptors are relevant to both stack and construction traffic emissions but there are a number of receptors alongside the construction traffic route as shown in Appendix 12.6, Figure 1.1. These receptors alongside the construction traffic route are located where pollutant concentrations and/or changes are expected to be greatest either from traffic alone or from traffic and stack emissions.</td></tr>
<tr><td>1.1.10</td><td></td><td>This is provided in AQ-2.</td></tr>
</table>

ExQ.	Question	Response
Applicant	Please provide a figure showing the location of ecological sites assessed in air quality terms and the ecological receptors modelled in relation to the Proposed Development site.	
1.1.11 Applicant	ES Chapter 2 indicates in paragraph 3.1.9 that the overall construction programme may last up to six years in a worst-case scenario. Please define 'of short duration', as stated in paragraph 5.1.1 of ES Chapter 12.	When considering individual receptors, the construction phase of the development will be short in relation to the operation of the proposed development. The construction programme of six years is for the whole development and assumes that each of the three phases of construction takes 18 months with a nine-month period in between each phase. Therefore the actual period of when dust is likely to be generated is shorter than six years and more likely to be four and half years for the whole scheme. When considering the impacts at individual receptors, the period when dust is likely to be generated is even shorter as construction activities move to different areas of the site. Nevertheless the length of the construction period would not affect the overall conclusions of the dust risk assessment as the recommended mitigation measures would be implemented for the duration of construction activities for each area.
1.1.12 Applicant	ES Appendix 12.6, Table 2.1 shows that construction traffic causes a 'slight' impact at receptor 5 and a 'moderate' impact at receptor 21 for annual mean NO2 emissions. Paragraph 2.1.3 states that in the context of absolute concentrations these impacts are considered to be negligible. Please explain why the impacts at receptor 5 and receptor 21 are considered to be negligible.	Paragraph 2.1.3 should have stated that "*the impact descriptor is categorised as 'negligible' at the majority of receptors" rather than "at all receptors*". This was an error in the wording but the conclusion was correct. The overall impact on sensitive receptors in the study area from NO_2 emitted by construction traffic is considered to be 'negligible' using the criteria adopted for the assessment and based on professional judgement.
1.1.13 Applicant	A moderate adverse effect has been assigned to receptor 9; Gravesham A226 one-way system AQMA. Limited explanation has been provided to explain why this effect can be considered minor adverse and not significant based on professional judgement. Please provide further explanation to support the identification of a minor adverse effect in this location.	The professional judgement that this is a minor adverse effect is based on observation of the current and expected future trends in baseline NO_2 concentrations at this location, a comparison of the modelled and monitored traffic-related NO_2 concentrations, and the level of process contribution from Thurrock Flexible Generation Plant. The results for receptor 9 presented in Chapter 12: Air Quality use a baseline concentration derived from recent monitoring data between 2013 and 2017. As outlined in paragraph 4.2.11 of Chapter 12: Air Quality, background traffic-related NO_2 concentrations in the UK are expected to reduce over time due to the progressive introduction of improved vehicle technologies and increasingly stringent limits on emissions. Therefore, the use of monitoring data collected between 2013 and 2017 would give a conservative estimation of the baseline level and the real baseline concentrations in future years are likely to be lower. Appendix 12.8: Further Analysis of Air Quality in Gravesend (APP-108)considers Receptor 9 (and other receptors in Gravesend) in more detail. This appendix provided a more detailed analysis of air quality in Gravesend by predicting the cumulative annual-mean NO_2 concentrations in the opening year of the development, 2022, and in future years, 2025 and 2030. This included modelling of traffic-related emissions in these years and a comparison of modelled and monitored concentrations in 2018. The appendix concluded

ExQ.	Question	Response
		that by 2022 there are a few small areas where the cumulative annual-mean NO_2 concentrations are predicted to exceed the AQAL but this is restricted to a few receptors at the front façades of buildings in West Street (Receptor 9) and in Harmer Street. By 2025 it is only receptors within 14 m of West Street that are predicted to exceed the AQAL and by 2030 concentrations are expected to be below the AQAL for all receptors. On this basis, the effect is considered to be minor adverse and not significant.
1.1.14 Applicant	Slight impacts have been predicted in the Tilbury AQMA 24 and Gravesham A226 one-way system AQMA. These have not been acknowledged or discussed. As highlighted in question 1.1.4 above, the modelled concentrations at Tilbury AQMA 24 would potentially be higher if a receptor was included at the east of the AQMA. Please explain why these impacts at Tilbury AQMA 24 and Gravesham A226 one-way system AQMA have not been discussed in the ES.	The impacts in Gravesham were considered in more detail in Appendix 12.8 Further Analysis of Air Quality in Gravesend (APP-108) and showed that by 2025 it is only receptors within 14 m of West Street that are predicted to exceed the AQAL and by 2030 concentrations are expected to be below the AQAL for all receptors. The response to question 1.1.4 shows that the impacts at a receptor at the east of the Tilbury AQMA 24 is 37.7 $\mu g.m^{-3}$ which is 94% of the AQAL. This indicates that no significant adverse effects are predicted at the Tilbury AQMA or Gravesham A226 one-way system AQMA.
1.1.15 Applicant	The annual mean NO2 concentrations at the receptors displayed in Table 4.5 do not appear to correspond to the concentrations presented in Figure 4.3. Similarly, the short-term NO_2 concentrations at receptors in Table 4.7 do not seem to correspond to the concentrations presented in Figure 4.4. It is unclear how the data presented in ES Chapter 12, Tables 4.5 and 4.7 informs the ES Chapter 12, Figures 4.3 and 4.4; can the Applicant explain the relationship?	Figure 4.3 and Figure 4.4 contained errors. The updated figures are enclosed in AQ-3. The concentrations presented in the tables in the report were correct and the conclusions were based on the data in the tables. The error was only in Figures 4.3 and 4.4.
1.1.16 Applicant	Please explain how the 4,000 operational hours per annum of the Proposed Development is secured by the dDCO.	The maximum operating hours of the flexible generation plant would be regulated by the Environment Agency through the Environmental Permit, and in principle the applicant does not consider that controls via other regulatory processes should be duplicated in the DCO. However, an upper limit of 4,000 annual operating hours has been added to the requirements as a new requirement 20.
1.1.17 Applicant	The Applicant states in paragraph 2.2.16 of ES Chapter 25 that the biggest annual mean NO2 contribution at receptor 47 is from Tilbury 2. The results in Table 2.2 do not display the contribution from Tilbury 2 at this location. Please confirm the contribution from Tilbury 2 at this location.	This was an error. Paragraph 2.2.16 should have stated that the biggest annual mean NO_2 contribution at receptor 47 was from the Lower Thames Crossing. There is no discernible contribution from Tilbury2 as receptor 47 is more than 200 m from the Tilbury2 development.
1.1.18		

ExQ.	Question	Response
Applicant	The Applicant states in Table 2.20 of ES Chapter 12 that they are not proposing to undertake any dust deposition or PM10 monitoring during construction. Please provide further justification for not undertaking PM10 monitoring during construction, considering that Table 4.2 and Table 4.3 of ES Chapter 12 state that there are receptors within 20m of the site boundary of the Proposed Development. The IAQM guidance on the assessment of dust from demolition and construction (IAQM, 2014) in Section 8.2 highly recommends dust deposition or PM10 monitoring for medium risk sites (mitigation measure 12).	As a worst-case it was assumed that all construction works would occur at the same time and up to the site boundary of the relevant zones (i.e. assuming works at any or all locations at the outer edges of the Order Limits). As a whole, based on that analysis, the site was deemed to be medium risk for dust. However, as outlined in response to Q1.1.2, dust would not be generated or would be minimal for Zone E, F or H. Of the remaining zones, only Zone C (Corridor for permanent access road, gas pipeline route, and construction laydown), Zone D1-2 (Corridors for gas pipeline route) and Zone D3 (National Grid gas connection compound and access) are within 350 m of high sensitivity human-health receptors. The main development site (Zone A) is at more than 600 m from high sensitivity receptors. The only ecological receptors within 50 m of any of the zones are Local Wildlife Sites which are low sensitivity receptors. A requirement to produce a Dust Management and Monitoring Plan (DMMP) that will include appropriate measures from the Institute of Air Quality Management guidance is confirmed in Table 12.1 of the Register of Mitigation, Enhancement and Monitoring Commitments (PDC-029; ES Appendix 2.1). This is also documented in Section 6.9 of the Code of Construction Practice (CoCP, to APP-142) and is secured in Requirement 5(2)(iv) in the draft DCO (PDC-009). As part of preparing the DMMP to discharge Requirement 5, more detailed dust risk assessment for the specific works in individual zones/areas would be undertaken and mitigation/monitoring measures for those works would be confirmed. The applicant agrees that where the dust risk of impact at sensitive receptors for a specific area or phase of works is medium, PM_{10} monitoring should be undertaken in accordance with the IAQM guidance. The 'Quantitative monitoring' bullet point in Section 6.9 of the CoCP has been edited to reflect that.

2. CLIMATE CHANGE

ExQ.	Question	Response
1.2.1	The ExA notes that the Committee on Climate Change published its Sixth Carbon Budget report on 9 December 2020, which sets the path to the UK's new net-zero emissions target for 2050. Please provide an update to the Examination on any impacts this has on the assessments undertaken in the ES.	The Committee on Climate Change's Sixth Carbon Budget report does not change the assessment approach or conclusions of the ES with regard to climate change, specifically in APP-063 (Chapter 14: Climate Change). In Chapter 14, the magnitude of greenhouse gas (GHG) emissions from the proposed development in operation was evaluated in the context of (a) the UK's carbon budgets and (b) policy goals for carbon reduction. The Committee on Climate Change's Sixth Carbon Budget report is relevant in that it shows what the UK's carbon budget in the period 2033–2037 may be (if, as is likely, the UK Government adopts the Committee's recommendation in its next Carbon Budget Order) and that it recommends policies that may be adopted to support achievement of that budget. With respect to (a) GHG emissions as a percentage of the UK's national carbon budget, paragraph 4.2.7 in Chapter 14 stated that the gross emissions would be 0.3% to 0.4% of the UK's carbon budgets to 2032. If the Committee's recommendation of a 965 $MtCO_2e$ budget for 2033–2037 were adopted, the proposed development's gross GHG emissions (if unabated at that time) would be up to 0.7% of that figure. This is acknowledged to be a higher contribution than in the fourth and fifth carbon budget periods, but remains well below a 1% contribution. With respect to (b) policies for decarbonising the UK power sector (while maintaining a resilient electricity supply and providing sufficient additional electricity generating capacity for this to play a role in decarbonising heating and transport), the Committee's Sixth Carbon Budget report makes recommendations concerning **flexibility**, **storage** and **hydrogen** that are relevant to the proposed development. On page 135, the Committee's report states that: *"A more flexible electricity system will help balance out the variability in renewable generation. Increasing flexibility comes from both demand (e.g. demand-side response, and use of surplus renewable generation to produce hydrogen) and supply (e.g. use of electricity storage)."* The specific requirement for more flexibility in the system is also recognised in the recently published Energy White Paper: *"While we are not planning for any specific technology solution, we can discern some key characteristics of the future generation mix. A low-cost, net zero consistent system is likely to be composed predominantly of wind and solar. But ensuring the system is also reliable, means intermittent renewables need to be complemented by technologies which provide power, or reduce demand, when the wind is not blowing, or the sun does not shine. Today this includes nuclear, gas with carbon capture and storage and* ***flexibility provided by batteries****, demand side response, interconnectors (see 'Energy system' chapter) and* ***short-term dispatchable generation providing peaking capacity, which can be flexed as required****."* (page 43, emphasis added) On page 135 the Committee also noted that *"dispatchable low-carbon generation is needed to balance variable renewables"* and that this essential flexible low-carbon generation capacity can be provided during the Sixth Carbon Budget period, in a balanced pathway, by a combination of gas-fired generation with carbon capture and storage (CCS), bioenergy with CCS and hydrogen-fired generation. Under the heading of dispatchable low-carbon generation on this page the Committee lists: ***"Gas with CCS****. From the second half of the 2020s, the Balanced Pathway sees the development of CCS infrastructure, which enables the deployment of gas CCS. By 2035, 30 TWh of generation comes from gas CCS, meeting 6% of demand.*
Applicant		

ExQ.	Question	Response
		[...] ***Hydrogen*** *can provide a flexible form of dispatchable generation similar to unabated gas. In the Balanced Pathway, some gas plants start to switch to hydrogen in the 2020s. By 2035, hydrogen gas plants provide 20 TWh of generation, meeting 5% of demand."* (emphasis in original). Thurrock Flexible Generation Plant, comprising battery storage and flexible thermal generation using a technology (gas reciprocating engines) that is suited to running on a hydrogen in future blend, has exactly the generation types identified by the Committee in its 'balanced pathway' as being required during the Sixth Carbon Budget period (2033–2037) for the UK to achieve the decarbonisation goal in the Sixth Carbon Budget recommendation. As set out in paragraphs 4.2.17 to 4.2.19 of ES Chapter 14 (APP-063), land for CCS is safeguarded in the proposed development in accordance with carbon capture readiness (CCR) requirements. Section 1.5 in Appendix 14.1 (APP-110) expands on this to discuss the fact that CCR land also provides space for hydrogen readiness, and the applicant's high confidence that the gas reciprocating engines are suited to run on a blend of natural gas and hydrogen in the future. Enclosed document CC-1 provides further detail on this point. Chapter 14 concludes that use of either CCS or hydrogen fuel in future would significantly reduce the gross GHG emissions from the proposed development. This conclusion is supported by the information in the Committee on Climate Change's Sixth Carbon Budget report as set out above. In the context of the Sixth Carbon Budget report and emerging government policy, the applicant notes that the need for greater flexibility in electricity generation is a direct result of the UK's greater dependency on renewables, driven in particular by the Government's ambition for 40GW of offshore wind (The Ten Point Plan for a Green Industrial Revolution, November 2020). Where intermittent generation is more dominant on the system, the greater the fluctuations in supply and the harder it becomes to balance the system both in terms of electricity output and keeping the grid stable within frequency tolerances. Against this backdrop it becomes harder to make the economics of conventional baseload generation work. This may be one of the reasons behind Drax's decision to shelve its plans for its recently consented combined cycle gas turbine (CCGT) development. It may also explain why no new baseload CCGT plants have started construction since SSE's Keadby project in 2016. With little prospect of new baseload CCGT plant being built, the closure of remaining coal plant, expected closure of some of the existing nuclear plant, continuing slow build out of new nuclear and an ageing existing CCGT fleet, the overall resilience of the grid to meet demand in periods of low wind is materially lowered going forward. Battery storage is able to play an important role in frequency response and dynamic containment (services to help manage the stability of the grid) but cannot alone provide the back-up required. For example, in January 2021 with UK electricity demand in the range of 42-44GW there were five periods of low wind (>9.5 hours) when the contribution from wind was less than 3GW. Providing reliable back-up capacity is crucial to the further deployment of intermittent renewable generation in the UK while maintaining a resilient electricity supply; and doing so fuel-efficiently (hence carbon-efficiently) is a benefit of the proposed development's gas reciprocating engine technology.
1.2.2 Applicant	Please provide further explanation for the methodology used to reach the conclusion that the Proposed Development would result in net negative	**Further explanation of methodology** The effect on net GHG emissions is assessed as the gross emissions from the proposed development minus emissions that are displaced (that would otherwise have occurred without the development) in the baseline.

ExQ.	Question	Response
	Green House Gas (GHG) emissions and thus a net beneficial impact. Please also identify examples of other instances of where the SoS has accepted a similar approach to the calculation of GHG emissions.	Section 1.4 of Appendix 14.1 (APP-110) discussed the sources of GHG emissions in the baseline that would be displaced by the proposed development. Briefly, these comprise: 1. A flexible open cycle gas turbine (OCGT) generator, or legacy combined cycle gas turbine (CCGT) generators operated at part load on standby as 'spinning reserve', to meet the equivalent peak power demand that the proposed development's gas engines would; 2. a gas-fired flexible generator to meet the equivalent peak power demand that the proposed development's batteries would; and 3. a marginal generator to meet the equivalent baseload demand that can be met by intermittent renewable generation deployment that is facilitated by the proposed development's peaking/back-up generation capacity. The net GHG emission totals stated in paragraph 4.2.4 of Chapter 14 (APP-063) have been calculated as follows. **Cumulative total lifetime GHG emissions, $MtCO_2e$** / **Source** 46 / TFGP gross emissions -49 / OCGT displaced -3 / Batteries displace peaking -7 / Renewables enabled **-14** / **Total** **Cumulative total lifetime GHG emissions, $MtCO_2e$** / **Source** 46 / TFGP gross emissions -52 / Standby CCGT displaced -3 / Batteries displace peaking -7 / Renewables enabled **-17** / **Total** As can be seen, the most important factor in the GHG emission reduction is avoiding the need, in the baseline, to operate less efficient legacy gas-fired flexible generation technologies to meet peak power demands. Note that these calculations assume natural gas combustion without carbon capture, hydrogen blending or substitution. **Examples of other instances of where the SoS has accepted a similar approach** The applicant is aware of the following examples where the SoS has accepted the approach in which a net GHG emissions effect was calculated with reference to the change from current or future baseline GHG emissions that would occur without the development in question. **Project** / **Applicant's approach** / **ExA or SoS comments** Kemsley K4 (EN010090). Gas-fired CHP station. / The applicant calculated a net 16% reduction in GHG emissions in the first operating year and 12% over its operating lifetime compared to the future baseline of gas-fired generation without the proposed development. / The ExA asked for a further explanation of how these figures had been calculated in ExQ1.11.11, which the applicant provided. There were no subsequent questions. The ExA accepted the approach, commenting in paragraph 4.10.23 of the Recommendation Report that *"Compared to the future baseline without the Proposed Development reductions in carbon dioxide equivalent of*

ExQ.	Question			
			The applicant concluded that this would be a significant beneficial effect (paragraph 6.6.5 of ES Chapter 6).	*16% in its first operating year and 12% over its lifetime were predicted. The ES indicated that this beneficial effect was significant."* The ExA concluded on this evidence that the development would have a beneficial effect on climate change, stating in paragraph 4.10.41 ('ExA Conclusion' section) that: *"In reducing CO_2 emissions the Proposed Development would have a **beneficial effect** which can be afforded some weight, but that weight is limited by the advice in NPS EN-1 and NPS EN-2 which state that individual applications for NSIPs are not to be assessed against carbon budgets."* (emphasis added). The SoS accepted this conclusion, commenting in paragraph 4.8 of the decision letter that the proposed development would result in lower GHG emissions than in the future baseline situation without it.
		Kemsley WK3 and WKN (EN010083)	The applicant calculated net GHG emissions by subtracting baseline emissions due to landfilling waste and conventional electricity generation from the waste combustion emissions of the proposed developments. This was set out in Appendices 6.1-6.3 of the ES (APPs 031-033).	The ExA accepted the principle of this approach, though noting that uncertainties in the calculation of waste combustion emissions and the landfill baseline emissions meant that little weight could be accorded to the net carbon benefit calculated by the applicant for these developments. This was set out in paragraphs 4.14.64 and 4.14.66 of the Recommendation Report. From paragraph 4.14.64: *"The netting off of a proportion of GHG is not an unreasonable approach where there is a clear baseline alternative from which like can be compared with like with a high degree of confidence."* In the Decision Letter the SoS commented at paragraphs 4.38 and 4.41 on the net emissions calculated as compared to the baseline and did not challenge that approach. The SoS agreed with the ExA's views (4.41).
		Eggborough CCGT (EN010081) Gas-fired power station	The applicant calculated net carbon savings compared to the baseline of UK-average gas-fired and existing coal-fired generation. In paragraph 18.9.2 of ES Chapter 18, the applicant concluded that the proposed development compares favourably with the existing coal-fired power station, and with UK gas fired power stations. As such, it was concluded that the proposed development would have a net beneficial effect.	The ExA accepted this approach, commenting in paragraph 4.17.4 of the Recommendation Report that: *"No concerns were raised by any IP. I had no matters of concern in this regard and I posed no WQs during the Examination. I am satisfied that the Proposed Development would not give rise to significant effects taken by itself, and would amount to considerable betterment on sustainability and climate change over the performance of the existing coal-fired power station."* The SoS' decision letter made no reference to the approach taken to calculating the net climate change effects of the proposed development.
		Keadby 3 (EN010114) Low carbon gas power station	In Table 6 of the Scoping Report, the applicant states that the ES will consider *"Potential GHG emissions avoided due to low carbon approach and the beneficial impact of the Proposed*	In row 4.10.6 of the Scoping Opinion, the ExA acknowledged the applicant's approach to assessing the net benefits – in GHG terms – of the proposed development by considering the avoided emissions due to displacement of electricity generation from other sources in the baseline.

ExQ.	Question	Response		
			Development on the carbon intensity of power generation in the UK as well as supporting the decarbonization path to net zero".	The ExA stated that information will be required in the ES regarding the emissions profile and carbon impacts of the two main fuel options.
		Wylfa Newydd (EN010007) Nuclear Power Station	The applicant calculated net carbon savings due to low carbon electricity generation (by comparing with project future grid carbon intensity). In paragraphs 7.1.4 to 7.1.5 of the *Carbon and Energy Report,* the applicant states, *"By developing the Wylfa Newydd DCO Project, it could be assumed the GHG emissions which might otherwise occur from conventional electricity generation, such as fossil fuel sources, will be avoided... Taking this into account a significant net carbon and energy offset (total emissions minus the energy offset) of 84 $MtCO_2e$ may occur from development of the Wylfa Newydd DCO Project, through avoided electricity emissions, and if it is considered to directly replace other more GHG emission intensive energy generating technologies over its lifespan."*	The ExA's Recommendation Report does not challenge the applicant's methodology for calculating the net GHG effects from the proposed development.
1.2.3 Applicant	Please explain whether, and if so how, the Proposed Development would be in line with the UK's commitments under the Climate Change Act 2008 and the Paris Agreement on Climate Change.	The proposed development will be a new entrant to the UK Emissions Trading Scheme (UK ETS). It will be obliged to hold a GHG Emissions Permit, regulated by the Environment Agency, and to purchase and surrender allowances for all CO_2 emissions from gas combustion. The UK ETS is the mechanism through which the government regulates and caps total emissions from major sources, including fossil-fuelled generators in the power sector. The ETS cap is set to a decreasing level over time and this mechanism is designed so that the cap set can be at a level that is compatible with both the UK's domestic climate change commitments and its nationally-determined contributions (NDCs) to reducing global emissions under the Paris Agreement. On 12 December 2020 the UK submitted its first independent NDC, post-Brexit, to the United Nations Framework Convention on Climate Change. The submission is published on the gov.uk website[1]. On page 12 of the UK's NDC submission the government refers to use of the UK ETS with a *"net zero consistent trajectory for the cap on emissions allowances"* to be set. As set out in the responses to Q1.2.1 and 1.2.2, Thurrock Flexible Generation Plant as a whole (with both battery storage and gas reciprocating engines) provides flexible generating and storage capacity that is required in a 'balanced pathway' for fulfilling the UK's domestic and international commitments on climate change. This is regulated by the EA under the UK ETS and the applicant has not sought to disapply that regulation.		

