



## The London Resort Development Consent Order

BC080001

### Environmental Statement Volume 2: Appendices

#### Appendix