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/943618/uk-2030-ndc.pdf (accessed 26/02/21)

3. COMPULSORY ACQUISITION

ExQ.	Question	Response
1.3.1 Applicant	The SoR [APP-024] indicates (at paragraph 11.42) that the Applicant is not seeking CA powers over the land in the River Thames required for the causeway. The ExA also notes the matters raised by the Port of London Authority in their RR [RR-005]. Please explain how the Applicant proposes to secure this land and provide an explanation on the implications for the project (and assessments contained in the ES) in the event that the land is not secured by agreement.	Thurrock Power Limited does not need to acquire the land in question permanently as the works can be retained in place post construction under a licence from the Port of London Authority (PLA). There is no intention of using CA powers over PLA interests. Discussions have been ongoing with the PLA. The parties have agreed that a licence to occupy will be granted for construction and that there is no known impediment to that grant. The issue of a licence for retention of the causeway post construction is secured in the Protective Provisions which provide for its issue.
1.3.2 Applicant	The Applicant states in the SoR [APP-024] that 'no crown land interests are included in or affected by the Order Land'. Please identify what steps that have been taken to identify the owner of the land required for Work No 10 and what investigations have been undertaken to ensure that the land is not Crown Land.	The land required for Work No 10 was checked against Land Registry and identified to be registered and owned by the Port of London Authority under titles EX971229 and EX971244. Thurrock Power Limited is therefore satisfied that the land is not Crown Land. The PLA also confirmed in its relevant representation (RR-005) that it is the owner of the land.
1.3.3 Thurrock Council	Please provide copies of the common land register map for the Register Units CL411 and CL228 together with relevant extracts of the land and rights sections.	[N/A]
1.3.4 Applicant	There are a number of parcels identified in the BoR [PDC-004] for which the owners are not known. Please provide further details on what has been done to identify these owners and any further action that will be taken to identify them prior to the exercise of CA powers.	A Land Registry search was undertaken at the outset of the project and the commencement of the land referencing process. In October 2018, formal land referencing questionnaires were issued to all identified affected parties within the Order Limits. Telephone numbers and email addresses were provided on the letter which accompanied the land referencing questionnaires, allowing parties to make contact if they sought further information on the project. This was followed by further rounds of formal land referencing questionnaires for parties who were yet to respond in November 2018 and in July 2019. Where there was unregistered land within the Order limits, Thurrock Power Limited visited the site and site notices were affixed on or adjacent to the land in order to notify any unregistered interested parties of the project. These notices were fixed on 23 October 2018 and again on 14 November 2018 and left in situ in advance of the statutory consultation exercise. Where there were unregistered properties, site visits on the above dates were conducted which involved visiting the land and where possible speaking with neighbours to assist in identification of

ExQ.	Question	Response
		interests. Referencing questionnaires were also hand delivered through letter boxes where owners/occupiers were not present. Where land remained unregistered and of unknown ownership, discussions were held between Thurrock Power Limited and neighbouring landowners and land agents to assist in determining the land ownership. Thurrock Power Limited will continue to try to identify the missing interests, with regular reviews of Land Registry information to see if any unregistered land is now registered and continued landowner engagement with neighbouring landowners.
1.3.5 Applicant	The BoR [PDC-004] includes a number of Statutory Undertakers (SUs) with interests in land. Please provide a progress report on negotiations with each SU listed, with an estimate of the timescale for securing agreement from them. Please state whether there are any envisaged impediments to the securing of such agreements and whether the Applicant intends to include any additional protective provisions in favour of affected SUs.	A Compulsory Acquisition Schedule has been prepared and is being submitted by Thurrock Power Limited alongside these responses at Deadline 2. The protective provisions at schedule 9 of the dDCO have also been updated to reflect discussions with affected statutory undertakers. An update on any additional protective provisions to be added to the dDCO is given in Thurrock Power Limited's response to ExQ. 1.7.41 below.
1.3.6 Applicant	Other than site selection, what other alternatives to CA, including modifications to the scheme, have been considered?	The primary alternative to CA that Thurrock Power Limited is actively pursuing is to acquire the land and rights needed for the proposed development by voluntary agreement. Details of engagement with affected parties is set out in section 10 of Thurrock Power Limited's Statement of Reasons (APP-024) and an updated summary of the position with regards to ongoing negotiations is being provided in the CA Schedule being submitted alongside these responses at Deadline 2. In addition to site selection, Thurrock Power Limited undertook a consideration of site development alternatives, which are detailed in section 3 of Chapter 3 of Thurrock Power Limited's Environmental Statement (APP-046).
1.3.7 Applicant	Network Rail (NR), in their RR, object to all CA powers in the Order to the extent that they affect, and may be exercised in relation to, Network Rail's property and interests. The ExA notes that the BoR does not identify any interests in favour of NR which are affected by the CA powers sought. Please clarify whether the CA powers sought affect land owned by NR, and if so, please provide further details.	The CA powers sought do not affect land owned by Network Rail.
1.3.8		[N/A]

ExQ.	Question	Response
Network Rail	Please provide details (including a plan) identifying any NR land interests or property affected by the proposed DCO.	
1.3.9 Applicant	Please provide an update on discussions with all APs including the number and overall percentage of plots for which agreement has been reached and provide regular updates. You may wish to include this information in the CA schedule.	A Compulsory Acquisition Schedule has been prepared and is being submitted by the Thurrock Power Limited alongside these responses at Deadline 2. This is enclosed as document CA-1.
1.3.10 Applicant	Please explain how the necessary funds required for CA and TP are secured in the dDCO and how this would be affected in the event that the Order was made, but the benefit of the Order subsequently transferred.	The necessary funds required for CA and TP are not secured in the dDCO, in line with standard practice. The Funding Statement (ref APP-023) submitted by Thurrock Power Limited sets out how the funding for the development is to be provided. In terms of any transfer of the benefit of the Order, this would need to be consented by the Secretary of State (in accordance with article 8 of the dDCO), who would need to be satisfied that any transferee was able to meet the funding requirements of the development.
1.3.11 Applicant	NE state, in their RR [RR-022], that public access rights over Walton Common pre-date the Countryside and Rights of Way Act 2000 and that Walton Common is managed by conservators. Please provide further information on the steps taken to identify the extent of public rights over Walton Common, their origin and the identity of the conservators referred to by NE in their RR [RR-022]. Please also supply copies of any schemes of management or regulation made over the common (as well as details of any byelaws).	The public rights of access predate the Countryside and Rights of Way Act 2000 (CROW Act) and are set out in Thurrock Power Limited's response to ExQ. 1.3.12 below. Thurrock Power Limited has been in discussion with the Conservators and they have been included in and responded to consultations (see Consultation Report ref APP-026). A copy of the West Tilbury Common byelaws which apply to the Common is enclosed as document CA-2. These byelaws will apply to the replacement land pursuant to article 33(3) of the dDCO. Thurrock Power Limited does not currently have any further documentation and the Conservators have been unable to provide any when Thurrock Power Limited has requested this information.
1.3.12 Applicant	Please comment on whether section 193 of the Law of Property Act 1925 applies in relation to Walton Common and, if so, whether those rights can and will transfer to the Exchange Land under Art 33 of the dDCO.	Section 193 of the Law of Property Act 1925 (LPA 1925) does apply as Walton Common was waste land of the Manor. However, the rights are subject to those in the Commons Regulation (West Tilbury) Provisional Order Confirmation Act 1893 (the 1893 Act). The rights in the 1893 Act are for *"free access to the common and a privilege of playing cricket and other games and of enjoying reasonable recreation thereon, subject to such byelaws and regulation as may from time to time be made by the Conservators…"*. Whilst the rights under section 193 could be extinguished by the compulsory acquisition of Walton Common, the dDCO provides (at article 33(3)) that the replacement land will be subject to all the rights, trusts and incidents as apply to the common land, including section 193 of the LPA 1925 and the 1893 Act. Therefore public access will be preserved. In any event, if for any reason section 193 was found not to apply, the CROW Act provisions have

<table>
<tr><th>ExQ.</th><th>Question</th><th>Response</th></tr>
<tr><td></td><td></td><td>immediate effect upon the replacement land becoming registered as common with no further process needing to be invoked.</td></tr>
<tr><td>1.3.13

Applicant & Natural England</td><td>Please confirm whether Walton Common benefits from any public access rights under the Countryside and Rights of Way Act 2000. If so, please specify.</td><td>Rights under the Countryside and Rights of Way Act 2000 (CROW Act) apply automatically unless there are section 193 rights in place. Section 193 rights can be limited to certain sections of the public and revoked by the landowner. Because there are section 193 rights in place in relation to Walton Common, the CROW access rights won't apply for as long as section 193 rights are in force.</td></tr>
<tr><td>1.3.14

Applicant</td><td>Paragraph 12.25 of the SoR [APP-024] states that 'the same rights of public access would apply to the new area of common land in Zone E as those extant on Walton Common under the provisions of the Countryside and Rights of Way Act 2000'. Please clarify this statement (specifying the provisions referred to and explaining how they apply in that context).</td><td>Please refer to Thurrock Power Limited's response to ExQ 1.3.12 above.</td></tr>
<tr><td>1.3.15

Natural England</td><td>Please provide further details of the access rights referred to over Walton Common in NE's RR [RR-022] including their extent, origin, details of any schemes of management or regulation, and the identity of the conservators referred to.</td><td>[N/A]</td></tr>
<tr><td>1.3.16

Applicant</td><td>Please provide a table indicating, for each relevant plot, which of the exceptions in s131 and 132 of the PA2008 apply and give reasons.</td><td>
<table>
<tr><th>Plot no.</th><th>Relevant exception</th><th>Reason</th></tr>
<tr><td>01/13</td><td>Section 131(4)</td><td>The exception applies because replacement land is being provided which complies with the requirements of section 131(12) of the Act. This is set out in more detail at paragraphs 12.16 – 12.28 of the Applicant's Statement of Reasons (ref APP-024) (SoR).</td></tr>
<tr><td>01/14</td><td>Section 132(3) and (4)</td><td>The exception at section 132(3) applies because the Order land, when burdened with the right being acquired, will be no less advantageous to the parties with the benefit of rights of common than it was before. Section 132(4) would also apply because replacement land is being provided. This is set out in more detail at paragraphs 12.29 – 12.38 of the SoR.</td></tr>
<tr><td>01/16</td><td>Section 131(4)</td><td>The exception applies because replacement land is being provided which complies with the requirements of section 131(12) of the Act. This is set out in more detail at paragraphs 12.16 – 12.28 of the SoR.</td></tr>
</table>
</td></tr>
</table>

ExQ.	Question	Response		
		02/01	Section 132(3) and (4)	The exception at section 132(3) applies because the Order land, when burdened with the right being acquired, will be no less advantageous to the parties with the benefit of rights of common than it was before. Section 132(4) would also apply because replacement land is being provided. This is set out in more detail at paragraphs 12.29 – 12.38 of the SoR.
		02/04	Section 132(3) and (4)	The exception at section 132(3) applies because the Order land, when burdened with the right being acquired, will be no less advantageous to the parties with the benefit of rights of common than it was before. Section 132(4) would also apply because replacement land is being provided. This is set out in more detail at paragraphs 12.29 – 12.38 of the SoR.
		03/03	Section 132(3) and (4)	The exception at section 132(3) applies because the Order land, when burdened with the right being acquired, will be no less advantageous to the parties with the benefit of rights of common than it was before. Section 132(4) would also apply because replacement land is being provided. This is set out in more detail at paragraphs 12.29 – 12.38 of the SoR.
1.3.17 Applicant	Has work been carried out to assess the extent of public use of Walton Common? If so, please signpost where this can be found in the application documents.	Numerous site visits have been undertaken on Walton Common and the adjoining areas by the environmental survey teams over the past two years, including five daytime visits from the land use and recreation team, and no public access/recreational activity has been observed during those visits. Accordingly, no targeted recreational surveys have been undertaken as it is considered likely that, if there is any use of Walton Common, then it is very limited. In any event, the area of replacement common land to be provided will be in excess of the area of common lost and will also be more easily accessed by the neighbourhood and the wider public. Please see also the response to ExQ1.13.2.		
1.3.18 Applicant	The BoR [PDC-004] indicates that only the CA of new rights over plot 03/01a are sought. However, the land plans indicate that it is the permanent acquisition of the freehold. Please provide clarification and updated documents if necessary.	The Book of Reference (BoR) (PDC-004) has been corrected to reflect the rights as shown in the Land Plans. A revised BoR incorporating these changes will be submitted during the examination.		
1.3.19 Applicant	Please confirm that none of the proposed Exchange Land is currently subject to any form of public access, whether by right or informally.	Confirmed. The exchange land is currently actively farmed and is therefore managed to exclude informal access.		
1.3.20 Port of London Authority	Please comment on paragraph 11.42 of the Applicant's SoR [APP-024] and provide the PLA's views on granting a licence for the proposed causeway.	[N/A]		

ExQ.	Question	Response
1.3.21 Applicant	In the event that agreement with RWE Generation (UK) Plc is not reached, how does the Applicant propose to ensure that RWE's interests, including the safety of any operational land affected, is protected?	Insofar as RWE Generation (UK) Plc (RWE) is an electricity undertaker its interests will be protected by the protective provisions at schedule 9 of the dDCO. Thurrock Power Limited would also note that the land owned by RWE is currently vacant and any buildings on that land have been demolished. Therefore, it is not clear what interests of RWE would need to be protected.
1.3.22 Applicant	In the event that agreement with Port of Tilbury London Limited (PoTLL) is not reached, how does the Applicant propose to ensure that PoTLL's interests, including the safety of any operational land affected, is protected?	As set out in Thurrock Power Limited's response to ExQ. 1.7.40 below, Thurrock Power Limited has now included protective provisions in favour of the Port of Tilbury London Limited (PoTLL) in the dDCO which are intended to ensure protection of PoTLL's interests. Thurrock Power Limited is seeking to agree the wording of these protective provisions with PoTLL.
1.3.23 Applicant/ National Grid	Please provide an update on discussions with National Grid (both arms) and identify any likely obstacles to reaching an agreement before the close of the Examination. You may wish to include this information in the requested SOCG and/or CA schedule.	The applicant has been in discussion with National Grid on the interactions with the project and protection of their assets, including the terms of protective provisions and an asset protection agreement. This work is ongoing and will be reported at future deadlines. The applicant is not aware of substantial disagreement between the parties or in principle obstacles which cannot be resolved. The applicant is not aware of any reason why agreement will not be finalised during examination.
1.3.24 Applicant	What consideration has been given to offering full access to alternative dispute resolution techniques for those with concerns about the CA of their land? Please comment on whether such techniques are appropriate to deploy for this project and if not, why not.	Thurrock Power Limited is open to offering alternative dispute resolution (ADR) to parties with concerns about the CA of their land where such techniques would be appropriate, which will depend on the nature and circumstances of any dispute. Thurrock Power Limited notes that ADR is most often used in relation to disputes over compensation prior to a reference being made to the Upper Tribunal, rather than during the compulsory acquisition process (which largely follows statutory process). Therefore, it has not yet been deemed appropriate to proceed with such techniques as discussions are still progressing with affected parties to acquire land and rights voluntarily. Thurrock Power Limited is of the view that the use of such techniques would most likely be premature at this stage.
1.3.25 Applicant	Annex C of the Guidance related to procedures for the compulsory acquisition of land indicates (at paragraph 4) that where it is necessary for the Land Plan to have more than one sheet, appropriate references must be made to each of them in the text of the draft order so that there is no doubt that they are all related to the order. Please signpost where these can be found or include appropriate references in subsequent versions of the dDCO.	Article 40(1)(a) of the dDCO has been amended to refer to all four sheets of the land plans.
1.3.26		[N/A]

ExQ.	Question	Response
Cogent Land LLP	Cogent Land LLP's RR [RR-009] refers to a map showing the extent of Cogent's land interests having been provided in previous representations. Please provide a copy of the map referred to or indicate where this information can be found in the application documents.	
1.3.27 Applicant	Please provide an updated list of discussions and negotiations with existing landowners to include details of those who are objecting to the CA of land or rights, as well as details of their land plots. This information can be included in the CA Schedule.	A Compulsory Acquisition Schedule has been prepared and is being submitted by Thurrock Power Limited alongside these responses at Deadline 2.
1.3.28 Applicant	Why does the Applicant consider, having regard to section 122(3) of the PA2008, that there is a compelling case in the public interest for the project to be carried out?	The compelling case in the public interest can be summarised as follows: *a.* There is a compelling need for additional generation capacity on the 275 kV electricity network around London. This is a point agreed with National Grid in the Statement of Common Ground (application document A8.12) paragraph 3.3, which states '*The Tilbury 275kV substation on the orbital network is critical in the supply of electricity to the Capital so generators connecting at this 275 kV substation (and at 400 kV) will therefore benefit the UK customer and specifically London.*' (REF: Planning Statement of Case [APP-135], Page 46, para. 4.8.3, and Appendix 1 (Green Belt Statement), Para 7.10, page 50). It is reconfirmed in National Grid's response to Q1.10.12. This need is driven by the increased provision of intermittent renewables, coupled with the decommissioning of both coal and gas fired power stations in the UK electricity market. (REF: Planning Supporting Statement (Appendix 1 Green Belt Statement) [APP-135], Executive Summary, page ii, sixth paragraph.) Meeting this need is compelling and is in the public interest. b. Meeting national policy requirements to provide secure, flexible and reliable supplies of electricity, and increased capacity in the market including through the provision of decentralised generation (NPS EN-1, for example at paras 2.2.20, 3.3.12, 3.3.29 and 3.3.31) (see also Planning Statement of Case [APP-135], Table 3.1, from page 8 and Table 3.2, EN-2, page 16 and paragraphs 3.26 to 3.35). The proposed development directly supports the increased growth in renewable energy generation, one of the key aims of the NPS EN-1 and the NPPF 2019. Under the NPPF the development is also considered to be low carbon. The proposed development will deliver these national policy requirements and as such provides a compelling case in the public interest.

<table>
<tr><th>ExQ.</th><th>Question</th><th>Response</th></tr>
<tr><td></td><td></td><td>c. Compliance with other environmental policy at national level as set out in the Planning Statement of Case [APP-135], Section 4 (in particular paragraphs 4.11 to 4.148) demonstrates a compelling case in the public interest.

d. Compliance with relevant local planning policy also demonstrates the acceptability of the project, and as such a compelling case in the public interest (see planning policy compliance case in the Planning Statement of Case [APP-135], Section 4, in particular paragraphs 4.191 to 4.219).

e. The case set out in respect of Green Belt policy, and in particular the special circumstances that exist – see Planning Statement of Case [APP-135], Section 4 (in particular paragraphs 4.158 to 4.190), also demonstrate a compelling case in the public interest.

f. The provision of slightly greater than like for like exchange common land and improving public access to common land is compelling and in the public interest (Ref: Planning Statement of Case [APP-135], Appendix 1, pages 47 and 48, paragraphs 6.57 to 6.60).

The above points highlight those matters that are considered to be compelling and in the public interest and justify why Thurrock Flexible Generation Plant should be allowed to proceed.</td></tr>
<tr><td>1.3.29

Applicant</td><td>Para 14.7 of the SoR [APP-024] states that "the estimated compensation payable in respect of any compulsory acquisition is anticipated to be circa £2-5m". Please provide details on how this figure was arrived at and confirmation from an independent person that the range identified in paragraph 14.7 is accurate in terms of the current value of land and rights in this part of Thurrock.</td><td>The calculation of estimated compensation has been derived largely on a market value basis using a set amount per acre of land or per linear meter of pipeline, with the exception of the compensation for access rights over the PoTLL and RWE sites, which has been estimated on the basis of commercial terms being reached between the parties. This valuation has been prepared by an individual within the Applicant who is a member of the Royal Institution of Chartered Surveyors. The figures attributable to the different areas of land are set out in the table below.

<table>
<tr><th>Item</th><th>Size</th><th>Unit</th><th>Estimated Compensation</th></tr>
<tr><td>Access road and water pipe in Zone C</td><td>5.66</td><td>Acres</td><td>£67,920</td></tr>
<tr><td>Zone G access road (eastern option – the longest)</td><td>7.89</td><td>Acres</td><td>£94,680</td></tr>
<tr><td>Ecological enhancement land (Zones F1-F4)</td><td>24.06</td><td>Acres</td><td>£288,720</td></tr>
<tr><td>Exchange common land (Zone E)</td><td>28.72</td><td>Acres</td><td>£344,640</td></tr>
<tr><td>Gas connection compound and access to it (Zone D3)</td><td>1.46</td><td>Acres</td><td>£17,520</td></tr>
<tr><td>Area of Work 1 within Walton Common</td><td>25.95</td><td>Acres</td><td>£311,400</td></tr>
<tr><td>Remaining area of Work 1 outside Walton Common</td><td>23.78</td><td>Acres</td><td>£285,360</td></tr>
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<tr><th>ExQ.</th><th>Question</th><th>Response</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Gas pipeline (northern option – the longest)</td><td>2,299</td><td>Meters</td><td>£229,900</td></tr>
<tr><td>Access via PoTLL and RWE sites</td><td>n/a</td><td>n/a</td><td>£1,500,000</td></tr>
<tr><td colspan="3">Total</td><td>3,140,140</td></tr>
</table>
</td></tr>
<tr><td>1.3.30

Applicant</td><td>The Applicant indicates (at paragraph 12.6 of the SoR [APP-024]) that an application will be made under s16 of the Commons Act 2006 (CA2006). Please explain further the rationale for running parallel processes under the PA2008 and the CA2006, including details of likely timescales and whether, and if so how, the Applicant considers the two regimes interact.</td><td>Following extensive discussion with the landowners, Thurrock Power Limited is proposing to lease the land required for the site of the main generating station. The intention therefore is to apply for section 16 consent to deregister the common and provide replacement land because Thurrock Power Limited and the relevant landowner would prefer for the common to remain in the ownership of the landowner.

The only option available under the Planning Act 2008 to deregister the common land is to acquire the common land by compulsion. This will then result in Thurrock Power Limited owning land which it does not wish to own. It would be possible to then transfer the land back to the landowner but this adds an unnecessary step in the event that section 16 consent can be secured. The process in the dDCO is a fallback. The section 16 consent process is likely to take between 6 and 12 months depending on the need for a public inquiry to address objections. The DCO powers protect the common land where compulsory acquisition is required.</td></tr>
<tr><td>1.3.31

Applicant</td><td>Paragraph 12.8 of the SoR [APP-024] states that consent under s38 CA2006 will be required for the installation of the pipeline. The ExA notes that s38(6) CA2006 exempts certain works carried out under a power conferred in relation to that particular land by or under any enactment. Please explain, with reasons, whether the Applicant considers this exemption applies in relation to the works proposed.</td><td>Since the SoR was prepared, Thurrock Power Limited's proposed construction methods for the laying of the pipeline have been subject to further consideration and it has been concluded that the pipeline is likely to be installed using horizontal directional drilling (HDD) at the location of this piece of Common Land. Because of this, it is now the position that section 38 consent is not required because the works will not constitute restricted works under section 38(2) of the CA 2006.

Thurrock Power Limited would draw section 139(2) of the PA 2008 to the attention of the ExA, which provides that the exemption under section 38(6)(a) of the CA 2006 does not apply to development consent orders.</td></tr>
<tr><td>1.3.32

Applicant</td><td>Please provide further explanation as to why the Applicant does not consider it reasonable to exercise CA powers in Zone A simply to effect the release of common land from the rights, trusts and incidents to which it is subject and attach them to the replacement land in Zone E. Please indicate when the Applicant expects any application under s16 CA2006 would be determined and whether, and if so how, those timescales affect the Applicant's approach?</td><td>Please refer to Thurrock Power Limited's response to ExQ. 1.3.30 above.</td></tr>
</table>

4. CULTURAL HERITAGE

ExQ.	Question	Response
1.4.1 Thurrock Council/ Historic England	The ExA notes Thurrock Council's comments (RR [RR-007]) that the ES fails to assess the effects on the Grade I listed Church of St Katherine and the Grade II listed Old Rectory. The Applicant explains (Historic Environment Settings Analysis [PDC-013]) that these heritage assets were scoped out of the assessment as the development site does not form part of their settings. Please comment on the approach taken by the Applicant to these assets (providing reasons where appropriate).	Response by the applicant: The development site does not form part of the setting of these assets in East Tilbury, hence they were scoped out of the assessment. The setting of the Grade I listed Church and the Grade II listed Rectory comprises their intimate setting and relationship with each other in East Tilbury. The Thurrock Flexible Generation Plant site is part of the former West Tilbury marshes, which fell within the medieval manor of West Tilbury, and therefore is not in the setting, nor had any functional or other relationship, with St Katherine's Church or the Rectory at East Tilbury. They were two different settlements. There are no views from the Church/Rectory to the Thurrock Flexible Generation Plant site which would affect the setting of the asset: a photomontage has been produced which confirms that present vegetation and topography limits views from the Church to the flexible generation plant site (see Viewpoints 4a and 4b in HER-2). Moreover, the Rectory is enclosed within its own intimate setting and surrounding tall trees: its main façade/elevation faces south and away from the main development site (see Plates 1 to 4 in HER-2).
1.4.2 Applicant	Please indicate whether, and if so how, the Church of St James has been assessed separately to the West Tilbury Conservation Area. If not, please provide a justification for the approach taken and state whether that approach has been agreed with relevant bodies.	Yes, it has been assessed separately to the West Tilbury Conservation Area and this was presented in the Settings Assessment (PDC-013, Appendix 1). It has its own wireline and photomontage (Viewpoint 7) in APP-053 (Figure 4.3a, Figure 4.3b, Figure 4.3c) and in APP-055 (Figure 4.23a and Figure 4.23b).
1.4.3 Applicant	Please explain why no measures have been put forward and/or explored to mitigate the significant effects on West Tilbury Conservation Area (or signpost where this information can be found in the application documents).	There is embedded mitigation in the design in the form of the site layout and the materials and colour palette proposed: see Table 2.8 in Chapter 6 (APP-049) and Table 2.9 in Chapter 7 (APP-056). In addition, there is a proposed landscaping scheme, secured by requirement 14 in the dDCO (PDC-009). The applicant does not consider that any further mitigation of the effects on West Tilbury Conservation Area is possible.
1.4.4 Applicant	Please comment on HE's proposed amendments to Requirement 12 of the dDCO [PDD-004].	The archaeology requirement is number 13 in the draft DCO submitted at Deadline C (PDC-009). The applicant has been in continuing discussion with HE on the Outline Written Scheme of Investigation (WSI). The detail being sought by HE is more appropriately set out in that outline scheme, not in the requirement itself. The outline WSI will be a certified document under article 40, and requirement 13(2) requires any detailed scheme to be substantially in accordance with the outline, meaning that detailed approach agreed in the outline is secured. Requirement 13 already allows for more than one detailed scheme to be submitted and approved, allowing different schemes for different parts of the development. The request that more than one detailed WSI has therefore already been provided for in the drafting proposed.

ExQ.	Question	Response
		The applicant does not agree that the detailed schemes need to be approved by the relevant planning authority and HE. This requirement is in the nature of a planning condition which requires approval of detail by the planning authority under the consent. It is agreed that HE will be an important consultee on that and an amendment has been proposed to the requirement to clarify that, but the applicant does not accept that HE should approve the detail under the requirement. That would be a departure from the normal approach to discharge of requirements which is not accepted to be justified in this case. As such, Essex County Council's Place Services, as archaeological advisors to Thurrock Council, will sign off on the Outline WSI and the staged programme of works thereafter. As no works affecting a scheduled monument or listed building are required, it is outwith the remit of HE to consent to each stage of works, although they may be consulted by ECC's Place Services. The Outline WSI previously included marine archaeology and the applicant understands that HE agrees with the marine proposals, as confirmed in paragraph 8.2 of PDD-004. The marine elements have been separated out from the terrestrial WSI and, at the request of the MMO, the separated 'Marine and Intertidal WSI' is secured in deemed marine licence. At para 12.9 of PDD-004, HE did not specify what its concerns were or what the proposed amendments should be to Requirement 12 [now 13] of Schedule 2. However, it is believed these have been addressed within the amendments made to the Outline WSI through ongoing discussion.
1.4.5 Applicant	Please comment on the proposed amendments to the Outline Written Scheme of Investigation (OWSI) set out in section 11 of HE's PDD submission [PDD-004].	The Outline WSI has been amended following positive consultation with Historic England and Essex County Council (advising Thurrock Council) in several meetings and through comments on WSI drafts subsequent to Deadline D. The amended WSI is submitted at Deadline 2. Progress towards agreement of this WSI is noted in the draft SoCG submitted at Deadline 2.
1.4.6 Historic England	Please respond to the Applicant's explanation that it is not possible to carry out trial trenching at present due to the need to obtain consent for trenching works under section 38 of the Commons Act 2006.	[N/A]
1.4.7 Historic England	Please explain and highlight the risks HE considers are inherent in the Applicant's proposed approach of carrying out more extensive field surveys pre-construction (but post-consent) - to be secured as part of the Written Scheme of Archaeological Investigation.	[N/A]
1.4.8 Applicant	The Applicant states [PDC-002] that the approach proposed (I.e. field surveys being undertaken post-consent and pre-commencement) is one commonly adopted on other large infrastructure projects. Please identify examples of other DCO's for projects	The following three projects are examples located in a highly sensitive area for the historic environment where a similar approach has been taken to pre-commencement rather than pre-consent intrusive archaeological investigations. **M4CaN – M4 Corridor around Newport:** this was not a DCO but Highways Act Order scheme (as it was not possible to do a highway scheme in Wales as a DCO when this project started). A major element of the scheme

ExQ.	Question	Response
	located in a highly sensitive area for the historic environment where a similar approach has been taken.	was a new 6-lane highway on embankment across the Gwent Levels – a highly sensitive archaeological area and also a registered Landscape of Outstanding Historic Interest. Intrusive archaeological investigations here would have required excavation to depths of more than 6 m in order to examine the full extent of potential impacts. The pre-submission archaeological work used a combination of non-intrusive methodologies (geophysical survey, airborne survey, deposit modelling etc) and this was accepted by Cadw as a reasonable way to proceed. Intrusive archaeological work was planned post-consent and was tied into the detailed design stage so that scheme impacts could be very closely targeted. Ultimately the scheme was cancelled by Welsh Government, despite a favourable Inspector's Report following a lengthy public inquiry, so the decision not to undertake archaeological works that would probably have damaged the Gwent Levels was a justified one. As with the Gwent Levels, even if pre-determination evaluation were possible at Walton Common, any programme of pre-submission intrusive archaeological investigation carries with it a high risk of physical and visual impact should the scheme not progress to construction. Similarly, with regard to Zone C, a blanket 4% sample approach across the whole pipeline corridor area would also be extremely damaging and best focused as a staged approach assessing and informing the revised pipeline corridor as it goes through an iterative design stage post-consent. As with the M4CaN project, intrusive archaeological work has been planned post-consent and tied into the detailed design stage so that the proposed development scheme impacts could be closely targeted to cause the lowest possible level of harm to the landscape. **Tilbury2**, adjacent to the proposed development: Thurrock Council (as advised by Richard Havis at Essex County Council's Place Services) was satisfied that the archaeological potential at the Tilbury2 site was of no more that local interest, and therefore all intrusive archaeological investigations were allowed to be undertaken by condition post-consent. **Northampton Gateway Rail Freight Interchange:** geophysical survey of site followed by only a very limited amount of evaluation trenching, contrary to the wishes of the county archaeologist. The Inspector disagreed with the view of the county archaeologist and agreed that sufficient information to determine the level of harm from the proposed scheme had been put forward and that works could therefore be undertaken post-determination (PINS ref TR050006). **Triton Knoll Electrical System (TKES) DCO:** the applicant proposed a very similar approach to that proposed in this case, relying on non-intrusive work pre-consent, with an outline WSI secured by the DCO which required intrusive investigations to be carried post-consent and pre-construction. The TKES DCO required that, prior to the construction of the proposed development, a WSI would be submitted and approved by the local authority. That WSI would be guided by initial geophysical survey and targeted trial trenching within the Order limits, in order to specify and programme which assets would be either 'preserved in situ', or 'preserved by record'. The host authority objected to this approach in the examination stating that the relying on desktop survey results to undertake the assessment and not carrying out intrusive pre-determination field evaluations was insufficient. The host authority considered that without intrusive investigation, the evidence base was insufficient to inform the identification of important heritage assets and to ascertain the extent of any potential effect on such assets. The TKES DCO Examining Authority concluded that that the baseline conditions had been accurately established and sufficient data had been provided by the applicant to allow the decision to be made, and that

ExQ.	Question	Response
		the need for intrusive field evaluations was appropriately secured by the requirements. The Examining Authority was therefore satisfied that regardless of the fact that this work would be carried out post consent, the necessary evaluation data will be available to inform the mitigation strategy and the approach was acceptable. The Secretary of State accepted this approach and included the WSI requirement in the granted DCO.
1.4.9 Applicant	Please provide photowireline and photomontage images (using photographs taken during winter and/or modelled without vegetation) for all key viewpoints applicable to heritage assets or signpost where they can be found in the ES. These should include Viewpoints 4, 7, 8, 17, 30, 31 (including from the raised embankment (seawall)), and 32.	During a meeting with HE and ECC on 10 February 2021 in which the visualisations were reviewed, it was agreed that the difference in winter/summer foliage in views from relevant viewpoints (including 3, 4, 7, 8, 10, 13, 14, 17 and 30-32) did not warrant reproducing the existing visualisations from these viewpoints on the winter photography base. These are already within the ES (ref: APP-053, APP-054, APP-055). It was agreed to take new winter photographs and to produce visualisations from: • the raised embankment (sea wall) near viewpoint 31; • at St Katherine's Church; • and if possible at Bowaters Farm HAA Battery. See minutes of meeting on 10 February 2021, enclosed as document HER-1. These photographs with visualisations are presented and discussed in enclosed document HER-2.
1.4.10 Applicant	Please provide photowireline and photomontage images (worst-case scenario) showing the effect of the proposed development on Bowaters Farm WWII anti-aircraft battery (and provide any necessary updates to the Historic Environment Settings Analysis) [PDC-013] or provide further justification as to why this heritage asset has been scoped out of the assessment.	A further site visit in February 2021 has re-confirmed that the Bowaters Farm HAA battery is completely overgrown and the monument is unreachable. This has been discussed with Historic England and Essex County Council officers on 10 March 2021 and photographic evidence of the battery's condition was shown. It was agreed that providing a meaningful visualisation from this location was not possible and that, in the battery's present condition, the dense vegetation prevents both access to it and views from it towards the proposed development. Plates 5-9 in HER-2 show the perimeter of the Scheduled Monument: the footpath indicated on OS mapping is densely overgrown and inaccessible. It is also noted that the Bowaters Farm HAA Battery was scoped out for assessment by the LTC project because of the overgrown nature of the monument which prevented any views of the proposed motorway alignment, which would lie between the monument and the Thurrock Flexible Generation Plant site.
1.4.11 Applicant	Please explain how the newly released archaeological data from the London Thames Crossing project has added to the baseline evidence on heritage assets.	In PDC-002 the data understood to have been gathered at that time by the LTC project was set out, but that information had not been available to review. However, subsequent pers. comms. with consultants working on the LTC project have indicated that the geoarchaeological data matches that from the Thurrock Flexible Generation Plant site, and the trial trench evaluations carried out within and surrounding Thurrock Flexible Generation Plant Zone D2 (part of the gas pipeline route) comprises evidence of Roman settlement, which is in keeping with what is already known for this area and is unsurprising. This is further discussed in HER-2.

ExQ.	Question	Response
		The data published by the LTC project before that application was withdrawn pertained only to the Kent side of the LTC project: now that the LTC application has been withdrawn, no further data relevant to the Thurrock Flexible Generation Plant baseline is in the public domain to review. Further archaeological evaluation works are being planned by the LTC project this summer which overlap with Zone C of the Thurrock Flexible Generation Plant site. The archaeological contractor for the LTC project is currently preparing an indicative trenching plan. An indicative trench plan for proposed pre-construction evaluation works by Thurrock Power Ltd has also been produced as part of the revised Outline WSI. There will clearly be an overlap between both projects and continued liaison with the LTC archaeologist will be maintained to ensure that information is shared.
1.4.12 Applicant	Please explain whether, and if so how, the effect of the Proposed Development on the non-designated heritage asset known as Shornemead Fort (and identified by Thurrock Council [PDD-008]) has not been assessed in the ES (or provide a justification for its omission).	The view from Shornemead Fort was assessed in the APP-049 (ES Volume 3, Chapter 6: Landscape and Visual Resources (Part 1)) paragraphs 3.4.21, 3.4.29, 4.1.23 and 4.2.23. The view from Representative Viewpoint 24, located at Shornemead Fort, is described at paragraph 3.4.67 and assessed at paragraphs 4.1.44 and 4.2.23 of APP-049. Shornemead Fort is non-designated and the effect of the development was not deemed significant following scrutiny of the LVIA assessment and photomontage from viewpoint 24, and hence was scoped out of further assessment. The setting and important relationships for Shornemead Fort comprise its inter-relationships with Coalhouse Fort and Cliffe Fort to the east, and Tilbury Fort and Gravesend Fort to the west. The proposed development would not impact on this heritage asset in the context of the pylons already in the view, and therefore it was scoped out of further assessment, although is mentioned in the historic baseline informing the ES chapter for Cultural Heritage. The purpose of an ES is not to identify every effect, but to only assess those where significant effects are possible.

5. CUMULATIVE IMPACTS

ExQ.	Question	Response
1.5.1 Applicant	Please explain whether, and if so what, consideration has been given to the Tilbury Link Road scheme (referred to by PoTLL in their RR [RR-023]) in the assessment of cumulative effects on transport and traffic.	The Tilbury Link Road has not been assessed as a cumulative development for effects on transport and traffic. In RR-023 PoTLL describes a 'Tilbury Link Road' as a potential route from the Lower Thames Crossing to the entrance to Tilbury2 (paragraph 65). As PoTLL notes, the Tilbury Link Road proposal has been withdrawn. The applicant is not aware of any consent application or active pre-application proposals for such a development. The applicant agrees with PoTLL's statement in paragraph 67 of RR-023 that "*TLR* [Tilbury Link Road] *cannot be considered a cumulative project at this time*".
1.5.2 Applicant/ Thurrock Council	Please explain the current status of the Tilbury Link Road project referred to by PoTLL in their RR [RR-023] including details of how advanced the scheme is and its relationship to the Proposed Development.	The applicant is not aware of any active proposal to develop a Tilbury Link Road. There is a reference to it in Annex D, Table 13 of Highways England's Delivery Plan 2020-2025 in which it is identified as one of 30 possible future road pipeline schemes *"for consideration"*, but no further details are provided. The applicant considers that a Tilbury Link Road, were it to be proposed in the future along an alignment south of the railway as had been suggested in Lower Thames Crossing consultation documents prior to 2018 (after which this proposal was removed), could be routed through the Zone C area of the proposed development without conflict with the flexible generation plant infrastructure in Zone A. Any such development would need to consider impacts on the habitat creation/enhancement areas established by Tilbury2 and proposed for Thurrock Flexible Generation Plant south of the railway and on utilities (including existing overhead lines, any lines undergrounded by the LTC, and the Thurrock Flexible Generation Plant gas pipeline). A Tilbury Link Road in this location might connect to or in effect partly replace the proposed development's private access road through Zone C. The applicant is supportive of the principle of the Tilbury Link Road and will continue to engage with the promoters on that proposal.
1.5.3 Applicant	The Cumulative Effects Assessment (CEA) of Air Quality in ES Chapter 25 states in paragraph 1.3.3 that the study area for ecological receptors is up to 15 km from the stacks. As the CEA study area is proposed to be based on the furthest reaching ZOI from the aspect Chapters, please explain why a 10km rather than 15km study area has been used?	The 15 km study area is an exception to that general ZOI, defined in APP-074 (ES Chapter 25: Air Quality CEA) specifically for screening of possible impacts from air pollutant deposition on ecological sites, under the guidance referenced in paragraph 1.3.3. As stated in paragraph 1.2.9 of APP-067 (ES Chapter 18), *"where applicable, individual study areas defined in each ES topic chapter have been used to inform the identification of short-listed developments to be taken forward for assessment within those specific chapters"*, and this has been the case for Chapter 25.
1.5.4 Applicant	Please signpost where the cumulative assessment of underwater noise has been	A cumulative assessment of underwater noise was not scoped into the cumulative effects assessment in Volume 4, Chapter 30 (APP-079).

ExQ.	Question	Response
	considered/assessed in the ES or explain why it is omitted from the application?	As outlined in response to question 1.14.8 below, the potential for significance of effects of underwater noise on marine ecological receptors (i.e. fish and marine mammals) from Thurrock Flexible Generation Plant alone was negligible. This was due to the short term and temporary nature of the impact and the low levels of underwater noise associated with the project, which will not represent a significant shift from the baseline underwater noise levels in the Thames Estuary, with a conclusion that this impact would lead to a negligible effect. For Tilbury2, the only other project for which there was information which could be used in the cumulative assessment in Chapter 30 (APP-079), construction activities (including piling activities which generate increases in underwater noise which may lead to effects on marine ecological receptors) will be complete prior to construction of the proposed development and therefore there is no temporal overlap. Operational phase impacts for Tilbury2 will be limited to vessel movements and the Tilbury2 Environmental Statement concluded that "*the overall increase in traffic as a result of use of this jetty is not expected to result in a measurable increase in average noise levels*" (Port of Tilbury, 2017). As such, there is no potential for significant cumulative effects on marine ecological receptors and the applicant considers that this provides adequate justification for not including a cumulative assessment of underwater noise.
1.5.5 Applicant	Paragraph 3.4.8 of the Planning Inspectorate's Advice Note 17 states that the type of effect should be considered in a cumulative assessment; this can be either synergistic or additive. Although the Applicant has identified that where the Proposed Development contributes to significant cumulative effects, these additions are small (for example, Air Quality and Population and Health etc.), regardless of the contribution, where the Proposed Development is adding to a significant effect this significant effect should be reported as such in the ES; these are not reported either in the relevant cumulative Chapters or the summary of significant effects. Please update the ES to report all significant effects to which the Proposed Development contributes.	Given the different planning stages that potential cumulative developments are at, and the different levels of environmental impact information published about each, it is not always possible to identify with high confidence where a potential impact of another development may cause a significant effect from that development. Where possible, Chapter 32 (Summary of Cumulative Effects) has been updated to highlight more clearly those cases where it is considered likely that there would be a significant adverse effect from another development to which Thurrock Flexible Generation Plant would add or contribute.
1.5.6 Applicant	Paragraph 2.4.1 of ES Chapter 22 states that additional mitigation for invertebrates has been proposed to address risks of temporary habitat loss due to cumulative effects. However, Paragraph 1.2.2 of ES Chapter 32 concludes that no further mitigation or monitoring measures are	The additional commitments in paragraph 2.1.6 of APP-071 (ES Chapter 22: Onshore Ecology CEA) have been added to the revised ES Appendix 2.1. They will be implemented through the Ecological Management Plan which is secured through Schedule 2, Part 1, Requirement 14 of the DCO.

ExQ.	Question	Response
	considered necessary. Furthermore, the Register of Mitigation, Enhancement and Monitoring Commitments found in Appendix 2.1 does not mention the additional mitigation proposed in Section 2.4 of ES Chapter 22. Please clarify this discrepancy?	
1.5.7 Applicant	Table 2.2 of ES Chapter 25 indicates that at Receptor 47 a new exceedance of the Air Quality Assessment Level (AQAL) is predicted due to the impact of the Proposed Development in combination with the cumulative developments. Paragraph 2.2.6 states that the Process Contribution (PC) from the Proposed Development at this receptor is only 1% of the National Air Quality Standard objective and the biggest contribution is from the Tilbury 2 development. Please explain the significance of this new exceedance of the AQAL and how it will impact air quality commitments made by Gravesham Borough Council?	As explained in response to ExQ1.1.17, paragraph 2.2.16 of Chapter 25 incorrectly states that the biggest contribution is from Tilbury2. The biggest contribution is in fact from the Lower Thames Crossing. At receptor 47 (named 20141214) the cumulative PEC is predicted to be 40.3 µg.m^{-3} or 101% of the AQAL. This is based on using a baseline ambient concentration (AC) of 38.6 µg.m^{-3} obtained from the five year average monitored concentration at monitoring location GR57. The location of GR57 is at the junction of the B251 and the A227, as depicted in Figure 1.3 of Appendix 12.2 Baseline Air Quality Conditions [APP-102]. The A227 is the only major road near to receptor 47 and therefore the baseline AC estimate obtained from GR57 (which will be affected by traffic on both the B251 and the A227) is likely to be higher than the actual baseline AC at receptor 47. On that basis the actual cumulative PEC at receptor 47 is likely to be below 40.3 µg.m^{-3} and the AQAL. The impact is not therefore considered to be significant and it is not expected to affect air quality commitments made by Gravesham Borough Council.
1.5.8 Applicant	The Applicant states in Paragraph 2.2.28 of ES Chapter 25 that Selective Catalytic Reduction (SCR) will be implemented, and the Proposed Development PCs are likely to more than halve. Please confirm how SCR is secured by the dDCO?	The predicted concentrations shown in the Chapter 25 assume that no SCR will be implemented. The purpose of paragraph 2.2.28 was to highlight that the results were worse case and based on a number of conservative parameters and the actual concentration were likely to be lower. The applicant will be required to implement Best Available Techniques (BAT) through the environmental permitting process, and at the time of applying for the permit will identify these through a BAT analysis. This would determine the air pollutant control system to be fitted, which the applicant considers is very likely to include SCR.
1.5.9 Applicant	Please state what Natural England guidelines are referenced in Paragraph 2.2.33 of ES Chapter 25 and provide a list of which potentially significant effects at designated sites were excluded from the CEA?	Paragraph 2.2.33 refers to paragraph 4.47 of the Natural England June 2018, *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitat Regulations* which states*:* *"In general terms, it is important for a competent authority to remember that the subject plan or project remains the focus of any in-combination assessment. Therefore, it is Natural England's view that care should be taken to avoid unnecessarily combining the insignificant effects of the subject plan or project with the effects of other plans or projects which can be considered significant in their own right. The latter should always be dealt with by its own individual HRA alone. In other words, it is only the appreciable effects of those other plans and projects that are not themselves significant alone which are added into an in-combination assessment with the subject proposal (i.e. 'don't combine individual biscuits (=insignificant) with full packs (=significant)')."*

ExQ.	Question	Response
		The following cumulative PCs were not included in the cumulative PECs as they were greater than 0.3 µg.m^{-3} and therefore may result in potentially significant effects in isolation. • Lower Thames Crossing and Tilbury 2 – All designated sites. • Tilbury Green Power – Thames Estuary and Marshes SPA, Hangmans Woodland and Deneholes SSSI, Mucking Flats and Marshes SSSI, West Thurrock Lagoon and Marshes SSSI. • Tilbury Peak Reserve – Thames Estuary and Marshes SPA, Mucking Flats and Marshes SSSI. • Gateway Energy Centre – Thames Estuary and Marshes SPA, Canvey Wick SSSI, Holehaven Creek SSSI, Mucking Flats and Marshes SSSI, Pitsea Marsh SSSI, South Thames Estuary and Marshes SSSI, Vange and Fobbing Marshes SSSI.
1.5.10 Applicant	The significance criteria set out in ES Chapter 4 Table 2.3 suggests that a minor impact at a very high sensitivity receptor would result in a moderate or major adverse effect. Please explain how the significance of effects identified in ES Chapter 29 [APP-078] were established, particularly the cumulative effects identified in paragraphs 2.1.4 and 2.1.6.	The cumulative effects in ES Chapter 29 are assessed qualitatively, using professional judgement with impact assessment criteria defined in Section 2.5 in APP-065 (Chapter 16). Edits have been made to Chapter 29 to set this out more consistently.

6. DESIGN AND LAYOUT

ExQ.	Question	Response
1.6.1 Applicant	How has the Design Principles Statement [APP-140] considered the extent to which the Proposed Development can contribute to the enhancement of the quality of the area?	The Design Principles Statement (APP-140) is focused on the design of the flexible generation plant itself. As industrial infrastructure, with a form that must follow its function, opportunities to contribute to enhancement of the quality of the area through its design are limited. However, the Design Principles Statement sets out a colour palette that was recommended by Thurrock Council and an approach to 'skyscaping' taller structures on the site (see also the response to question 1.12.2). The proposed development's contributions to enhancing the quality of the area are through providing common land in a location that is more accessible to local communities than Walton Common (and slightly larger), and through providing landscaping planting together with ecological habitat creation and enhancement on land north and south of the railway.
1.6.2 Applicant	The dDCO includes provision for the certification of the 'illustrative site layout plans'. How is compliance with these plans secured within the dDCO? Please explain the purpose of certifying these illustrative documents.	These do not relate to any provision of the DCO. The illustrative site layout plans have been deleted from Articles 1 and 40.

7. DRAFT DEVELOPMENT CONSENT ORDER

ExQ.	Question	Response
1.7.1 Applicant	Art 2 - Permitted preliminary works – There is some overlap between the list of permitted preliminary works (as defined in Art 2) and the "further development" listed at the end of Schedule 1. This should be remedied.	The applicant has reviewed and proposed amends to these lists in version 4 of the dDCO.
1.7.2 Applicant	Art 2 - please review the definition of 'Order Land' and consider whether it could be more precisely defined.	Thurrock Power Limited has proposed amends to this definition which also take account of changes requested by the Port of London Authority
1.7.3 Applicant	Art 4 - Please comment on whether this article should be subject to Schedule 2 and Art 11.	The applicant is unclear what would be achieved by stating that article 4 is subject to the requirements set out in schedule 2. That is true for every article and is explicitly stated in article 3 which makes the whole consent subject to the requirements. It is unclear why article 4 would be stated to be subject to article 11. Article 4 constrains the development within the order limits and provides for deviation within those limits to be restricted. Article 11 provides authority for street works within the Order limits, it does not act to constrain the applicability of article 4.
1.7.4 Applicant	Art 6 (2) - as drafted this only applies to the operation of a generating station. Is this intended or should it be expanded to cover the totality of the authorised development (including for example the causeway)?	The article has been expanded to refer to the authorised development.
1.7.5 Applicant	Art 15 - the EM is not fully aligned with the actual wording of Art 15 (and only appears to apply to a single Traffic Regulation Order – see Schedule 3). Please review.	The applicant has submitted an amended EM (version 3) with this response.
1.7.6 Applicant	Art 16 - should the broad power in paragraph 1 be expressly subject to the restrictions in paragraphs 3 and 4? If not, please provide a justification.	The applicant considers that this is a stylistic point and has amended the article so that the power in paragraph 1 is expressly subject to the restrictions in paragraphs 3 and 4.
1.7.7 Applicant	Art 18 (5) - is there repetition in final part of sentence?	Yes, this is an error and has been corrected in version 4 of the dDCO.

ExQ.	Question	Response
1.7.8 Applicant	Art 19 - the compulsory purchase powers in this Art are very broad and include land required to facilitate the authorised development "or incidental to it". Please provide further justification for the inclusion of these very broad powers.	The wording used directly follows the enabling power in section 122 of the Planning Act 2008, which specifies when compulsory acquisition may be authorised. That provides that a DCO can include powers of compulsory acquisition only for land which "is required to facilitate or is incidental to that development" (s122(2)(b)). This wording is therefore what is prescribed by the Act. The need for each plot has been set out in the Statement of Reasons.
1.7.9 Applicant	Art 20 - please explain the reference to s.158 PA2008 in the EM. This Art confers statutory authority to override easements and other rights (subject to the payments of compensation under s.7 or 10 of the 1965 Act).	This article covers the same substantive matters as are addressed in section 158 of the Planning Act 2008 (which provides for statutory authority to be applied). However, that section provides only very high level principles. The purpose of this article is to set out how those principles are given effect under the DCO. Article 20(3) applies the statutory authority to "the exercise of any power authorised by this Order". This is necessary to ensure that the full range of powers under the DCO are covered. This also ensure that persons whose rights are overridden by that exercise have a clear claim to compensation for that action. This is precedented in The Millbrook Gas Fired Generating Station Order 2019 and The A303 (Amesbury to Berwick Down) Development Consent Order 2020.
1.7.10 Applicant	Art 21 (2) - please explain why this power is necessary and identify any previous precedent for it.	Article 21 is a time limit on the use of powers of compulsion. Paragraph 2 simply provides that temporary possession of land for the carrying out of development cannot be continued after the expiry of the time limit unless entry has been taken within it. As these time limits run from the making of the order not the commencement of development or start of any particular works, this provision is necessary to allow possession to continue where works are not yet complete at the end of the specified period. Article 28(3) limits the period for which possession can be taken and requires removal of the undertaker within one year of the completion of the works for which temporary possession was taken. This drafting was included in the model provisions as paragraph 20 of schedule 1. It is precedented in numerous DCOs; some examples of recently made orders which include this provision are The Cleve Hill Solar Park Order 2020 (art 17), The A303 (Amesbury to Berwick Down) Development Consent Order 2020 (art 21) and The Southampton to London Pipeline Development Consent Order 2020 (art 24).
1.7.11 Applicant	Art 24 - please provide further explanation of the rationale for the modifications to the 1981 Act.	The modifications to the 1981 Act are required to allow the general vesting declaration procedure to be used for the exercise of compulsory acquisition under this order, allowing several parcels to be acquired at once and therefore more efficiently than under the notice to treat procedure. This process also allows a landowner with multiple holdings subject to acquisition to be dealt with through one procedure rather than receiving individual notice to treat notices for each holding which can become confusing. The changes apply the 1981 Act procedure with amendments to accommodate the nature of the DCO regime so that it works in practice. For example by specifying that the time limits for the making of a declaration are as specified in the DCO and not the period specified in the Act so preventing any conflict between these.

ExQ.	Question	Response
		These modifications are fundamental to having a fit for purpose DCO. Thurrock Power Limited is not clear what explanation is sought further to that provided in the EM which addresses this article in detail.
1.7.12 Applicant	Art 29(11) - the definition of 'maintenance period'. A number of recent DCOs granted by the SoS BEIS provide greater certainty on the maintenance period. The ExA considers that this Art should be similarly drafted.	The paragraph has been amended to provide that the maintenance period commences on the date on which the gas fired power station first exports electricity to the national electricity transmission network as precedented in the Cleve Hill Solar Park Order 2020.
1.7.13 Applicant	Art 28 - Given the parliamentary approval to the TP regime under the Neighbourhood Planning Act 2017 (NPA2017), which was subject to consultation and debate before being enacted, should the current wording of Art 28 be modified to more closely reflect the incoming statutory regime? As examples: • The notice period that will be required under the NPA2017 is 3 months, substantially longer than the 14 days required under Art 28(2). Other than prior precedent, what is the justification for only requiring 14 days' notice in this case? • Under the NPA2017, the notice would also have to state the period for which the acquiring authority is to take possession. Although Art 28(3) limits the period for which possession can be taken, is it sufficiently precise? • Powers of TP are sometimes said to be justified because they are in the interests of landowners, whose land would not then need to be acquired permanently. The NPA2017 provisions include the ability to serve a counter-notice	Thurrock Power Limited notes that it does not accept that it is a reasonable approach to exclude prior DCO precedents in considering the drafting of this DCO. The relevant provisions of the NPA 2017 have not been brought into force and (as at the date of preparing this answer), no commencement date for them has been set by Parliament. The High Speed Rail (London to West Midlands) Act 2017 and the High Speed Two (West Midlands to Crewe) Act 2021 both do not mirror the provisions of the NPA 2017. Parliament has therefore clearly accepted, both in primary and secondary legislation, including DCOs, that the NPA is not a model which must be followed for all exercise of powers of TP. The 14 day period is designed to ensure that the development can be efficiently delivered and that Thurrock Power Limited can respond to circumstances where they arise. The 14 day notice period is a minimum and Thurrock Power Limited would seek to give more notice wherever applicable or possible. As part of the ongoing relationship with affected landowners, programming of works and the taking of possession will be discussed and where possible timed to minimise disruption to other activities (avoiding harvest seasons for example). While Thurrock Power Limited will seek to give more notice and avoid sensitive times, flexibility is required to accommodate the works and especially interactions with other parties. For example National Grid gas will require access to land for the gas pipe connection, and works accommodate the interaction with LTC of the gas pipeline will require to be co-ordinated to that project's build stage and programme as well as Thurrock's. Thurrock Power Limited has to be able to make this access available when it is needed, a 3 month delay would disrupt the programme and could result in other areas of land being occupied for longer than should have been required because works were delayed during the notice period. All of the potentially affected landowners have been consulted on this application and have had the opportunity to make representations on this period. The Applicant does not accept, in the particular circumstances where TP is proposed in this case, that a counter notice procedure is necessary or desirable. There are only two plots which are subject only to TP, plots 03/07 and 03/10. Plot 03/07 is required to allow temporary redirection of a right of way foot over an existing private road. It has been included because the precise extent of the public rights of access over this road cannot be identified with enough certainty to ensure that all of the diverted route can be made available. The use sought for this plot is not exclusive, will not prevent the current use continuing, and is necessary to cover only any gap in the existing public rights.

ExQ.	Question	Response
	objecting to the proposed TP so that the landowner would have the option to choose whether TP or permanent acquisition was desirable. Should this article make some such provision – whether or not in the form in the NPA2017?	Plot 03/10 is adopted public highway. The exercise of rights in this land are primarily controlled by the Council as highway authority not the underlying owners of the sub-soil. A counter notice would make no sense in such a situation as the underlying ownership is not in any practical sense affected by the TP to any greater extent than already occurs by virtue of public highway status.
1.7.14 Applicant	Art 33 - Please explain how Art 33(2) interacts with the CA powers set out in Part 5 of the dDCO.	In this case the special category land affected by the development is common land. The main development site is located in common land which is to be replaced by land lying to the north of the railway. Where CA powers have to be used to deliver the land for the development, article 33 provides that the current common land (Walton Common) cannot be acquired by the applicant until the replacement land is ready for use. This prevents any 'gap' in the provision of common land by sequencing the use of CA powers. Article 33 effectively constrains the order in which parcels of land can be compulsorily acquired. Article 33 therefore acts to protect the rights of commoners and the public by restricting when CA powers can be used to ensure that the existing rights of common cannot be removed unless and until the replacement land in which they will vest is laid out and made available.
1.7.15 Applicant	Art 35 - subsections (4) and (5) extend the power to apply to important hedgerows. Please provide further justification for the inclusion of these subsections as well as details of any hedgerows identified to which these powers might apply. Has their loss been factored into any assessments in the ES? If so, please signpost.	This wording was included as precaution only. Thurrock Power Limited has not identified any important hedgerows within the order limits. Accordingly there is no assessment of loss as none is expected. The wording has been deleted.
1.7.16 Applicant	Art 37 - should the broad power expressed in Art 37(1) be more narrowly drawn? The ExA also notes the comments from the PLA in relation to Art 37(4) and the applicability of section 75(3) of the Marine and Coastal Access Act 2009. Please provide further justification for the inclusion of this provision in the DCO.	The drafting of article 37(1) is necessary to allow construction of the causeway and follows the precedent set out in The Port of Tilbury (Expansion) Order 2019. The limit of work 10 is proposed to be reduced which constrains the area this power applies to. The overall volume of material which may dredged is constrained by the deemed marine licence parameters. The exercise of this power is therefore already constrained in extent and volume. The applicant has been in discussion with the PLA and, although this could be argued to be duplication of schedule 9, has agreed to add a new paragraph 37(4) to this article stating that the PLA must approve dredging proposals as provided for in the protective provisions for clarity. Thurrock Power Limited are aware that the PLA would prefer that a dredging boundary is introduced on the work plans but does not accept that is practical or helpful at this time as such a boundary would, essentially, mirror the red line. The precise dredging requirements will not be able to be finalised until the final, detailed design of the causeway is complete.

ExQ.	Question	Response
		The paragraph 37(4) as shown in version 3 of the dDCO (PDC-009) has been deleted from version 4.
1.7.17 Applicant	Art 40 - a number of the plans listed in this article do not appear to be referred to elsewhere in the dDCO. Please explain the purpose of certifying these plans.	This list has been reviewed and plans not elsewhere referred to have been deleted from Articles 1 and 40.
1.7.18 Applicant	Schedule 1 - Please ensure that the lettering used in the Works Plans [PDC-056] accords with the lettering used in Schedule 1 of the dDCO [PDC-009] (eg, Work No 12).	These have been reviewed and amended where required.
1.7.19 Applicant	Schedule 2, P1, R4 - The ExA notes the addition to this requirement of details for cycle parking. Should this requirement be expanded to include details of, for example, landscaping, internal access routes, circulation routes, vehicle parking (including for construction workers), and pedestrian facilities?	Cycle parking was added in response to a direct request from Public Health England. Thurrock Power Limited does not consider that it is necessary or helpful to seek to list every element which must be included in the detailed design, and that trying to create an exhaustive list is more likely to create an omission than clarity. Landscaping is also already secured by requirement 14.
1.7.20 Thurrock Council	Schedule 2 - Please comment on the requirements set out in Schedule 2 and highlight any proposed changes suggested by the local planning authority.	[n/a]
1.7.21 Applicant	Schedule 2, P1, R9 - please provide further justification for R9(2)(b) and provide examples of the types of works which might reasonably fall within the specified levels.	On occasion, to maintain a construction programme or to recover from any programme slippage, it can be essential for a developer to be able to undertake work outside the normal hours where this would not cause noise disturbance. This can avoid holding up other major works and can help to ensure that the construction programme as a whole is not extended, with the greater duration of construction impacts which would then be incurred. There are many possible types of work can be carried out which do not cause noise, for example surveying and marking out items of work, or fit out activities such as installing electrical equipment within buildings prior to commissioning.
1.7.22 Applicant/ Thurrock Council	Schedule 2, P1, R11 - should the Host Authority have a role in approving the Flood Evacuation Plan?	The Flood Evacuation plan was intended to be finalised during Examination and would not have needed to be approved under requirement. Following discussion with Thurrock Council it was agreed that this should be specified to be a living document which is updated as required. Any change is a health and safety requirement of the continuing use of the site not a planning requirement. The planning authority interest is that a plan remains in place and is kept up to date. The content of the plan is an operational obligation on the project under health and safety provisions; it does not require to be approved by the planning authority.

ExQ.	Question	Response
1.7.23 Applicant	Schedule 2, P1, R12 - should this provision include references to groundwater?	Thurrock Power Limited understands that the Environment Agency and Thurrock Council are content with the scope of the requirement. Groundwater has been removed from the title to prevent confusion.
1.7.24 Historic England	Schedule 2, P1, R13 - Is Historic England content with the wording of this requirement?	[n/a]
1.7.25 Applicant	Schedule 2, P1, R14 - 'illustrative landscape plan' is not defined. The wording of the dDCO should reflect the title of the documents submitted.	This is an error. The illustrative landscaping plan was defined in article 1, the references have been made consistent.
1.7.26 Thurrock Council/ Applicant	Schedule 2, P1, R15 - Please provide a justification for the inclusion of this requirement in the dDCO.	A requirement securing restoration of construction compounds to an agreed standard was requested by Thurrock Council as planning authority in order to ensure the standard and timing of restoration of these areas is to an acceptable standard. Thurrock Power Limited agreed to its inclusion as, given that the site is located in Greenbelt and some of the areas are quite large, the requirement serves the legitimate purpose of minimising impacts by ensuring that construction compounds are timeously and appropriately reinstated.
1.7.27 Applicant	Schedule 2, P1, R16 - Should the Host Authority have a role in approving any proposed mitigation under R16(4) and does this requirement need an implementation clause? Would it be preferable for R16 to require the submission and approval of a noise management and monitoring scheme to be submitted and approved by LPA? Also, should noise levels be assessed against the background ambient noise levels?	Requirement 16 has been amended in version 4 of the dDCO to provide that Thurrock Council will require to approve a monitoring plan, and where one is required, a mitigation plan. The nearest residential receptor has been amended because Haver's lodge, while classified as residential as being the most appropriate category, is a Scouting centre in use by scouts including children. Undertaking monitoring in this location, which would require the attendance of staff, is not considered appropriate. Noise levels should be measured at the nearest, occupied residential receptor, as determined at the time of monitoring. Measurements of the specific noise from the operation of the plant should be assessed against both the background sound level and the ambient sound level measured at the same location in the absence of the plant, in accordance with BS 4142:2014+A1:2019.
1.7.28 Applicant	Schedule 2, P1, R17(1) - should this require a review to be carried out in addition to a report being submitted? Is there a role for the LPA (and/or other statutory bodies) to assess whether any of the alternatives identified meet the requirements? Against what criteria will this be judged?	This is now requirement 18. Thurrock Power Limited considers that the report cannot be drafted unless a review has been undertaken: the conclusions of the review form the content of the report. Art 18(1) requires submission of the output of a review in the form of a report, so that output (report) cannot be provided unless the process (review) has been undertaken. Accordingly, in order to comply with the requirement, the review which is documented in the report has to be carried out. Thurrock Power Limited does not consider any addition is necessary. Requirement 18 has been amended in version 4 of the dDCO to provide that Thurrock Council will require to determine if the alternative access (which would be overland) is feasible.

ExQ.	Question	Response
	R17 (5) - has the phase to 'environmentally acceptable' been intentionally omitted from other parts of the requirement (e.g. subsections (3) and (5(a))? If so, please provide an explanation.	The phrase 'environmentally acceptable' was requested by interested parties who initially only requested the single insertion made. This has been amended.
1.7.29 Applicant	Schedule 2, P1, R18 - please respond to the requests from IPs (including NE, the MMO and PoTLL) to be added to the list of consultees in R18.	The MMO will require to approve this plan; they accordingly do not need to be a consultee. It is noted that the decommissioning plan does not supersede the need to obtain any licences required to undertake those works, including those from the PLA and MMO, and the normal processes of consultation on such applications would apply. Licences or permits may also be required from NE although that cannot be known at this time. The MMO licence consultation would include NE. However, as they have requested to also be consulted under this requirement, the dDCO has been revised to add this. It is for the bodies issuing the necessary licences to permit the work to dismantle the causeway to consult PoTLL. In particular, the PLA will require to be satisfied on any vessel movements or changes in navigation risk. Those points will be controlled through licencing and PoTLL should make representations through that process not this plan.
1.7.30 Applicant/ Statutory Bodies	Please can the Applicant seek to agree suitable draft wording with the relevant statutory bodies for the Deemed Marine Licence included in Schedule 8 of the dDCO [PDC-009].	The Applicant has been in discussion with the MMO and PLA and has made a number of revisions to the DML in version 4 of the dDCO in order to address the comments made. Although an earlier draft of version 4 with changes was circulated for comments, which comments have been taken into account, the MMO and PLA have not had an opportunity to review all of the changes as proposed in the submitted version 4 due to pressure of time. Work to agree wording is therefore ongoing.
1.7.31 Applicant	The Applicant should ensure that all cross references within the dDCO are checked and corrected where necessary/relevant; this includes references to any plans.	This has been reviewed.
1.7.32 Applicant	The Applicant is asked to maintain a list of all plans and other documents that will require SoS certification (including plan/document references), updated throughout the examination process, and supplied to the ExA before the close of the examination.	Noted. This will be maintained.
1.7.33 Applicant	The DCO, if made, would be a Statutory Instrument (SI) and so should follow the statutory drafting conventions. The draft DCO (and any subsequent revisions)	Noted. The applicant notes that the draft DCO as submitted at application was validated and a copy of the validation report was included with the application (APP-022). Thurrock Power advises that it may not always be

ExQ.	Question	Response
	should be in the form required by the statutory instrument template (see Planning Inspectorate AN15) and validated as such using the current SI template, including detailed footnotes to all statutory references.	possible to provide a validation report at every deadline due to pressure of time, but that one will be provided at the final deadline to confirm the formatting is compliant with the SI template
1.7.34 Applicant	ES Chapter 2 [PDC- 015] and the OCoCP [APP-142] refer to the possibility of the construction of the proposed development being carried out in either one or three phases. Please explain whether, and if so how, this is taken account of in the dDCO.	This has been taken account of the in DCO which allows for delivery in parts. The approach would be specified in the Code of construction practice secured by requirement 5 which sets out how the development will be delivered.
1.7.35 Environment Agency	Please comment on the protective provisions set out in Schedule 9, P3 of the dDCO. Please provide details of any additional protections the EA considers are necessary to protect its interests.	[n/a]
1.7.36 National Grid (both arms)	Please comment on the protective provisions set out in Schedule 9, P4 of the dDCO. Please provide details of any additional protections National Grid considers are necessary to protect its interests.	[n/a]
1.7.37 Port of London Authority	Please comment on the protective provisions set out in Schedule 9, P5 of the dDCO. Please provide details of any additional protections the Port of London Authority considers are necessary to protect its interests.	[n/a]
1.7.38 Anglian Water	The ExA notes that Schedule 9, P1 of the dDCO includes provisions for the protection of water and sewage undertakers. Please provide details of the nature and form of the additional protective provisions sought together with a detailed justification. You may wish to provide this as part of any Written Representation.	The applicant notes that this question is not directed to it but considers it may be of assistance to the ExA to note that agreement has now been reached between the parties that Anglian Water's standard protective provisions and two additional paragraphs are required in these provisions. These are included version 4 of the dDCO.

ExQ.	Question	Response
1.7.39 Network Rail	Please comment on the protective provisions set out in Schedule 9, P6 of the dDCO. Please provide details of any additional protections Network Rail considers are necessary to protect its interests.	[n/a]
1.7.40 Applicant/ PoTLL	Please provide an update on discussions on protective provisions for the benefit of PoTLL, and provide a copy of the current draft.	Protective provisions in favour of the Port of Tilbury have been added to version 4 of the dDCO. These were amended from the version originally provided to the Port after deadline D to take account of the Port's submission and sent to the Port for their comment as part of a marked up dDCO incorporating all initial marine changes following the issue of these questions.
1.7.41 Applicant	Does the applicant, having viewed the RRs, anticipate including additional protective provisions in the dDCO? If so, please provide details. If not, please provide a brief explanation.	Yes, further protective provisions have been added. The PPs which had already been prepared for the Port of Tilbury have been added to version 4 of the dDCO. The Environment Agency has provided its preferred protective provisions. Thurrock Power Limited has made some suggested revisions to these which are under discussion. The dDCO version 4 includes the applicant's revisions and is therefore not yet agreed. Discussion has been ongoing with Royal Mail. At this time, Thurrock Power Limited considers that the amends proposed to address the Royal Mail's concerns were included in the dDCO submitted at procedural deadline C and do not include protective provisions. Amendments to address Anglian Water's concerns have been added, including their requested standard protective provisions. Highways England (Lower Thames Crossing project) and the applicant have been in discussion and consider that protective provisions may be required to address the interaction between the project. The scope of these provisions is under discussion and while a placeholder had been added to the dDCO, the drafting has not yet been developed. The wording of the provisions included in the DCO for various parties has been under discussion and further minor amends to those may be required.

8. ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL STATEMENT

ExQ.	Question	Response
1.8.1 Applicant	Can the Applicant explain why the constraints displayed on Figures 2.2 and 2.3 are not consistent? For example, there are no flood zones displayed on Figure 2.3.	We assume that this question refers to figures in APP-046 (ES Chapter 3: Consideration of Alternatives). The figures differ in what they show because the locations are different: • Figure 2.2 does not show SSSIs, Ramsar sites or SPAs (present on Figure 2.3) because there are no SSSIs, Ramsars or SPAs within the area depicted in Figure 2.2. • Figure 2.3 does not show Ancient Woodland (present on Figure 2.2) because there is no Ancient Woodland within the area depicted in Figure 2.3. • Figure 2.3 does not show Flood Zones 2 or 3 (present on Figure 2.2) because the area benefits from flood defences providing protection equivalent to Zone 1, as discussed in paragraphs 2.2.12 and 3.2.12. A version of Figure 2.3 depicting the mapped extent of Flood Zones 2 or 3 without flood defences can be seen at drawing 10872-0050-005 in APP-137.
1.8.2 Applicant	Can the Applicant explain where a comparison of environmental and sustainability risks and opportunities between the Tilbury and Warley sites has been provided?	Within the Planning Statement of Case [APPs-135-139], the applicant has produced statements on the comparative planning, environmental and commercial merits of the sites that were considered in the site selection process, including Tilbury and Warley. This is in Section 6 of Appendix 1 to the Statement of Case, in particular Table 6.2 on page 41 [APP-135] which provides a summary assessment of the alternative substation locations including Tilbury and Warley. Paragraphs 6.41 to 6.56 set out the planning, environmental and technical tests applied to the Tilbury and Warley areas. Annex B to Appendix 1 also provides the individual site assessments around the substation locations considered, including Tilbury and Warley [APP-137]. The applicant has produced a further written submission which provides greater clarity in terms of the process and the environmental and planning comparisons made between the Tilbury and Warley sites. This is enclosed at EIA-1. In the Environmental Statement, environmental factors for the Tilbury and Warley substation locations were considered in Section 2.2 of Chapter 3 (Consideration of Alternatives) [APP-046] under the headings 'Grid connection options analysis' and 'Option selection'. This drew upon the comparisons and mapping of constraints undertaken for the site selection exercise as documented in the Planning Statement of Case, referenced in the previous paragraph. This was 'Stage 1' of the site selection process and was necessarily a relatively high-level comparison, as it encompassed a broad search area around each substation within which a development site might potentially be located. Chapter 3 goes on to further consider environmental and sustainability risks and opportunities in 'Stage 2' of the site selection (Section 3 of the chapter), where design alternatives for the selected development site location were considered. The goal of this exercise, responding sustainably to the environmental risks and opportunities, was described at paragraph 3.1.2 on page 9[2]. This does not include a comparison with the 'Warley site', as no specific development site at Warley was put forward for consideration. Stage 1 of the site selection exercise had compared the areas around the Warley and Tilbury substations and

[2] there is an error in the section/paragraph numbering in Chapter 3 which has led to the numbering of 'Section 3.1' and paragraph numbering from 3.1.x onwards being repeated on pages 10-11. It is the first paragraph 3.1.2 on page 9 that is referenced in this response.

ExQ.	Question	Response
		concluded (on planning, environmental and commercial/feasibility grounds) that Tilbury was the preferred area to take forward for identifying a specific preferred development site and then a specific design on that site. The consideration of sustainability risks and opportunities was then introduced, at Stage 2, for the site design alternatives at Tilbury.
1.8.3 Applicant	Can the Applicant explain why a construction waste impact assessment has not been provided or signpost where this information can be found in the ES?	The 'Construction waste' section on pages 22-23 of PDC-015 (ES Chapter 2: Project Description) sets out the reasoning for concluding, in paragraph 3.2.27, that *"construction waste arisings of a nature or quantity to have potential for likely significant environmental effects are not predicted"*. Briefly, the main reasons were: 1. The proposed development largely comprises modular equipment (such as the gas engines, battery units, gas pipeline sections and similar) that would be manufactured off-site and delivered for assembly on site, with minimal associated construction waste arisings. 2. The assessments of ground conditions and marine sediment have not shown that excavated/dredged material requiring disposal (where this cannot be re-used as fill on site) is contaminated and could cause adverse environmental effects. 3. Good practice measures to minimise construction waste and manage this to avoid any adverse environment effects form part of the Code of Construction Practice (APP-142). These have now been set out more explicitly at new section 6.13. The applicant has constructed a similar flexible generation plant with 50 MW generating capacity from four gas engines at its Saltholme site near Stockton-on-Tees. Construction waste arising records from the Saltholme site show that around 135 tonnes of waste was generated, much of which was suitable for recycling. Referring back to item 4.14.1 of the Scoping Opinion, the applicant has had regard to the Inspectorate's comment about potential impacts arising from waste or contaminants relating to landfills on or around the application site, and the need to assess any impacts that are likely to result in significant effects. Since that stage of the project the Order Limits have changed and the only location where there is former landfill is adjacent to part of the access road through Zone G. This area was used for deposit of pulverised fuel ash (PFA) from the former coal-fired Tilbury Power Station. It has since been subject to an ongoing process of PFA mining for re-use and subsequent fill and land-raising with inert spoil. The applicant's eastern route option for the Zone G access road would follow the course of works roads already in use by the land-raising operation, which is ongoing. The western option (closer to Tilbury Substation) would require some reprofiling of one edge of the land-raised area, similar in the nature of work but far smaller in volume than the land raising already carried out there. In neither case would the applicant's development be mobilising or transporting this inert landfill material offsite. Any reprofiling would be in situ and would be regulated by the Environment Agency via a Waste Recovery Permit, as set out in APP-129. This is noted as a point of agreement in the draft SoCG with the Environment Agency. No impacts likely to result in significant environmental effects are predicted.
1.8.4 Applicant	Can the Applicant indicate where the potential risks of accidents and hazards identified in Appendix 2.2 are assessed in the ES to support the conclusion that there will not be any likely significant	Appendix 2.2 (APP-084) is part of the ES. It explains that the proposed development is not considered to be a major accident hazard and does not require a quantitative risk assessment. The qualitative assessment undertaken in Appendix 2.2 indicates that, taking into account the existing control measures provided by legislation, in particular the requirements of the Environmental Permitting process, all of the risks/events identified are considered to be of low or very low likelihood and therefore unlikely to lead to significant environmental effects.

ExQ.	Question	Response
	effects? Can the Applicant also confirm that this assessment approach has been confirmed with the relevant consultees?	Appendix 2.2 identified three key vulnerabilities arising from the risk assessment, which are releases of pollutants (loss of containment), tidal flooding and fire/explosion (paragraph 3.1.5). As stated in that paragraph, flood risk has been assessed in the Flood Risk Assessment (PDC-025) which includes the 'disaster' scenario of a major breach in the tidal defences. Discussion with the Environment Agency to agree the approach and results of the Flood Risk Assessment has now been concluded with agreement reached, as referenced in the response to Q1.16.9 and in the draft SoCG with the Environment Agency. The risk, mitigation measures and potential significance of effects due to accidental pollutant release to surface water or land/groundwater have been assessed in PDC-017 (ES Chapter 15: Hydrology and Flood Risk) and APP-065 (ES Chapter 16: Geology, Hydrogeology and Ground Conditions). In Chapter 15, see for example the impact assessment section *'Construction may cause risk of leaks and spills to surface watercourses'* and the equivalent for operation. In Chapter 16, see for example the impact assessment section '*Potential for construction activity to cause soil or groundwater contamination'*. The control systems that would be in place to minimise fire risk have been set out in Sections 3.2 and 3.3 of Appendix 2.2: these support the conclusion that the residual risk from fire is very low (paragraph 3.3.16) and hence there are no likely significant environmental effects to be further assessed. The relevant consultees are the Health and Safety Executive, the Environment Agency and Public Health England. The Environment Agency is responsible for environmental permitting of facilities of this nature, which includes risk assessment and the requirement for an accident management plan in the permitting process, as explained in Appendix 2.2. The Health and Safety Executive has responded to consultations in 2018 and 2019 (see APP-034 and APP-039) and has not commented on the approach in Appendix 2.2. The Environment Agency has agreed the approach to the Flood Risk Assessment as set out above. Public Health England has agreed (see Statement of Common Ground with PHE) that potential accidents and emergencies have been identified, appropriate mitigation measures listed against each and that as the proposed development would be a regulated facility through the Environmental Permitting Regulations, major accidents and disasters giving rise to significant effects are not considered likely.
1.8.5 Applicant	There are inconsistencies between the further monitoring stated in each individual technical chapter and what is stated within ES Appendix 2.1: Register of Mitigation, Enhancement and Monitoring Commitments. For example, in ES Chapter 17, Table 5.1, the Applicant commits to post construction monitoring of saltmarsh habitats to reduce a potential	Monitoring of saltmarsh has been added to Table 17.1 of ES Appendix 2.1. This measure was included in PDC-051 (Outline Ecological Management Plan) at paragraph 9.1.6. APP-049 (ES Chapter 6: Landscape and Visual Resources) referred to a defects liability period for landscaping. This would be an aspect of the maintenance proposals to be detailed in the Landscaping and Ecological Management Plan (when discharging Requirement 14, clause 1(g) in PDC-009) but for consistency has also now been added to Table 6.1 of ES Appendix 2.1. PDC-021 (ES Chapter 9: Onshore Ecology) referred to monitoring of wintering birds during causeway use if barge deliveries overlap with wintering bird season. This was secured by Requirement 19 in PDC-009 (and has been moved at the request of the MMO to the DML in schedule 8 in version 4 of the dDCO) but for consistency has also now been added to Table 9.1 of ES Appendix 2.1.

ExQ.	Question	Response
	significant effect from moderate to minor adverse. However, ES Table 17.1 of Appendix 2.1 indicates that no monitoring or mitigation is proposed post construction. Can the Applicant clarify these discrepancies?	PDC-061 (ES Chapter 12: Air Quality) referred to monitoring of stack emissions during operation being required by the Environmental Permit. As noted this would be secured via the permitting regime, but for completeness has also now been listed in Table 12.1 of ES Appendix 2.1. The applicant has not identified any other discrepancies in monitoring commitments. Errata in table number cross-referencing within Appendix 2.1 have been corrected. Cross-references to DCO requirements have also been updated for consistency with PDC-009.

9. GREEN BELT AND LOCAL PLANNING POLICY

ExQ.	Question	Response
1.9.1 Thurrock Council & Gravesham Borough Council	Please comment on the Applicant's case for very special circumstances set out in the statement of case and green belt statement [APP-135 to APP-139]. You may instead prefer to include this information in any Written Statement.	[n/a]
1.9.2 Applicant	The Applicant states that there are significant benefits and very specific locational needs that outweigh the harm to the green belt from the Proposed Development. Please list all of the benefits that the Applicant considers should be weighed against the identified harm.	The benefits can be summarised as follows: *a.* Supporting the growth of renewable energy. *(Ref: Planning Statement of Case* [APP-135]*, Appendix 1, Page 36, para 6.7 to 6.16)* *b.* Meeting national policy requirements to provide additional secure, flexible and reliable supplies of electricity, including through the provision of decentralised generation. *(Ref: NPS EN-1, for example at paras 2.2.20, 3.3.12, 3.3.29 and 3.3.31)* *(Ref: Planning Statement of Case* [APP-135]*, Page 8, Table 3.1 and Page 16, Table 3.2, and paragraphs 3.26 to 3.35)* *c.* Compliance with other environmental policy at national level. *(Ref: Planning Statement of Case* [APP-135]*, Page 29, Section 4, paragraphs 4.11 to 4.148)* *d.* Satisfying a strategic and local need for this type of energy infrastructure. *(Ref: Planning Statement of Case* [APP-135]*, Appendix 1, paras 4.34 to 4.39 and paras 4.43 to 4.45)* *e.* Compliance with relevant local planning policy. *(Ref: Planning Statement of Case* [APP-135]*, Page 47, Section 4, paragraphs 4.191 to 4.219)* *f.* The inability to achieve the principal benefits of the scheme on other alternative sites – this is demonstrated by the outcome of an extensive analysis of alternative connection points and sites leading to the selection of the project site as being the most appropriate in planning policy (including Green Belt), environmental and commercial terms. *(Ref: Planning Statement of Case* [APP-135] *, Appendix 1, Page 46, paragraphs 6.39 to 6.56)* *(Ref: Applicant's response to ExQ 1.8.2)* *g.* The beneficial case set out in respect of Green Belt policy, and in particular the special circumstances that exist that offset the limited identified harm. *(Ref: Planning Statement of Case* [APP-135]*, Page 43, Section 4, paragraphs 4.158 to 4.190)*

ExQ.	Question	Response
		h. Improvement of access to Common Land. *(Ref: Planning Statement of Case* [APP-135], *Appendix 1, Page 47, paragraphs 6.57 to 6.62)* The applicant would also like to take this opportunity to correct two errata in the Planning Statement of Case [APP-135]. Paragraph 4.184 should have read: *"4.184 - Development of the project site does not mean it would undermine the ability of the planning authority to check any unrestricted urban sprawl of large built up areas, nor would it cause neighbouring towns to merge into one another, nor undermine the ability to preserve the setting and special character of historic towns. Development of the site would also not undermine the purpose of assisting in urban regeneration. None of these purposes are threatened by the proposed development. Therefore, the application site does not conflict with four of the five Green Belt purposes set out at paragraph 134 of the NPPF 2019."* And at paragraph 4.175, in the fourth line, 'e)' should have read 'c)'.
1.9.3 Thurrock Council	Does the Host Authority agree with the Applicant's statement at paragraph 3.56 of [APP-135] that, based on the SGBA carried out by the Council, "in order to avoid 'fundamentally' important green belt land, any new development has to be placed in a parcel that is still of 'major' importance".	[n/a]
1.9.4 Thurrock Council	Does the Host Authority agree with the Applicant's statement in paragraph 3.56 of Appendix 1 to the Applicant's Statement of Case (Green Belt Statement) [APP-135] that as the locations of the above ground elements of the project within parcels 30 and 34 are of no importance to the first two purposes of the green belt and of 'major' importance with regard to the third purpose, they can be deemed as relatively low importance in comparison to other land parcels?	[n/a]
1.9.5 Applicant	The Applicant states (Appendix 1 to the Applicant's Statement of Case (Green Belt Statement) [APP-135]) that, on the basis that the Proposed Development is necessary to support the greater deployment of intermittent generation and can meet peak power demands in a more efficient way than conventional gas-fired power stations, it can be	Under the National Planning Policy Framework (NPPF) the development is considered to be low carbon. The definition on page 70 of low carbon technologies is *"those that can help reduce emissions (compared to conventional use of fossil fuels)".* The applicant submits that on the basis that the proposed development is necessary to support the greater deployment of intermittent renewable generation and can meet peak power demands in a more efficient, lower-carbon way than conventional gas-fired power stations, including through the provision of battery storage, it can be considered low carbon.

ExQ.	Question	Response
	considered low carbon. Please provide further justification for this statement.	See also the answer to Q1.2.2.
1.9.6 Applicant/ Thurrock Council	Section 3 of Appendix 1 to the Applicant's Statement of Case (Green Belt Statement) [APP-135] refers to Thurrock Council's Strategic Green Belt Assessment (SGBA). Please provide a copy of this document together with any plans referred to or signpost where they can be found in the application documents.	See link on page 53 of the Planning Statement of Case [APP-135]: [Accessed 04 March 2021] There is also a document on Thurrock Council's website containing two appendices of the Thurrock Council's Strategic Green Belt Assessment; it is a set of maps displaying the land parcels ratings and one showing the position of the lower Thames crossing. Link - Thurrock Council - Thurrock Strategic Green Belt Assessment stages 1a and 1b, January 2019: appendices E and F [Accessed 03/03/21]
1.9.7 Thurrock Council	What is the view of the Host Authority regarding the use of Green Belt land for the Proposed Development? Does the Council consider the very special circumstances necessary to outweigh the harm to the green belt, and any other harm, are present?	[n/a]
1.9.8 Thurrock Council	Are there any proposals to change the boundaries of the Green Belt in the vicinity of the Proposed Development? If so, please specify and include details of whether the application site is affected.	[n/a]
1.9.9 Thurrock Council	Does the Council consider the Proposed Development would be in conflict with any proposals or policies in any development plan documents (including emerging plans)? If so, please provide a summary and link to the relevant policy and/or proposals map.	[n/a]
1.9.10 Thurrock Council	Please provide details of the current status of the emerging Thurrock Local Plan and the anticipated timescale for adoption.	[n/a]

10. GENERAL QUESTIONS

ExQ.	Question	Response
1.10.1 Applicant	The Applicant is requested to review and update the 'Other Consents and Licences' document [APP-129] and submit an updated copy at Deadline 2 [Tuesday 23 March 2021]. Please keep this document updated throughout the examination including at Deadline 7 [Monday 9 August 2021].	The Other Consents and Licenses document has been updated to v3. The requirement to keep this updated including for Deadline 7 is noted.
1.10.2 Applicant	The SoR indicates that the Applicant requires flexibility in the DCO for the final location of the NTS connection point. Please provide further justification for the extent of deviation for Work No 5 and explain how the dDCO ensures that any CA of land in order to carry out Work No. 5 is limited to that which is reasonably necessary to carry out the Proposed Development?	When the technical gas connection application is made to National Grid Gas (NGG), NGG will advise whether the applicant's proposed location is suitable and may have a preference, based on engineering considerations, for the NTS connection point above-ground elements to be located a short distance to one side of Feeder 18. The applicant has also given consideration to the impact on the ongoing agricultural use of the remainder of this field, and the inconvenience of locating the connection compound towards the centre of the field; a location in the southern corner may be preferable from the landowner's perspective and will also benefit more from the screening of existing hedges and trees, reducing the amount of new landscape planting required. These two factors mean that it has been considered prudent to retain some limited flexibility on the gas connection compound location along the south-eastern boundary of the field that is crossed by Feeder 18. Land take will be minimised to the area required for the detailed design. The applicant has been in ongoing, positive discussions with the landowner of this area and acquisition by agreement is imminent. Where it is necessary to use compulsory powers, the DCO would technically allow acquisition of the whole area. This is necessary as, until the final layout is known, it cannot be determined precisely how much and which parts of the land need to be acquired to allow access to and maintenance of the final design. The applicant notes that to seek more land than is required would increase the compensation payable over that which the applicant would otherwise incur; there is accordingly a commercial pressure to minimise land take in addition to the principle of minimising interference. The applicant could not use the DCO power to acquire land for purposes other than those for which that acquisition was authorised, and therefore would not want to acquire more land than is needed.
1.10.3 Applicant	The Gas Connection Concept Design Report submitted with the application [APP-126] sets out a number of recommendations in relation to the construction of the gas pipeline. Please explain whether, and if so how, these are secured within the dDCO. (if not, please explain the purpose of this document).	The applicant is required to demonstrate how its connections to operate the proposed development will be delivered in order to provide certainty that the project is deliverable. It is also required to have enough information on how the connections will be constructed to allow these to be included within the project envelope for EIA. The report provides those details for the gas connection to the national transmission system. The recommendations set out in that report are points of engineering detail to inform construction operations and/or points necessary to comply with the requirements of the Health and Safety standards applicable to gas pipelines. They are not matters which should be secured in the DCO.

ExQ.	Question	Response
1.10.4 Applicant	Paragraph 3.6.8 of the Non-Technical Summary [APP-043] states that a number of options were considered and consulted on for construction traffic, particularly the large abnormal loads of the gas engine blocks and transformers. What consideration was given to the use of existing structures in the River Thames to enable these elements to be delivered by barge.	The applicant has considered the use of existing structures owned by PoTLL and Ingrebourne Valley Ltd. PoTLL's Ro-Ro jetty would not be able to take the weight of the AILs. PoTLL's CMAT jetty is specifically designed to discharge aggregates and is not suitable for offloading AILs from barges. There are two Ingrebourne Valley jetties at Goshem's Farm; one is understood to be a state of disrepair and to be subject to a demolition order, and the other (more recently constructed to replace it) has a weight limit of only 30 tonnes, far below that required for the AILs.
1.10.5 Applicant	What works will be necessary to establish the exchange land as replacement common, and should these be more clearly defined in the dDCO?	The works necessary to establish the exchange land as replacement common land would comprise: • The arable use of the field will be replaced by semi-natural grassland. The area would be cultivated and sown with a mix that is representative of the NVC community (MG1) present within the release land. An example of the type of mix currently available would be https://grassandflower.co.uk/british-flora/store/products/bfs-13-tussocky-grassland-wildflower-meadow-mix/ • It is proposed to thicken the existing vegetation along the southern boundary with a native scrub and tree mix to a maximum width of approximately 5 m; this would be to the north side of the existing boundary with Network Rail land and would not encroach on the railway. • A ditch would be dug to create the western boundary of the area of exchange common land. • A post and wire fence would be erected along the western boundary of the exchange common land. The description given in schedule 1 of the dDCO "Creation of common land with planting and landscaping" and the general works item "(e) landscaping, planting, tree planting and erection of permanent means of enclosure and boundary facilities including fences and gates, alteration of drains and ditches" is accordingly considered to a complete description of the works proposed.
1.10.6 Applicant	Please explain how the effect of the Proposed Development on Condovers Scout Activity Centre has been assessed in the ES and signpost where this information can be found.	Condovers Scout Activity Centre has been referred to as the receptor 'Havers Lodge', which is one of the buildings in the activity centre. References to Havers Lodge as a receptor may therefore be read as representing the activity centre, for example in several references made in the Noise and Vibration chapter (APP-060). Scouts visiting the area are represented in general categories of receptors, for example among the people using footpaths as a category of receptor in the Landscape and Visual Resources chapter (APP-049) or Land-Use, Agriculture and Socio-Economics chapter (APP-057). Havers Lodge, representing Condovers Scout Activity Centre, has been described as a 'residential' category of receptor where appropriate in the ES to ensure a conservative assessment, for example in the case of noise or air quality impacts. This has been the case where residential receptors are considered more sensitive to impacts than other categories that might have been applicable, such as treating the activity centre as a recreational or leisure facility where people are only present for shorter periods.

ExQ.	Question	Response
1.10.7 Applicant	The works plans show wide limits of deviation for a number of the works proposed. Please explain why this degree of flexibility is required and confirm that the limits of deviation have been reduced to the minimum extent necessary.	Thurrock Power Limited has assumed that this question relates primarily to the following zones as others do not have wide limits of deviation. <u>Zone C (Works 4, 6, 7 and 8), the corridor for permanent access route, gas pipeline route and a utility (water) connection; compound and laydown area:</u> Flexibility is required in the location of the access road to allow it to be sited having due regard to the constraints, including proximity to the railway line, proximity to electrical pylons, underground utilities and the need to tie into Station Road with a safe junction. Other than the highway connection, these constraints also apply to the underground gas pipeline; however, more flexibility is required for this to allow for the potential interaction with the LTC project. Discussions with LTC are ongoing, but have so far indicated that the southern route for the pipeline would be preferable in terms of aligning with their proposed crossing point under the new highway. This flexibility is accordingly necessary to ensure that the pipeline can be located with safe separation from other infrastructure and can be designed to interface with LTC in the required location. The gas pipeline will not prevent the current arable use of the land subject to a depth restriction for the protection of the pipeline (a no-dig restriction). <u>Zone D (Works 4 and 5) Gas pipeline and above-ground installation for connection to NGG transmission system:</u> The limits of deviation for Work 4 in this zone are necessary to allow for selection of the best crossing points of the highway, working areas, including for HDD, and routing around existing utilities and ecological constraints including hedgerows, as well as minimising impacts on land interests and facilitating the interface with LTC. In Zone D3, flexibility for the route of the gas pipeline is sought partly in order to ensure that no conflict is created with National Grid's assets and set-off distances can be maintained. The limits of deviation for Work 5 (the above-ground installation for connection to NGG transmission system) are necessary so that this can be sited in accordance with NGG requirements. See also the response to Q1.10.2. <u>Parts of Zone G (Work 10 and parts of Work 12) the causeway and access routes:</u> The limit of deviation for Work 10 has been reduced and plans showing the change sought to this work have been submitted along with this response. The wider areas of Work 12 are where it will be necessary to allow for groundworks to address level changes and in particular, where cuttings or embankments will be required. Thurrock Power Limited therefore confirms that the limits of deviation (including as updated for Work 10) are the minimum necessary.
1.10.8 Applicant	Please confirm that the design parameters set out in Schedule 2 of the dDCO are the same as those which were assessed in the	Thurrock Power Limited confirms that the design parameters set out in Schedule 2 of the dDCO (PDC-009) are the same as those which were assessed in the ES.

ExQ.	Question	Response
	ES. Please identify any deviations and provide an explanation.	The stack height is expressed as 43 m AOD in Schedule 2 and generally described as 40 m in height (without reference to a datum) in the ES. For the avoidance of doubt we confirm that the stacks have been modelled as 40 m above ground level, which is approx. 42.5 m AOD (with slight variations for the individual stacks across the site based on its topography); that has been rounded to 43 m AOD in the parameter for Schedule 2. There is an erratum in Table 2.8 of Chapter 7 (APP-056) in which the working corridor for gas pipeline construction is said to be 20 m rather than 23 m as in dDCO Schedule 2 and the other ES documents. This has not affected the assessment of impacts in Chapter 7.
1.10.9 Applicant	Please state whether any land within the Order Limits falls within the Order Limits of any other made DCO and, if so, how the applicant proposes to deal with this interaction in the dDCO.	The access route through Port of Tilbury lies in part within the order limits of The Port of Tilbury (Expansion) Order 2019. That order consented inter alia the construction of the access roads which Thurrock Power Limited wishes to use to access its site. Those roads have been constructed and are in use. There is accordingly no interaction with the implementation of the powers of the Port of Tilbury (Expansion) Order 2019 as these have already been exercised and the relevant road works constructed. Any interaction from the Thurrock DCO would be the acquisition of rights of access and any minor works to support that and would be subject to the protective provisions in favour of PoTLL. The Port already has the affected land in its ownership. Thurrock Power Limited would, where no voluntary agreement could be reached, seek to acquire rights over this land only. Those rights would coexist with the Port's and would not displace any acquisition undertaken under the 2019 DCO. Thurrock Power Limited is seeking to agree an access agreement for the use of this route with the Port of Tilbury which would set out the position between the parties. Thurrock Power Limited notes that there would also be interaction with any DCO for the Lower Thames Crossing project if such an order were granted within the currently proposed limits for that project. A voluntary agreement setting out how this would be managed is under discussion between the promoters.
1.10.10 Applicant	Please explain how a piling risk assessment will be secured in the dDCO.	The applicant is of the view that it is not necessary to secure individual mitigation measures within the dDCO where these measures are contained within documents that are themselves secured through requirements in Schedule 2. All mitigation measures are set out in the Register of Mitigation, Enhancement and Monitoring Commitments (PDC-029) which will be updated as the Examination progresses. That document signposts where the individual measures are secured through the dDCO. In this instance, the requirement to undertake a piling risk assessment if applicable (i.e. depending on whether and where piling is needed in the development design, and on the findings of further site investigation) is set out in paragraph 6.12.4 in APP-142 (Code of Construction Practice). The CoCP is secured through Requirement 5 in the draft DCO (PCD-009) and both of these facts are signposted in Table 16.1 of PDC-029. To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2 must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.

ExQ.	Question	Response
1.10.11 Applicant	The ExA notes that up to 10 days of 24-hour construction working per phase for continuous activity is assumed as a maximum for assessment in the ES [ES Chapter 2, Paragraph 3.2.16]. Please explain how this is secured in the dDCO.	This maximum parameter has been added to in Table 11.1 of the Register of Mitigation, Enhancement and Monitoring Commitments (PDC-029; ES Appendix 2.1).
1.10.12 National Grid Electricity Transmission	Does NGET agree that there is a specific and established need for additional capacity within the 275 kV network around London.	The applicant has contacted NGET to request a response to this question, which is enclosed at GEN-1. The response is as follows. *"Yes. The 275kV network around London is underutilised and having generation near the largest demand centre in the UK would negate the need for further boundary reinforcements to manage the North to South electricity flow. This remains supported by National Grid's charging methodology that seeks to identify, from a system perspective, the most optimum location to connect. Thurrock Power's development is in one of the lowest charge areas in the UK."*
1.10.13 Applicant	Please provide details of any temporary works permits the Applicant anticipates may be required for Work No 10.	No temporary works permits are currently anticipated to be required.
1.10.14 Applicant	The ExA notes that there has been no reduction in the limits of deviation for Work No 10 following the removal of Work No.9. Please provide further justification for the limits of deviation for Work 10 or updated Works Plans.	The applicant proposes to reduce the size of the Order Limits by approximately 2.38 ha in the area of Work 10 (the causeway and barge berthing pocket), reducing the limit of deviation for this work from approximately 7.48 ha to 5.11 ha (32% reduction). Updated plans are enclosed.
1.10.15 Applicant	Please explain how the recommendations in the Phase 2 Site Investigation Report [APP-117] are secured in the dDCO.	The applicant is of the view that it is not necessary to secure individual mitigation measures within the dDCO where these measures are contained within documents that are themselves secured through requirements in Schedule 2. All mitigation measures are set out in the Register of Mitigation, Enhancement and Monitoring Commitments (ref. PDC-029) which will be updated as the Examination progresses. This document signposts where the individual measures are secured through the dDCO. The recommendations would principally be addressed in the Code of Construction Practice (CoCP) (APP-142) and the contaminated land and groundwater scheme. The CoCP is secured through requirement 5 in the draft DCO (PCD-009) and the contaminated land scheme secured through requirement 12 in PCD-009. To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2 must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.

11. HABITATS AND ONSHORE ECOLOGY

ExQ.	Question	Response
1.11.1 Applicant	Please respond to the matters raised by Ms Elaine Laver in her RR [RR-008].	Ms Laver makes two comments in RR-008: firstly that construction work between the former Bata Shoe Factory and East Tilbury Railway line may have affected baseline noise monitoring; and secondly that migrating geese have been seen feeding in a farmer's field to the rear of Beechcroft Avenue, East Tilbury. The baseline sound environment at monitoring locations LT2, LT3 and LT7 (those lying between the flexible generation plant main development site and Ms Laver's property) was dominated by sound from EMR metal recycling and at LT2 by HGV traffic (see survey records in Annex A of APP-096); any construction noise from beyond the more distant Bata Shoe site was not audible at the survey locations and did not affect the monitored baseline. The field to the rear (west) of Beechcroft Avenue is well outside the Order Limits for Thurrock Flexible Generation Plant, beyond the railway line, and is not impacted by the proposed development.
1.11.2 Thurrock Council	Thurrock Council's RR [RR-007] indicates that Walton Common includes habitat of principle importance that was to be included in a Local Wildlife Site. Please provide further details including the extent of habitat affected, its size in relation to the remaining area to be designated, the stage of designation and the effect of the Proposed Development on any potential designation.	[n/a]
1.11.3 Applicant	Please confirm whether or not receptor sites are being prepared in the event that water voles recolonise parts of the site. If not, please explain what measures will be put in place to ensure that the need to take water any water voles who do recolonise the site into captivity is avoided (including how such measures are secured in the dDCO).	Proposed mitigation measures for water voles were updated in PDC-050 (Outline Ecological Management Plan) in paragraphs 4.3.54-4.3.55, and comprise improvements to retained boundary ditches around Zone A so that they are capable of supporting water voles. Discussions with the landowner relating to these works are ongoing. The intention now is for these works to be undertaken between August – October 2021. In the event that monitoring in 2021 confirms absence of water voles in the Zone A central ditch, the ditch would be infilled. As these measures will be implemented in advance of consent, they are not secured through the dDCO (PDC-009). Measures to protect water voles during and post-construction are secured by the requirement to produce a pre-commencement Landscape and Ecological Management Plan as set out in PDC-009 (dDCO) Requirement 14.
1.11.4 Applicant	Please clarify the discrepancies between the maximum parameters set out in ES Chapter 17, Table 2.8 and Schedule 8, Tables 1 and 2	The parameters in Tables 1 and 2 of Schedule 8 of the dDCO have been adjusted, where applicable, to be maximum values (without the +5% or +10% parameter) to match those in Table 2.2 of Chapter 2 (PDC-015), which are those assessed in the ES.

ExQ.	Question	Response
	of the dDCO. For example, the maximum volume of material to be removed for the construction of the causeway (2,900m3 in the dDCO and 16,100m3 in the ES) and the maximum area to be dredged for the vessel berthing pocket (13,900m2 in the dDCO and 14,200m2 in the ES)	
1.11.5 Applicant	Please provide evidence of agreement on the approach to the HRA assessment and in-combination assessment.	There remain matters of disagreement to be resolved regarding the methodology of the HRA which are the subject of ongoing discussion with Natural England (NE). NE's position on the HRA assessment is provided in RR-022, and the applicant's response to that was contained within Section 2 of PDC-001. NE subsequently provided further comments in PDD-012, and an updated detailed draft SoCG has been submitted to NE in early March for discussion. However, as the NE case officer has been on paternity leave in February and March, this discussion has not progressed further at present. The applicant has submitted comments on NE's RR and PDD submissions at Deadline 2.
1.11.6 Applicant	ES Chapter 11: Noise and Vibration [APP-060] assumes a maximum 4,000 hours of operation per annum. Can the Applicant explain how this maximum parameter is secured by the dDCO?	The maximum operating hours of the flexible generation plant would be regulated by the Environment Agency through the Environmental Permit, and in principle the applicant does not consider that controls via other regulatory processes should be duplicated in the DCO. However, an upper limit of 4,000 annual operating hours has been added to the requirements set out in Schedule 2 of the dDCO as a new requirement 20.
1.11.7 Applicant	Please explain what measures will be put in place to ensure that there is no unauthorised access to the causeway post-construction and how these will be secured in the DCO.	These measures were set out in PDC-053 (Restrictions on Public Access to the Causeway). That document has been further updated in paragraphs 1.2.2 and 1.2.3 in response to comments made by Natural England (PDD-012) and the Port of London Authority (PDD-011). The Restrictions on Public Access to the Causeway document has now been appended to the Design Principles Statement, meaning that it is part of the certified documents in the DCO. The combined document is submitted at Deadline 2.
1.11.8 Applicant	Can the Applicant provide an assessment of the potential impacts of transportation of INNS to European designated sites from vessels serving the causeway or explain why an assessment is not necessary i.e. what mitigation measures are in place to prevent this?	The main vectors through which introduction of marine INNS to the Thames (and European designated sites within it) could be via introduced substrate or vessel movements. All materials used to construct the causeway will be sourced from land based sources and therefore there is no potential for introduction of INNS via this source. The Thames Estuary is a busy waterway with high levels of vessel traffic and a wide variety of vessel types: e.g., general cargo vessels, tankers, ro-ro vessels, service vessels of all kinds (e.g., tugs engaged in ship towage, pilot launches, survey vessels, workboats, etc.), intra port trade vessels (cargo and passengers), recreational vessels and less regular users such as non-routine tows and naval vessels (see PDC-052).

ExQ.	Question	Response
		Construction of the causeway will result in a very small increase in vessel movements in the context of the background levels of vessel traffic. While it is possible that INNS may be introduced to the Thames via ballast water (if vessels used in construction use ballast water), from vessels originating from outside the Thames, all vessels will comply with the International Maritime Organisation (IMO) ballast water guidelines to minimise any risk of introduction of INNS via this vector. Biosecurity measures are set out in Table 2.10 of Volume 3, Chapter 17 (PDC-019) and will be implemented through the Code of Construction Practice (APP-142). Given the low risk of introduction of INNS from the vectors set out above and the designed-in mitigation measures, the increased risk of introduction of INNS to the Thames Estuary from the project is negligible and would not represent a significant effect and has therefore been scoped out of the impact assessment. See also section 5 of Volume 6, Appendix 17.3: WFD Assessment (PDC-027) which scopes out this impact.
1.11.9 Applicant	Can the Applicant signpost where AIL delivery times are secured in the application?	AIL delivery times are not secured in the application. They will be dependent on the timing of tides, as discussed in the response to Q1.11.11.
1.11.10 Applicant	Can the Applicant determine how many HGV movements would be required to transport dredged materials to a licenced site, what routing they would take and explain how this has been accounted for in the assessment of significant effects within the ES?	Using worst-case assumptions that dredged material requires transporting by road to a licensed onshore disposal site, the applicant estimates that this would require 1,610 HGVs (3,200 HGV movements). The applicant estimates that this equates to 16 HGV exports (32 HGV movements) per day over a 100 working day period. These potential HGV movements have been fully accounted for within the assessment of significant effects. They are included within the trip generation and distribution (i.e. HGV numbers and HGV routeing) estimates and the assessments set out in Section 4.1 of Chapter 10 of the ES (APP-059) and Sections 6.1 and Section 7 of the Transport Assessment (APP-095).
1.11.11 Applicant	Can the Applicant confirm whether the only activity on the causeway will be during high tide and signpost where this is secured in the application?	The proposed sequence of works for use of the causeway during barge deliveries was set out in PDC-039 (Habitats Regulations Assessment Report) Section 6.5. Barges will dock at the causeway at high tide and depart from the causeway at high tide. This is a practical necessity of using a causeway to dock barges (which must be able to float) and is not secured in the application. The details of docking operations will also be subject to control by the PLA under their statutory powers as the harbour authority and subject to such measures and restrictions as are set out in the final approved navigation risk assessment. The barge cargos will be unloaded onto the causeway at low tide when the barge has settled onto the river bed. Activity on the causeway will therefore occur at low tide; activity on and at the causeway will occur at all states of tide. The sequence of events for unloading a docked barge at low tide was summarised in PDC-039 at paragraph 6.5.2:

ExQ.	Question	Response
		• A mobile crane will lift out a section of the sea wall and, depending on barge model, may also move down to the causeway to lower the barge unloading ramp. • The loaded self-propelled transporter vehicle from the barge will move the engine to beyond the sea wall and up to the main development site. An empty transporter will move down the causeway onto the barge. • The barge front will be closed and the mobile crane will then move back up the causeway and replace the sea wall gate. Unloading will take approximately 1-2 hours to complete.
1.11.12 Applicant	Please provide up to date information on the current condition and functionality of the outfalls identified in Drawing A2.10 and explain how this influences the assessment of water quality and hydrological impacts to the Thames Estuary and Marshes SPA and Ramsar Site.	The surface water drainage system is designed to manage the water quality, rate and direction that rainwater falling on the site is discharged. Some rainwater infiltrates the ground and the balance ultimately discharges to the Thames. Drawing A2.10 refers to two potential outfall locations: Bowater Sluice outfall and/or Worlds End Pumping Station Outfall. Further communication with the EA has identified that the Bowater Sluice outfall does not function at its design standard and its design life is considered limited. This means that the site may not be able to rely upon this structure for the ultimate discharge of surface water from the site to the Thames Estuary in the future. Following the comments from the EA, the drainage scheme has been reviewed and the applicant agrees that it would be preferable to direct surface water flows west to Worlds End Pumping Station as suggested by the EA. This was agreed in correspondence with the EA (see item 4 in the applicant's letter to the EA of 26th November, within PDC-001) and is reflected on the wording of dDCO (PDC-009) requirement 10(b) for the detailed drainage design. It is also worth noting that the proposed drainage design restricts discharge rates from events with up to a 1 in 100 year plus 40% allowance for climate change return probability to a 1 in 1 year greenfield rate. The design ensures that flows from the site will be managed and that no additional flows will enter the local water network. The incorporation of the drainage scheme will therefore benefit the local network, helping manage flow rates during extreme storm events. As such, there will be no change to the water quality and hydrology of the Thames Estuary and hence no Adverse Effect on Integrity on the Thames Estuary and Marshes SPA and Ramsar site would occur (PDC-039 Habitats Regulation Assessment Report).
1.11.13 Applicant	Please explain how the Conceptual Drainage Strategy [PDC-007] is secured in the dDCO.	Requirement 10 of the dDCO (PDC-009) requires the submission and approval by the local planning authority of a scheme for surface and foul water drainage. For the avoidance of doubt, the applicant will propose an amendment to requirement 10 to require that all details submitted for approval of the relevant planning authority must be in accordance with the concept drainage strategy certified under article 40.

ExQ.	Question	Response
1.11.14 Applicant	Please explain why, in view of its 35-year lifespan, the effects of the proposed causeway should be considered 'temporary'.	In simple terms, the effects of the causeway have been considered in the context of the river as the receptor, rather than, say, a human lifetime, but the description of these effects as temporary does not alter the nature or scale of the effects. The effects associated with the construction of the causeway are temporary, not significant and reversible; the effects of its operation are insignificant and also reversible. The effects of its decommissioning are likely to be similar or less than its construction, subject to a decommissioning plan, and also temporary and reversible. On this basis the effects are not permanent and have been termed as temporary.
1.11.15 Applicant	Please update the footnotes in the integrity matrices to include references to mitigation i.e. specific measures in the OCoCP or relevant design plans, where these are secured in the DCO and any agreements made with SNCBs.	The integrity matrices (Matrix 9 (Thames Estuary & Marshes SPA) and Matrix 10 (Thames Estuary and Marshes Ramsar) of PDC-039 (Habitats Regulations Assessment Report) have been updated with reference to the following documents of relevance to mitigation for hydrological changes and water quality effects during construction and operation: • APP-142 Outline Code of Construction Practice (construction). The full CoCP is secured through requirement 5 in the draft DCO (PDC-009). Measures relating to contaminated land and groundwater are secured through requirement 12 in the draft DCO (PDC-009). • PDC-006 Conceptual Drainage Strategy (operation). Surface and foul water drainage design is secured through requirement 10 in the draft DCO (PDC-009). As of the time of writing no agreements have been made with SNCBs in relation to mitigation measures covered in PDC-039 (Habitats Regulations Assessment Report).
1.11.16 Applicant	Please provide a copy of the populated Biodiversity Metric 2.0 spreadsheet used to inform the calculation of Biodiversity Net Gain.	A copy of the Biodiversity Metric 2.0 spreadsheet has been submitted for Deadline Two.
1.11.17 Applicant	Following the 5 yearly reviews of access for AIL's as proposed in R17 of the dDCO, an alternative may be taken forward if it is considered 'environmentally acceptable'. Please explain what this means, and how an assessment of the alternative means is either captured in the ES or proposed to be undertaken to ensure that no significant effects are likely to occur.	This is now requirement 18 in version 4 of the dDCO. The drafting of this requirement has been amended to define this term, which has been included at the request of several interested parties. The environmental acceptability of any alternative access would be determined by the relevant planning authority or other consenting body if an application to consent that access were necessary (for example, a Town and Country Planning application). The Thurrock Flexible Generation Plant DCO does not itself authorise creation of an alternative access and given the UK's strong environmental protection and planning laws, any alternative access in future not requiring a consent application would necessarily be one without any potential for significant adverse environmental effects. The assessment of alternative means of access is not captured in the ES because, by definition, these means cannot yet be known. The purpose oft this requirement is to allow for adaptation to unknown changes in

ExQ.	Question	Response
		circumstances outside the applicant's control where those provide the opportunity to decommission the causeway earlier than at the end of the proposed development's operating lifetime, which is considered beneficial by several consultees.
1.11.18 Applicant	The ExA notes that the application of impact magnitude and receptor sensitivity through comparison of the methodology in ES Chapter 9 (Tables 2.3 and 2.4 respectively) and paragraph 4.1.68 and 4.1.69 do not fully align. For example, it is unclear how a long-term, continuous, direct impact to a sensitive receptor that is a feature of a European designated site warrants a 'negligible' impact to a 'medium' sensitivity receptor and subsequently no significant effect is anticipated. Please provide further justification for the approach taken.	The wintering bird assemblage present on the foreshore was assessed as being of no higher than district importance for the ES, and was considered to be of medium sensitivity. The magnitude of impact of habitat loss was considered to be negligible given the small loss of mudflat compared to the available resource in the wider area, and the reversibility of the impact. Therefore, the significance of the impact was considered to be negligible with reference to Table 2.5 of PDC-021. Further detail on the justification for this approach is provided below. ES Chapter 9 Onshore Ecology (PDC-021) assesses impacts on the wintering bird assemblage observed to be present on the foreshore within the impact zone of the Zone G causeway. The importance of the assemblage and of the populations of individual species were assessed for the ES against criteria of local and national populations as set out in Tables 3.1 and 4.1 of PDC-033 (Environmental Statement Volume 6 Appendix 9.4 - Foreshore Wintering Bird Surveys 2019-2020). The evaluation for the ES assesses numbers of birds in relation to national and county population estimates or status, and, where appropriate, in relation to numbers of birds listed on the citation for the Thames Estuary and Marshes SPA. Table 2.4 of PDC-021 is not meant to imply that in an ES context all populations of birds for which an SPA is designated should be considered of international / European value in locations outside the SPA. The assessment of birds in relation to their importance in an SPA context is provided in PDC-039 (Habitats Regulations Assessment Report). As noted in PDC-021 paragraph 2.5.5, the sensitivity assigned to a receptor takes into account the value of an Important Ecological Feature (IEF) as well as vulnerability and recoverability. Therefore, while value is usually the primary consideration when determining sensitivity, professional judgment is also used to determine how sensitive an IEF may be to impacts when these other factors are considered. The wintering bird assemblage within the zone of influence of the causeway was considered to be of medium sensitivity taking into account the evaluation of the assemblage and numbers of individual species against national criteria and their vulnerability and recoverability in the context of the habitat resource available to the birds. The description of the impact on wintering birds from habitat loss due to the causeway in PDC-021 Paragraph 4.1.68 should have read "reversible" not "irreversible", and the word 'permanent' should have been deleted from the submitted version, given that the causeway will be fully decommissioned at no greater than 35 years from construction. Given the small amount of habitat loss in relation to the wider resource of mudflat, and the fact that the impact is reversible in the long-term, it is considered that an impact magnitude of 'negligible' in ES terms is correct. By reference to ES table 2.5, the significance of a negligible magnitude impact on a feature of medium sensitivity can be defined as either 'negligible' or 'minor' (neither of which are considered significant). It was considered that 'negligible' was the correct category of significance for impacts on wintering birds for the ES taking into account the numbers of birds potentially affected, the relatively small extent of habitat loss in relation to the habitat resource in the wider area and the reversibility of the impact in the long term.

ExQ.	Question	Response
1.11.19 Applicant	ES Chapter 17, paragraphs 4.2.9 and 4.2.10 state that a significant effect is likely to occur as a result of the loss of mudflat habitat and monitoring is put forward to understand the rate of change over time but no mitigation is put forward. Please explain why no mitigation measures have been put forward to mitigate this significant effect and whether monitoring will inform potential mitigation.	The applicant notes that while effects of long term habitat loss may be significant at a very local scale, in the context of the wider Thames estuary, the loss of this small proportion of mudflat habitat is very small (i.e. 0.06% of intertidal mudflat habitat within the Middle Thames Estuary waterbody). As noted by the ExA, monitoring has been proposed to assess the changes in intertidal habitats in the lee of the causeway and particularly the rate of expansion of saltmarsh habitats/communities into the mudflat. With respect to mitigation, the applicant has now committed to decommissioning the causeway, leading to a reversal of the significant impact, with an overall neutral effect on intertidal mudflat habitats in the long term (see paragraph 4.3.12 of Chapter 17; PDC-019). The Causeway Decommissioning Plan will also be informed by the monitoring of intertidal habitats and the degree of change to these habitats since construction of the causeway. This mitigation commitment is secured by requirements 14 and 19 of the dDC) (version 4).

12. LANDSCAPE AND VISUAL

ExQ.	Question	Response
1.12.1 Applicant, Thurrock Council, Gravesham Borough Council, Essex County Council	Have the representative viewpoints identified in ES Chapter 6 (Landscape and Visual Resources) [APP-049 to APP-055] been agreed with the relevant local authorities?	Yes. Details of the consultation with Thurrock Borough Council, Gravesham Borough Council and Essex County Council are set out in APP-049 (ES Volume 3, Chapter 6: Landscape and Visual Resources (Part 1)) Table 1.3.
1.12.2 Thurrock Council	How might detailed design relating to form, materials and use of colour minimise adverse visual effects as suggested in the design principles statement [APP-140]?	The applicant notes that the coloured banding illustrated in APP-140 (Application Document number A8.4 Design Principles Statement) Figure 12, is a form of 'skyscaping' used to reduce the visual impact of the height of buildings. The colours of the upper bands are lighter to better merge with the sky. The roof being slightly darker, to offset the brightening effect of direct sunlight.
1.12.3 Applicant	Please state the reasons for excluding the ribbon of development along the southern end of Princess Margaret Road from assessment.	The potential for impact on visual receptors at the southern part of Princess Margaret Road was assessed at APP-049, paragraph 3.4.6. It was judged to be not significant because the views from publicly accessible areas are limited by distance and intervening housing. Visual impact assessment considers the impact on visual receptors (people) at public locations, not the change in private views. The Landscape Institute has provided guidance on residential visual amenity in Landscape Institute *Technical Guidance Note 2/19 Residential Visual Amenity Assessment* (LI TGN 2/19). It was judged that the impact on residents' private views would not be a degree of harm over and above substantial adverse at this location. Further assessment was therefore not required, in line with the *Guidelines for Landscape and Visual Impact Assessment: Third Edition* (landscape Institute and Institute of Environmental Management and Assessment, 2013) (GLVIA) guidance as explained at APP-049, paragraph 2.2.1 (GLVIA paragraph 1.17).
1.12.4 Applicant	Paragraph 4.1.30 of ES Chapter 6 refers to anecdotal evidence of low pedestrian use of the section of highway and nearby access land. Please provide any evidence to support this statement.	None of the consultants visiting the proposed development and surrounding area for field surveys has observed members of the public using these roadside areas of Access Land. This includes five visits by the Land Use, Agriculture and Socio-economics consultants, two visits by the Historic Environment consultant (photographic fieldwork), six visits by the Landscape and Visual Resources consultants (photographic fieldwork) and two visits by the EIA co-ordinator. On all fifteen of these visits no pedestrian use of these areas was observed. The great majority of these visits were undertaken prior to Covid lockdowns in 2020. See also the response to question 1.13.2.
1.12.5		

ExQ.	Question	Response
Applicant	Paragraph 4.2.31 of ES Chapter 6 identifies the graveyard at St James' Church as having a high sensitivity with an impact magnitude of moderate. It goes on to classify the effect experienced at this receptor as moderate adverse but no reasons are provided. Please provide further explanation for the conclusions reached.	APP-049, paragraph 3.4.50 describes the existing view: *"The view is elevated, with long views over the drained marshland. The high land of north Kent can be seen through the pylons and overhead lines which emanate to the south of Zone A from the substation at Tilbury and aligned roughly south to north. Wide views are interrupted by the vegetation within the churchyard."* APP-049, paragraph 4.1.31, describes the impact of construction effects at Viewpoint 7, including the context of the view. The context of the view will not change between construction and operation phase (assessed at APP-049, paragraph 4.2.31), that is *"although it is an elevated viewpoint, the view of the construction works is distant and will be seen in the context of the development either side of the River Thames, as well as being partly screened by vegetation"* (APP 0-49, paragraph 4.1.31).
1.12.6 Applicant	Paragraphs 4.1.30 and 4.2.30 of ES Chapter 6 identify pedestrian receptors using the access land at representative viewpoint 6 as having a high sensitivity with the impact magnitude during both construction and operation identified as moderate. However, during construction the effect is classified as major adverse (which is significant) while during operation it is classified as moderate adverse (not significant). Can the Applicant provide further explanation on how these conclusions have been reached?	A moderate impact to a high sensitivity receptor may result in either moderate or major adverse effects, in the assessment methodology as defined in Table 2.6 of ES Chapter 6 (APP-049). Professional judgement is used to determine the significance of effect in such cases. For the construction phase, temporary and often intermittent impacts of the construction works associated with the Thurrock Flexible Generation Plant development, including the impact of the construction traffic using these local roads, the movement of the plant on site and the height of tall plant, such as cranes (higher than the completed development) is judged to have a more significant effect on pedestrian receptors than the completed development during the operation phase.

13. LAND USE, AGRICULTURE AND SOCIOECONOMICS

ExQ.	Question	Response
1.13.1 Applicant	Please provide details of deprivation levels for Walton Common and Zone E as requested by PHE in its RR [RR-020].	As has been agreed with Public Health England (see SoCG with PHE), both Walton Common and the exchange common land (Zone E) are currently in agricultural use and neither are populated. On the basis that there will be no change in the deprivation level of the population with access to the common land associated with the proposed Thurrock Flexible Generation Plant and no disproportionate impact on populations with differing levels of deprivation, it is not considered relevant (or meaningfully possible, given that these pieces of land are uninhabited) to provide population deprivation levels specific to these land parcels in relation to human health.
1.13.2 Applicant	What steps have been taken to identify the extent of public access rights which subsist over Walton Common?	A desktop study of the extent of common land parcel CL 228 was undertaken to determine the area of land available for public access including an inspection of the common land register and mapping. This was followed by numerous site visits that have been undertaken on Walton Common and the adjoining areas by the environmental survey teams since 2018, including five daytime visits by the land use and recreation team, and no public access/recreational activity has been observed during those visits. Accordingly, no targeted recreational surveys have been undertaken as it is considered likely that, if there is any use of Walton Common, then it is very limited. The landowner has also been asked and has advised that they are not aware of any recreational use of Walton Common. This may be due to difficulties in accessing Walton Common from the other parts of CL228. There are gates across the railway that link Parsonage Common to the north and Walton Common to the south. However, these gates are padlocked with Network Rail warning signs attached to them. Access between Parsonage and Walton Commons therefore requires the public to climb over two locked gates and cross an active railway line. There is no other route of public access to Walton Common as it is surrounded by private land. Its value as a recreational resource is therefore limited by the fact that it is difficult and hazardous to reach and in effect is a recreational dead end, not forming part of any recreational circuit. The area of replacement common land to be provided will be in excess of the area of common lost and will be more easily accessed by the neighbourhood and the wider public.
1.13.3 Applicant	Please justify the statement in Paragraph 3.4.2 of ES Chapter 8 (Land Use, Agriculture and Socio-economics) [APP-057] that 'there is little evidence of access by the public on Walton Common'.	See answer to 1.13.2 above.

14. MARINE ENVIRONMENT

ExQ.	Question	Response
1.14.1 Applicant/ NE/MMO/ EA	Please can the EA, NE, the MMO and the Applicant work together to provide suitable draft wording for further requirements and/or for additional/modified conditions in the Deemed Marine Licence to address the various matters raised in the RRs.	The applicant has been in discussion with the MMO and PLA and has made a number of revisions to the DML in version 4 of the dDCO in order to address the comments made. Although an earlier draft of version 4 with changes was circulated for comments, which comments have been taken into account, the MMO and PLA have not had an opportunity to review all of the changes as proposed in the submitted version 4 due to pressure of time. Work to agree wording is therefore ongoing.
1.14.2 Applicant	Please explain how the duration of maintenance dredging would be controlled in the dDCO.	The dDCO does not provide authority for maintenance dredging, for which separate licences will be required; Article 10 has been amended to make this clearer.
1.14.3 Applicant	Please respond to the proposed amendments to the dDCO suggested by the MMO in its RR [RR-014] and Procedural Deadline D submission [PDD-005].	The applicant has been in discussion with the MMO and has made a number of revisions to the DML in version 4 of the dDCO in order to address the comments made. The applicant believes that most of the MMO's comments have been addressed and the basis for that is set out in the draft SoCG between the parties. Discussions will continue once the MMO have had an opportunity to review the amends to the dDCO.
1.14.4 Applicant	Please ensure that all plans and drawings relating to the marine parts of the Proposed Development are identified and listed in the DML.	This has been reviewed.
1.14.5 Marine and Coastguard Agency	Please explain whether, and if so how, the Applicant should notify you of the marine works and whether the MCA consider any such notification should be secured in the dDCO or DML.	[n/a]
1.14.6 Applicant	Please explain the relevance of the yellow diagonal hatching shown in Figures 1.3 and 1.4 of ES Chapter 2.	The yellow diagonal hatching denotes SSSIs.
1.14.7 Applicant	Table 2.2 in ES Chapter 2 sets out the design parameters for assessment of the causeway and berthing pocket. However, the ExA notes that Schedule 8 of the DCO includes various parameters which allow for a 5 or 10% increase in the parameters set out in table 2.2. Please confirm	See response to Q1.11.4.

ExQ.	Question	Response
	whether these higher parameters were considered as part of the ES. If not, please provide a justification for their inclusion in the dDCO.	
1.14.8 Applicant	The ExA notes that the assessment of significant effects on fish receptors have been 'grouped' together with marine mammals and there is no consideration of the varying species and their vulnerability to impacts from the Proposed Development. For example, species (both fish and marine mammals) have differing life cycles and dependencies on various marine habitats and therefore, their sensitivity to impacts should be assessed separately. Can the Applicant provide a full assessment on fish receptors where significant effects are likely to occur; this may be supported by additional surveys, survey areas and information on fish species utilising the Thames. Updates of the ES should be provided where it is influenced/altered by this assessment, for example, mitigation measures.	The Applicant has taken a proportionate approach to the impact assessment presented in Volume 3, Chapter 17 (PDC-019), ensuring the assessment is proportionate to the risk that the relevant impact poses to marine environmental receptors. Where marine ecological receptors have identical sensitivities, these have been considered together to minimise repetition. For example, for effects of habitat loss, both fish and marine mammals in the Thames Estuary are mobile and can avoid the area temporarily affected by this impact. For increases in suspended sediments, the increases in suspended sediments are predicted to be localised, which both receptor groups can avoid, and both receptor groups would be expected to have some tolerance to this impact, due to the naturally high levels of suspended sediments in the area. In the case of underwater noise, it is noted that marine mammals and fish have different hearing sensitivities, but the risk to marine ecological receptors from underwater noise associated with the project is low. There is no risk of injury to marine ecological receptors due to dredging and vessel noise, and disturbance will be minimal as the increases in underwater noise from the project (i.e. dredging and vessel movements) will be negligible in the context of the baseline underwater noise levels in this part of the Thames estuary. This is reflected in the magnitude of impact, which was considered to be negligible (see paragraph 4.1.80 of PDC-019). As noted, the applicant agrees that fish and marine mammals have different sensitivities to underwater noise. However, given the low level of noise disturbance associated with the project, it was not considered relevant to include large sections of text from the scientific literature outlining these differing sensitivities of these receptors. Within Chapter 17 (PDC-019), paragraph 4.1.82 presents an overview of sensitivity of fish to underwater noise impacts, with specific reference to dredging operations, based on recent peer reviewed guidelines published by the Acoustical Society of America. Paragraph 4.1.83 presents an overview of sensitivity of marine mammals, directing the reader to a recent review of the effects of dredging on these species, rather than repeating the technical detail contained within it. The conclusion reached based on these paragraphs was that sensitivity of marine mammals and fish receptors was low for both receptor groups. The applicant's position is that while fish and marine mammals are considered under the same impact assessment headings, where there are differences in their sensitivities, these were discussed separately, with the ultimate conclusion for the underwater noise assessment that their sensitivities to the predicted impact (i.e. a very low level and temporary increase in underwater noise in the context of the baseline noise levels) are both low. All impacts assessed within Chapter 17, were concluded to have either negligible or minor effects on marine mammals and fish receptors, which will not be significant. As such, no further assessment or additional mitigation is considered necessary.

15. NOISE AND VIBRATION

ExQ.	Question	Response
1.15.1 Thurrock Council	Please state whether the Host Authority agrees with the assessment methodology and conclusions set out in ES Chapter 11 (Noise and Vibration [APP-060]).	[n/a]
1.15.2 Applicant	Schedule 2, R9 of the dDCO limits construction hours to specified times. However, Subsection (2) identifies works which would be permitted outside those hours including those which do not cause noise that is more than 5dB above the pre- construction ambient noise at the nearest residential property to the Order limits, (subject to specified lower cut-off values). What is the ambient noise at the nearest residential receptor? This appears to allow for an increase of 5dB over pre-construction ambient noise which BS 5228-1:2009+A1:2014 indicates (at E.3.3) may have a potential significant effect. Please provide further justification for the 5dB threshold. Please identify the activities that could be undertaken outside the core hours, what noise levels will be associated with these activities, how they have been taken into account in the environmental assessment and any mitigation proposed.	A table showing the ambient noise at the nearest residential receptors to each phase of the construction works is shown in supporting document N&V-1. BS 5228-1:2009+A1:2014 at E.3.3 states that *"Noise levels generated by site activities are deemed to be potentially significant if the total noise (pre-construction ambient plus site noise) exceeds the pre-construction ambient noise by 5 dB or more, subject to lower cut-off values of 65 dB, 55 dB and 45 dB $L_{Aeq,T}$ from site noise alone, for the daytime, evening and night-time periods, respectively"*. Therefore, short term working outside of normal hours is only deemed potentially significant if it exceeds the 5 dB threshold (or lower cut-off values, whichever is lower). There are many possible types of work which can be carried out that do not cause noise, for example surveying and marking out areas of work, or fit out activities such as installing electrical equipment within buildings. As by definition these are not significant noise generating activities, they are not activities with a noise impact to assess in the EIA, nor require any mitigation. The reason for imposition of Requirement 9 is to limit noisy works to in order to ensure the impacts remain within the assessed envelope and that the amenity of others is protected. Where works are not noisy and there would be no impact on amenity those works do not need to be restricted to same degree as noisy works. The BS5228 standard provides an objective level for determining if a work is 'noisy' and thereby allows the applicant to know what is permissible and the Planning Authority to apply that level in assessing compliance with the requirement.
1.15.3 Applicant	Table 2.7 of ES Chapter 11 (Noise and Vibration) [APP-060] sets out the criteria for receptor sensitivity. Please provide further explanation of why residential receptors are classified as medium sensitivity.	As stated in ES Chapter 11 (APP-060), there is no nationally or internationally accepted standard for the assignment of receptor sensitivity. As a result, sensitivity has been assigned based on experience and professional judgement. Residential receptors have been assigned to the medium (or normal) sensitivity due to the average population having high recoverability to short term (such as construction activity) and intermittent (such as the operation of the plant) noise effects. The classification of residential receptors as medium sensitivity was consulted on at the PEIR stage and no comment was raised at that time. Residential properties were classed as medium sensitivity by a number of DCO applications and othe rmajor development projects, including the Kemsley Mill K4 CHP Generating Station, National Grid North Wales Connection Project, and Hornsea Part Three offshore wind farm, and the M4 Corridor around

ExQ.	Question	Response
		Newport Highways Act Order Environmental Statement. No objections were raised as to the classification of residential receptors as medium sensitivity.
1.15.4 Thurrock Council	Does the Host Authority agree that the locations set out in Tables 3.1 and 3.2 are representative of the nearest NSRs?	[n/a]
1.15.5 Applicant	ES Chapter 11 identifies St James' Church as both a high sensitivity receptor and a medium sensitivity receptor, with footnote 1 explaining that it was subsequently identified as a converted residential property. Please confirm how St James' Church has been assessed, whether as a high sensitivity or medium sensitivity receptor and provide a justification for the approach taken. Has that approach been agreed with relevant bodies?	St James' Church has been assessed as a medium sensitivity receptor due to being a residential property. Paragraph 2.3.3 in Chapter 11 (APP-060) should have stated that it has been classified as medium sensitivity. Paragraph 2.5.14 should read: *"The operational noise magnitude of impact criteria presented in Table 2.5 are derived from BS 4142:2014+A1:2019 and, as such, are representative of noise impacts on residential premises.",* with no further text. The classification of residential receptors as medium sensitivity was consulted on at the PEIR stage and no comment was raised at that time. As referenced in the response to question 1.15.3, there is no nationally or internationally accepted standard for the assignment of sensitivity of receptors, and as such this has been based on previous project experience and professional judgement.
1.15.6 Applicant	Para 1.3.3 of Appendix 11.3 states that while certain activities may require continuous operation throughout the 24-hour period, these activities are limited to a continuous operation of no more than 10 days per phase. Please signpost where/how this is secured in the dDCO. Does this also apply to a single-phase construction programme?	This maximum parameter has been added to in Table 11.1 of the Register of Mitigation, Enhancement and Monitoring Commitments (PDC-029; ES Appendix 2.1). It does apply to a single phase construction programme.

16. ONSHORE WATER ENVIRONMENT

ExQ.	Question	Response
1.16.1 Applicant	Please comment on the changes proposed by Anglian Water Services Limited to Art 16 of the dDCO [RR-017].	It is noted that alternative amends which Anglian Water have agreed adequately protect their position have been agreed and Thurrock Power Limited understand that the changes previously proposed to article 16 are no longer sought by Anglian Water. Anglian Water objects to the dispute resolution method being to treat any dispute if it were a dispute under section 106 (right to communicate with public sewers) of the Water Industry Act. This wording is however taken from the model provisions, is commonly used in DCOs and has not been objected to by any other affected party. Thurrock Power Limited does not agree with the changes proposed by Anglian Water as these would act to change the effect of the article for all other parties. It is noted that there is no proposal to connect to Anglian Water assets, foul sewage on the site is proposed to be packaged and removed not discharged to the sewers. The proposed amends would therefore in practice affect connections to drains including drainage ditches which are not Anglian Water's infrastructure. To prevent such changes being imposed on others who have not agreed to them, specific wording for the protection of Anglian Water only has been added to the protective provisions.
1.16.2 Applicant	The ExA notes that the study area is identified in section 2.3 of ES Chapter 15 and displayed on Figure 2.1 of ES Chapter 15. However, there is no evidence in the ES or FRA of what has determined the zone of influence on which the study area is based or how the hydrological pathways for impacts have been identified. In paragraph 3.3.2 of the Scoping Opinion, the Applicant was advised that the study areas should be based on the zone of impact but there is no explanation of how that was determined. Can the Applicant justify the hydrological and flood risk study area and explain how the zone of influence has been determined. Explanations should be supplemented with figures, where relevant.	The study area for the ES and FRA have been defined having regard to the areas most likely to be directly affected by the proposed development. This encompasses the area within the proposed Order Limits where the development could be at risk of flooding, or where the development could be expected to have an effect on drainage and/or water resources during construction, operation and later decommissioning. The 'zones of influence' were established by firstly identifying hydrological points of origin or assets of origin, i.e. the development site. The primary asset (the site) and a 'study area' for secondary assets are searched. Each impact linked to an asset is given its own study area. For example a drainage discharge on the site will be assessed for water quality impacts downstream to a point where the concentration of any release has become statistically unimportant; whereas the flood impact of a new culvert is assessed for the zone of influence being measurable, normally ±1 mm; or a tidal flood water displacement impact is considered for the entire flood cell. There is no specific guidance to define a hydrological study area. However, over time the sector has established general guiding principles which have been presented to the regulators without tendering negative or adverse responses. Similar examples are the HS2 application, which utilised a 1 km search area from the centreline of the development, which was reduced to 500 m in urban areas and to 200 m from stations and depots with reliance on professional judgement. A further example is the M4 Corridor around Newport Highways Act Order application, in which the study area was limited to the proposed order limits, namely where the development was identified to be at risk of flooding. The applicant maintains that a 250 m buffer around the proposed causeway, the electrical cable corridor, the gas pipeline connection corridor), as well as the storage areas, compounds and permanent access road is

ExQ.	Question	Response
		appropriate with an increased zone of influence of 1 km around the proposed development's gas engines and battery storage facilities.
1.16.3 Applicant	In the guidance used (DMRB, 2019) it states that "for some projects, sensitive receptors and resources can be located beyond the immediate environs of the project e.g. through hydrological pathways". The Mucking Flats and Marshes Site of Special Scientific Interest and Thames Estuary and Marshes Ramsar and SSSI are located on the banks of the River Thames and therefore it is considered there is a pathway for potential impact to these sensitive receptors, yet they are not assessed within the Hydrology and Flood Risk Chapter. Additionally, the dredging plume modelling undertaken (section 5, Appendix 17.2) suggests that the dredging plume travels downstream to the Thames Lower Water Body which has been scoped out of the WFD assessment. Can the Applicant explain why sensitive receptors identified in the Marine Environment and Onshore Ecology (or) which are hydrologically linked to the Proposed Development site via the River Thames are not included in the baseline and assessment?	As discussed in response to 1.11.12 above, the only discharges from the onshore elements of the proposed development will be clean surface water discharge, controlled to a greenfield rate for the main development site and regulated by the Environmental Permit. The drainage scheme has been designed with consideration of comments from the EA, such that flows from the site will be managed and that no additional flows will enter the local water network. The incorporation of the drainage scheme will provide some benefit to the local network, aiding to manage flow rates during extreme storm events. Ultimately these discharges will enter the Thames Estuary via the outfall discussed in the response to 1.11.12 above. These additional discharges will not result in a change to the water quality and hydrology of the Thames Estuary and there is no impact pathway on the designated sites identified or other marine environmental receptors. The potential for impact on the Thames Estuary and Marshes SPA, of which the Thames Estuary and Marshes Ramsar and SSSI form a part, was assessed in the Habitats Regulations Assessment Report (PDC-039). With respect to impacts of dredging during the construction phase, while numerical modelling has predicted that suspended sediments may extend up to 20 km upstream and downstream of the dredge location, the levels of suspended sediments will be very limited beyond 1 km either side of the dredge location. Paragraph 4.1.44 of Chapter 17 (PDC-019) describes the predicted increases in suspended sediments during dredging, with spikes of the order of 100 mg/l in close proximity to dredging, but suspended sediments beyond 1 km predicted to be below 10 mg/l (reducing further with increasing distance from the dredge location). This is against background concentrations in the Thames Estuary of over 1,000 mg/l and therefore an increase of 10 mg/l in suspended sediment concentrations will represent an immeasurable change to baseline suspended sediments. Additionally, owing to the very strong affinity that the key Priority Hazardous Substances (PHS) of concern – i.e. tributlytin, polynuclear aromatic hydrocarbons and mercury compounds – possess for solid matter rather than water (termed solid partitioning), and the significant potential for dilution within a large tidal river estuary, impacts on water quality at such distances will be immeasurable. Notwithstanding the magnitude of such affects, the duration of impact is small, of the order of days compared to the compliance standards for river water quality being assessed as an annual average. It is also of significance that the magnitude of the key PHSs recorded at the site are representative of baseline river sediment and water chemistry measured downstream of the proposed dredging area, where three of the four PHSs already exceed the statutory EQS for coastal transitional waters. It is therefore concluded that there is no meaningful potential to increase baseline chemical concentrations, or materially affect the compliance potential, of the key PHS compounds downstream of the site. As such, this very small increase in suspended sediments will not lead to significant effects to marine or onshore receptors beyond 1 km from the dredge location. This was also the rationale for scoping out other WFD waterbodies from the WFD Assessment, including the Thames Lower WFD waterbody, which is located 6 km downstream of the development boundary.

ExQ.	Question	Response
		Effects on onshore ecology receptors and marine environmental receptors have been fully assessed in Volume 3, Chapter 9 (PDC-021) and Chapter 17 (PDC-019) where a receptor-impact pathway has been identified.
1.16.4 Applicant	Please explain how baseline water quality data has informed the assessment of water quality effects and the WFD assessment.	The applicant has taken a proportionate approach to the impact assessment presented in Volume 3, Chapter 17 (PDC-019), ensuring the assessment is proportionate to the risk that the relevant impact poses to marine environmental receptors. Due to the low impact on water quality from dredging, which will be short term and temporary, a high level baseline review of the water quality of the Thames Middle WFD waterbody has been presented within Chapter 17 of the Environmental Statement (PDC-019) and the WFD Assessment (PDC-028). The applicant has been in discussion with the Environment Agency prior to Deadline 2 about baseline water quality data and has provided further information to the EA as part of that discussion, which is being reviewed by the EA. The applicant and EA intend that this can be agreed through subsequent drafts of the Statement of Common Ground. As set out in response to 1.16.3 above, the assessment of effects of increases in suspended sediment concentrations takes into account the naturally high baseline suspended sediment concentrations within the Thames Estuary. Owing to the high solid partitioning behaviour of the key PHS compounds, the significant potential for dilution, the short duration of the proposed dredging works and the prevailing water and sediment quality of the Thames locally, impacts on water quality and statutory compliance potential at such distances will be immeasurable. Effects from the development will be limited to dredging activities and associated short term, temporary increases in suspended sediment concentrations and potential resuspension of sediment-bound contaminants. As per other responses (e.g. 1.11.12 and 1.16.12), no discharges, other than clean surface water drainage, will be released to the Thames Estuary and therefore there will be no change to water quality baseline of the Thames Estuary due to onshore infrastructure. Therefore these increases in suspended sediments are minimal (when compared with baseline levels), short term and temporary and will not lead to significant effects on the water quality of the Thames Estuary (e.g. see paragraphs 4.1.56 and 4.1.57 and paragraphs 4.1.71 and 4.1.72 of Chapter 17; PDC-019) nor will they not lead to negative effects on the water quality objectives of the Thames Middle WFD waterbody (see section 6.5 of the WFD Assessment: PDC-028).
1.16.5 Applicant	Please explain why the assessment has diverged from the guidance used? For example, no sensitivity is defined for groundwater receptors although the site overlays a groundwater source protection zone (SPZ) (paragraph 4.5.1 of the FRA) and this is included as a	The assessment of groundwater receptors (hydrogeology) in relation to potential impacts from contamination is contained within APP-065 (Chapter 16: Geology, Hydrogeology and Ground Conditions). A more conservative classification of the nearby potable abstraction is used for this groundwater receptor. The main development site (Zone A) is not located in a groundwater SPZ. The northern part of Zones C, D and I are located within a groundwater SPZ3. The DMRB guidance assigns an SPZ3 as being of medium importance. The EA advised that the groundwater abstraction located approximately 85m to the north of the

ExQ.	Question	Response
	sensitive receptor in the DMRB guidance.	Order Limits includes abstraction for potable supply and that this receptor should be included in all risk assessment. This is referenced in Table 1.3 of APP-065. This has been assigned a very high sensitivity and has been included in the assessment as a worst case given the close proximity of the abstraction point. The assessment concluded no significant adverse effects are predicted.
1.16.6 Applicant	Please explain how magnitude and sensitivity have been allocated to impacts and receptors where criteria are not quantifiable.	Where specific quantifiable metrics cannot be used in respect of flood risk, for example, comparative metrics and professional judgment with other sites/application of a similar nature have been used to aid in developing a reasoned impact matrix. This is, where possible, underpinned by EA and/or LLFA classifications such as Flood Zone 3 being equivalent to a high sensitivity, while Flood Zone 1 would be low sensitivity. Where required these categories can be ranked further based on number of inhabitants potentially at risk. Therefore, urbanised areas in Flood Zone 2 were given the highest sensitivity (Very High) with rural areas in Flood Zone 3 given a slightly lower sensitivity of high. This approach was similarly adopted for Flood Zone 2.
1.16.7 Applicant	Please provide a figure depicting the location of the Proposed Development in relation to the outputs of the EA's pluvial flood modelling or explain why this is not possible.	This is enclosed as figure FR-1.
1.16.8 Applicant	There are a number of contradictions within the FRA, for example paragraph 4.2.4 states that due to the tidal influence in the Thames, there is a very low fluvial flood risk and therefore it is not considered further. Paragraph 4.12.3 then states that the site is at risk from fluvial flooding. It also determines that the risk from groundwater and surface water flooding is low to medium, however, in sections 4.4 and 4.6 this is determined to be low. Please explain/clarify these discrepancies.	The dominant flood risk in the area is tidal, for which appropriate flood resilience and resistance measures are secured via the DCO. Paragraph 4.2.4 of the FRA identifies that there is a risk of fluvial flooding, but this is low/minimal as identified in the Thurrock SFRA. In the absence of specific fluvial flood modelling, surface water flood mapping was used as a proxy which indicates that fluvial flooding is restricted to the banks of field drains with little impact on the development site, therefore a minimal impact. With respect to the inclusion of 'medium' in paragraph 4.12.3, this is a typographical error and should have been removed. The typo has no effect on the assessment or conclusions.
1.16.9 Applicant	Please update the FRA to ensure that all measurements are correct with respect to applying the H++ scenario.	The FRA (PDC-025) has been consulted upon with the EA. The EA has agreed to these amendments and calculations of the H++ scenario which has been used to design drainage mitigation and its application is therefore correct. This is confirmed in correspondence received from the EA after Procedural Deadline D (enclosed at FR-2) and is referenced as a point of agreement in the draft SoCG with the EA.
1.16.10		These assessments have been added to Table 3.3 in Chapter 31.

<table>
<tr><th>ExQ.</th><th>Question</th><th colspan="2">Response</th></tr>
<tr><td>Applicant</td><td>Table 3.1 of ES Chapter 31 identifies the potential for inter-related effects in Hydrology, Geology and Ground Conditions and the Marine Environment but no assessment is provided in Table 3.3. Please explain where this assessment is provided or provide the assessment.</td><td colspan="2"></td></tr>
<tr><td>1.16.11

Applicant</td><td>Please signpost where the maximum parameters set out in Table 2.5 of ES Chapter 15 are secured in the dDCO.</td><td colspan="2"><table>
<tr><th>Measure</th><th>How secured</th></tr>
<tr><td>Main development site (Zone A) buildings and low permeable (hardstand) surfacing up to 6.35 ha in total</td><td>The low permeability area parameter relates to the volume of surface water runoff that must be attenuated to not exceed the greenfield runoff rate.

Ultimately it is the runoff rate that must be secured, which is via the measures and attenuation design set out in the Conceptual Drainage Strategy and secured by Requirement 10 in the draft DCO.

To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2 must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.</td></tr>
<tr><td>Above ground installation for NTS connection (National Grid gas connection compound within Zone D3) buildings and low permeable (hardstand) surfacing up to 0.25 ha in total</td><td>Schedule 2, Part 1, Table 1 in the draft DCO.</td></tr>
<tr><td>Permanent access road (within Zones C and G) use low permeable surfacing</td><td>This is a reasonable maximum case (maximum increase in runoff from impermeable area) for the EIA and should not secured. Any use of more permeable surfacing would reduce the runoff.</td></tr>
<tr><td>Ground floor/base height of buildings and other structures of main development site (Zone A) to be set at 2.0 mAOD.</td><td>This forms part of the flood resilience measures to achieve the level secured in Requirement 4(2)(b) in the draft DCO.</td></tr>
</table></td></tr>
</table>

ExQ.	Question	Response	
		Gas pipeline construction: 23 m wide working corridor; pipeline crosses all fields of 'Zone D'; total length up to 3 km	The working width is secured in Schedule 2, Part 1, Table 1 in the draft DCO. The other parameters are maximum case assumptions for the EIA and could not be exceeded within the Order Limits.
		Access road(s) for construction: 20 m wide working corridors; routes not shared with gas pipe	The working width is secured in Schedule 2, Part 1, Table 1 in the draft DCO. The no-overlap parameter is a maximum case assumption for the EIA and should not be secured.
		Up to 2 ha in Zone C used for laydown or temporary construction compounds.	The location of construction compounds is constrained to Zone C by the limit of deviation applied to Work 8. Requirement 15 provides for restoration of construction compounds. The temporary land-take is a maximum case assumption for the EIA and should not be secured as a DCO parameter.
		Sea wall flood defence at head of causeway has opening made with slot-in gate to provide access to the causeway.	Design of works to the tidal defence wall under the EA's approval is secured by Requirement 4(3) in the draft DCO and by the protective provisions in schedule 9.
		Storage of fuel and refuelling or minor maintenance of construction plant within main development site (Zone A)	This is a reasonable maximum case assumption (risk of spills) for the EIA and should not be secured.
		Trenchless techniques used for surface watercourse crossings by gas pipeline and underground cable.	This is specified in Table 3.1 (Crossing Schedule) of the ES Project Description Chapter (PDC-015) and in Table 15.1 of the Register of Mitigation, Enhancement and Monitoring Commitments (PDC-029). To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2 must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.
		Temporary bridging or culverting of surface watercourse crossings for construction access, remaining in place for up to six year construction programme	This is specified in paragraphs 3.3.4 and 3.3.5 of the ES Project Description Chapter (PDC-015) and in Table 15.1 of the Register of Mitigation, Enhancement and Monitoring Commitments (PDC-029). To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to

ExQ.	Question	Response	
			navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2 must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.
		Up to 500 m of existing field drainage channels and surface water systems removed permanently	This is secured by the limits of deviation for those works requiring removal of field drainage channels.
		Up to one major maintenance period (duration three weeks) and four minor maintenance visits (duration one week) per annum	This describes the applicant's expected maximum annual maintenance requirements and is not a matter that should be secured.
		No excavation or machinery access required for routine inspection of pipeline.	This describes the expected normal operation of a high-pressure gas pipeline, which is inspected internally using PIGs (pipeline inspection gauges), provision for which is made in the gas connection compound (Work 5A). It is not a matter that should be secured.
		Possible repair or replacement of any pipeline section not planned during operating lifetime; unplanned repair or maintenance maximum design scenario no greater than construction	This describes the expected normal operation of a high-pressure gas pipeline. The assumption that any unplanned repair or maintenance works would be no greater in impact than the gas pipeline construction is a reasonable maximum case for the EIA and should not be secured.
		Removal of all infrastructure including areas of hardstanding and flood attenuation, with the exception of buried pipeline and cable assets.	This is a reasonable maximum case assumption (magnitude of impacts from decommissioning works) for the EIA and should not be secured.
1.16.12 Applicant	Can the Applicant explain how the outcome of the compliance assessment and the water quality assessment would be affected by applying the 2013 Environmental Quality Standards Directive (EQSD) criteria rather than the superseded 2008 EQSD criteria?	The WFD Assessment (PDC-028) has been undertaken according to the Environment Agency (2017) *Clearing the Waters for All* guidance for assessing impacts in estuarine (transitional) and coastal waters for the WFD. These guidelines state that if the activity releases any chemicals on the EQSD list and has a mixing zone (like a discharge pipeline or outfall) then the Environment Agency surface water pollution risk assessment guidance should be followed. With regard to surface water discharges in operation, as per the response to 1.11.12 above, discharges from the development will be limited to clean surface water drainage only and these will be managed so as to limit	

ExQ.	Question	Response
		flows into the local water network. No chemicals will be released (including priority EQSD chemicals) as part of these surface waters and therefore the EQSD guidelines are not relevant to the WFD assessment in terms of discharges from the flexible generation plant. As such, this was scoped out of the WFD Assessment (see Section 3 of the WFD Assessment; PDC-028). Clean surface water drainage from the flexible generation plant will be regulated by the Environment Agency via the Environmental Permit. With regard to the temporary impact of dredging activity during construction, the compliance assessment's conclusions are unaffected by the updated 2015 EQSD concentrations, which only affects the assessment of the polynuclear aromatic hydrocarbon compounds, namely benzo(b)fluoranthene and benzo(g,h,i)perylene, and for these compounds could be taken to support a relaxation of compliance. This is for three principal reasons. Firstly, the predicted impacts on dissolved contaminant water quality are so low, the argument remains the same, that is that the solid partitioning is very unlikely to result in breaches of either the 2008 or 2013 EQSD compliance for either the Annual Average (AA) or the introduced Maximum Allowable Concentrations (MAC) limits. Secondly, the reduction in compliance targets for the stated compounds does not change the absolute status of the baseline background chemistry for the Thames Middle and Thames Lower water bodies. These water bodies still fail for these EQSs – just by a higher margin – and the relative margin of failure remains the same compared to the baseline chemistry recorded at the application site. Thirdly, the change in EQSD limits does not affect the predicted distribution of sediment following dredging and the predicted impact relative to the baseline sediment load of the Thames remains low.
1.16.13 Applicant	Please justify the reason for selecting a 500m search area from the limits of the red line boundary as the study area for cumulative hydrological and flood risk impacts.	Similar to response 1.16.2, the search area for the cumulative assessment was defined having regard to the areas most likely to be directly affected by Thurrock Flexible Generation Plant and cumulative development(s). In the absence of specific guidance a 500m search radius was deemed reasonable, informed by a review of the site setting and local environment. This distance was chosen to capture the point where the hydrological impacts of any two developments exacerbate each other generating an effect that's causing a cumulative impact within the most likely 'zones of influence' identified in the study area (250m zone of influence per development), established by firstly identifying hydrological points of origin or assets of origin i.e. the site and then secondary assets (the cumulative development). For developments located beyond 500 m it becomes increasing difficult to establish any potential for a cumulative effect as the significance an impact diminishes/reduced with distance from the proposed development.
1.16.14 Applicant	Can the Applicant clarify the discrepancy between 2.5m AOD stated in ES Chapter 15 paragraph 3.1.38 and 2.84m AOD stated in Table 2.6 of Schedule 2 of the dDCO and explain why flood resistant measures are not included in dDCO Schedule 2, R4?	The reference to 2.5m AOD in Table 2.6 of Chapter 15 (PDC-017) was missed when updating this document for Procedural Deadline C. This should read 2.84m AOD as stated in paragraph 3.1.38 of that document. The flood resilience level of 2.84m AOD has been agreed with the Environment Agency (see the draft Statement of Common Ground with the EA and correspondence from the EA received by the applicant after Procedural Deadline D, which is enclosed as FR-2) and is specified in Requirement 4 of the dDCO Schedule 2 (PDC-009). Both "flood resistant" and "flood resilient" measures would be employed; these terms are used together throughout the Flood Risk Assessment (PDC-025). The wording of Requirement 4 has been edited to include

ExQ.	Question	Response
		both terms. The applicant considers this correctly reflects the applicant's and Environment Agency's agreed position that critical elements of the development must be designed to remain operational during a flood event, as set out in the draft SoCG.
1.16.15 Applicant	Table 2.6 of ES Chapter 15 includes additional mitigation in the form of flood defences, flood resilience and resistance measures and an Operational Outline Drainage Strategy (OODS). It is unclear where the OODS and the measures it proposes (infiltration/soakaway tests etc.) are secured in the dDCO. Please signpost where the Operational Outline Drainage Strategy and the measures it proposes are secured in the dDCO.	The applicant is of the view that it is not necessary to secure individual mitigation measures within the dDCO where these measures are contained within documents that are themselves secured through requirements in Schedule 2. All mitigation measures are set out in the Register of Mitigation, Enhancement and Monitoring Commitments (ref. PDC-029) which will be updated as the Examination progresses. This document signposts where the individual measures are secured through the dDCO. In this instance, the requirement to provide mitigation in the form of flood defences, flood resilience and resistance measures to achieve the required flood resilience/resistance level was set out in Table 15.1 of the Register of Mitigation, Enhancement and Monitoring Commitments (Appendix 2.1, ref. PDC-029). The flood resilience/resistance depth, as agreed with the EA (see response to Q1.16.14) is confirmed in requirement 4 of the draft DCO (PDC-009). The requirement for an operational 'surface water drainage scheme' was also set out in Table 15.1 of the Register of Mitigation, Enhancement and Monitoring Commitments, which cross-referred to draft DCO requirement 10. The written details to be produced under requirement 10 are what is meant by an 'Operational Drainage Strategy' or 'surface water drainage scheme'. To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2 must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.
1.16.16 Applicant	Please signpost where temporary interceptor and hydraulic brake mitigation measures are secured in the dDCO and how, and to what extent, the secured mitigation measures would avoid/reduce the impacts from a bentonite breakout.	The Code of Construction Practice (CoCP, APP-142) set out the principles of managing construction drainage to avoid impacts on sensitive watercourses. Specific reference has now been made to the use of interceptor and hydraulic brake mitigation measures in the CoCP at Section 6.11 and in Table 15.1 of Appendix 2.1. Explicit reference has also been now made in the CoCP at Section 6.11 to measures to avoid/reduce the impact of bentonite breakout. The applicant is of the view that it is not necessary to secure individual mitigation measures within the dDCO where these measures are contained within documents that are themselves secured through requirements in Schedule 2. All mitigation measures are set out in the Register of Mitigation, Enhancement and Monitoring Commitments (Appendix 2.1, ref. PDC-029) which will be updated as the Examination progresses. This document signposts where the individual measures are secured through the dDCO. To set out each individual mitigation measure within the dDCO would result in extremely lengthy requirements that would be difficult to navigate. For the avoidance of doubt, the applicant will propose a new requirement to the dDCO to require that all details submitted for approval of the relevant planning authority under Schedule 2

ExQ.	Question	Response
		must be in accordance with the parameters of the environmental statement and reflect the principles set out in the documents certified under article 40.
1.16.17 Applicant	Please explain how the mitigation measures are secured for the decommissioning stage in the dDCO and how the impacts have been determined and magnitude applied in relation to a future baseline.	Mitigation measures with respect to decommissioning the causeway are secured through the requirement to produce a Causeway Decommissioning Plan for approval that includes a description of environmental management measures to be employed (Requirement 18 in PDC-009). As set out in paragraph 4.3.14 of the Chapter 17: Marine Environment (PDC-019), it is expected that measures in the Causeway Decommissioning Plan will be equivalent to the CoCP and will follow prevailing regulatory requirements, guidance and good practice at the time. The applicant considers it appropriate for these to be defined in detail for approval at the time of producing the Causeway Decommissioning Plan, as both regulatory requirements and good practice may evolve over time, so over-prescriptive limits on the measures should not be set at this stage. Paragraphs 4.3.2 to 4.3.13 of Volume 3, Chapter 17 (PDC-019) present an assessment of the effects of decommissioning of the causeway on intertidal habitats. This assessment gives consideration to potential changes in the relative distributions of intertidal mudflat and saltmarsh habitats in the vicinity of the causeway that may have occurred between construction of the causeway and decommissioning. The degree of change will depend on the length of time that the causeway will be in place, although changes to intertidal habitats in the lee of the causeway will be monitored (see response to 1.11.19). The mitigation measures described in Chapter 15: Hydrology and Flood Risk (PDC-017) with respect to the onshore water environment likewise represent good practice and fulfil legal requirements for managing onshore construction-type activity, including decommissioning or demolition works. These have now been added to Table 15.1 in Appendix 2.1 (REAC) for the decommissioning phase.
1.16.18 Applicant	The FRA proposes in section 6.2 that land raising will be used to mitigate flood risk to the Proposed Development which will alter the flood characteristics of the area and potentially increase flooding elsewhere. Currently this has not been modelled and no impact assessment has been undertaken. Can the Applicant provide an assessment of flood risk post-development including a scenario where temporary defences fail and update the ES reflect any influence this might have on the assessment of significant effects?	As identified in paragraph 6.5.1 of PDC-025, as a consequence of raising the ground level in areas of the main development site to 2 mAOD, there is potential for impacts on localised water flow regimes during an extreme flood event. However, impacts on flood flows as a consequence of ground raising would be confined to the main development site and would not increase risks to off-site receptors. From paragraph 6.5.1 in PDC-025: *"A detailed analysis of the modelled outputs presented within the Thurrock SFRA has been undertaken. This identified that the flood cell within which the site is located covers an area of approximately 14 km^2. As a conservative assumption, c. 55,850 m^2 would be raised to 2 mAOD, equivalent to c. 0.056 km^2. This equates to c. 0.4% of the flood cell. The limited area of raising would have negligible impact on the flood model and could be potentially accounted for within models' margin of error, standard deviations, and/or errors in the models bathymetry/ground level data throughout the cell.* *However, a further assessment of the local topography has been undertaken, which identifies that in general the site has a slight slope to the northwest. Given the minimal ground raising being undertaken and also the prolonged nature of flood water inundation (hours) it is unlikely that the raising of the site would have any significant impact on tidal flood propagation. Topographical data also records elevations along the northern*

ExQ.	Question	Response
		boundary of the main development site, which are 200 mm to 300 mm higher than the site itself. Therefore, any impacts on flood flows as a consequence of ground rising would be confined to the main development site." The development design will incorporate flood resilience and resistance measures (secured by Requirement 4 in the draft DCO, PDC-009) for critical equipment to ensure the development can remain operational even during an extreme flood event. Although in the Flood Risk Assessment (PDC-025) an image of a temporary demountable barrier was included among the various illustrations of typical measures that are employed for flood protection, drawn from the industry guidance document ENA ETR138 Annex 1, the applicant does not intend to rely on temporary/demountable defences that could fail with any potential for increasing flood risk.
1.16.19 Applicant	Please provide up to date information on the current condition and functionality of the outfalls identified in Drawing A2.10 and explain how this influences the assessment of significant effects in the ES and the effectiveness of the proposed mitigation.	See response to Q1.11.12. There is no influence on the assessment of significant effects nor proposed mitigation. Discharges from the development will be limited to clean surface water drainage and these will be managed so as to limit flows into the local water network. Clean surface water drainage from the flexible generation plant will be regulated by the Environment Agency via the Environmental Permit. The conceptual drainage design restricts discharge rates from events with up to a 1 in 100 year plus 40% allowance for climate change return probability to a 1 in 1 year greenfield rate. The design ensures that flows from the site will be managed and that no additional flows will enter the local water network.
1.16.20 Applicant	Please explain how the Flood Evacuation Plan will be disseminated to on-site operatives both during construction and operation and how this will be secured in the dDCO.	The Flood Evacuation Plan will be a live document with copies held on site during construction and operation, with staff to be trained and drilled, as well as being distributed to the EA, LLFA and Emergency Planning Department on request. This is secured though requirement 11 in the dDCO (PDC-009). The wording of 11(1) has been edited to confirm that the Flood Evacuation Plan must be in place during the construction as well as operational period.

17. TRANSPORT AND TRAFFIC

ExQ.	Question	Response
1.17.1 Applicant	What, if any, consideration has been given to the use of rail to transport construction material to and from the site?	The use of rail to transport construction material has been considered and deemed to be not feasible. Materials being transported by rail require a railhead at both the point of origin and at the point of destination. It also requires the material to be bulk transported over long distances to be viable. The delivery of construction material is subject to a procurement exercise that will only be completed after the grant of a consent. Therefore, the precise origins of construction material cannot be confirmed at this stage. Construction material is expected to arrive from multiple origins with multiple contracts and differing haulage companies. This does not lend itself to materials being bulked together to make rail use viable. Even if the transportation of construction material by rail could be made viable, there would be no guarantee of a railhead at the point of origin either (i) being available, (ii) having suitable capacity to meet the delivery requirements or (iii) reaching an agreeable commercial arrangement for its use. The Tilbury2 scheme incorporates rail sidings, however, these are private and have been designed around the requirements of and the operations of Tilbury2. Additional rail siding infrastructure would be required to provide such facilities at the point of destination if Thurrock Flexible Generation Plant were to use these. Given all of this, the use of rail to transport construction material has been deemed to be not feasible.
1.17.2 Applicant	How does the Applicant propose to minimise the number of freight movements by road?	The applicant has prepared a Construction Traffic Management Plan (CTMP) (PDC-048) which includes measures to reduce the number of freight movements by road (via a booking system: Section 8.4 and paragraph 8.5.3) and the number of vehicle-kilometres (local contractors: paragraph 8.5.3). In addition, the applicant expects that major components of the proposed development (excluding the largest AILs for gas engines and substation transformers) would to be delivered via either the Port of Tilbury or London Gateway (DP World), as set out in paragraph 3.4.21 of Chapter 2 of the Environmental Statement (PDC-015).
1.17.3 Applicant	Table 2.6 of ES Chapter 10 [APP-059] specifies a maximum design scenario whereby 10% of the construction workforce will arrive by car, with the remainder car sharing and travelling by minibus or coach. Please explain how this represents a worst-case scenario and signpost where this maximum parameter is secured in the dDCO.	Paragraphs 6.1.10 to 6.1.15 of the Transport Assessment (APP-095) sets out details on the mode share of construction workers. It explains that construction workers will all travel by minibuses and coaches and on that basis the proportion arriving as a car driver would be 0%. However, assuming 10% arriving as a car driver results in an increased number of vehicle movements and was therefore a worst case scenario for the assessment. Section 5.2 of the Outline Construction Worker Travel Plan (CWTP) (Document Reference APP-145) sets a target for car drivers to be no more than 10% of construction worker trips. This is secured through Requirement 7(2) of the draft DCO (PDC-009) as signposted in Table 10.1 of PDC-029, where the Construction Worker Travel Plan approved under the requirement must be substantially in accordance with the outline construction worker travel plan.
1.17.4		This plan is enclosed as document reference TR-1, drawing number 10872-0253-03.

ExQ.	Question	Response
Applicant/ Highways England	Please provide a plan showing the areas where the Proposed Development will directly conflict with the land required for the Lower Thames Crossing Project.	
1.17.5 Highways England	Please expand on the concerns raised in your RR [RR-016] in respect of additional vehicle movements during construction and safety at the 'Asda' roundabout.	[n/a]
1.17.6 Applicant	Does the Applicant envisage a role for PoTLL in the management of construction traffic within the Tilbury 2 site? If not, please explain.	The applicant does envisage a role for PoTLL in the management of construction traffic within the Tilbury2 site. The applicant has made minor edits to the Construction Traffic Management Plan (CTMP) to provide better clarity on the role of PoTLL and submits this at Deadline 2.
1.17.7 Highways England	Does highways England agree with the methodology and models used for the transport assessment and its conclusions?	[n/a]
1.17.8 Applicant	In light of the progression of the Lower Thames Crossing and London Resort NSIP projects, new information has become available. Can the Applicant indicate if this influences the ES Traffic assessments and their conclusions and if so, describe how?	There has been no published information in the public domain relating to the Lower Thames Crossing since submission of the applicant's Cumulative Effects Assessment Addendum (Document Reference: AS-007). The transport assessments and the conclusions therein therefore remain up to date. The London Resort DCO application was submitted subsequent to the applicant's additional submission on cumulative assessment (AS-007). The London Resort identified Thurrock Flexible Generation Plant as a site included in their cumulative assessment. London Resort's cumulative assessments did not report any significant effects from traffic during the future years for construction of Thurrock Flexible Generation Plant. On this basis, the applicant considers that the London Resort submission does not influence the ES traffic assessments or alter its conclusions.

18. WASTE AND MINERALS

ExQ.	Question	Response
1.18.1 Essex CC	Please explain Essex CC's role in minerals and waste matters for the Thurrock Administrative area.	[n/a]
1.18.2 Thurrock Council	The ExA notes that operational waste is considered in ES Chapter 2, Para 2.11.4 and construction waste considered in ES Chapter 2, para 3.2.20-3.2.26. Please comment on the Applicant's approach to operational waste (ES Chapter 2, Paragraph 2.11.4) and construction waste (ES Chapter 2, paragraph 3.2.20-3.2.26).	[n/a]

19. SHIPPING AND NAVIGATION

ExQ.	Question	Response
1.19.1 Applicant	It is not clear in the Preliminary Navigational Risk Assessment (PNRA) [PDC-052] that a worst-case scenario has been assessed. The PNRA states in Section 2.1 that there will be a maximum of 60 barge deliveries over the 6-month period. Please can the Applicant confirm that the maximum number of barges has been assessed and comment on how the assessment represents a worst-case scenario.	The applicant confirms that 60 barge deliveries represents the maximum case, as stated in paragraph 3.4.9 of the ES Project Description chapter (PDC-015). Each barge delivery would carry one gas engine block AIL, which is up to 48 barges. Headroom of a further 12 barges has been allowed for other potential AILs such as transformers.
1.19.2 Applicant	Please confirm where/how the six additional risk control measures, as detailed in Table 13 of the PNRA [PDC-052], will be secured.	The final NRA required by requirement 17 must be substantially in the form of the PRNA (17(2)). The PNRA has been added to the DCO as a certified document to facilitate this. The key principles of the mitigation are secured in requirement 17 (particularly the requirements for the passage plan). It is not appropriate to secure the detail of the measures specified in the PNRA ahead of the approval of the final NRA by the PLA as that would inappropriately constrain the final NRA.
1.19.3 Applicant	Please explain how the mitigation measures set out in the PNRA [PDC-052] are to be secured in the DCO.	Please see 1.19.2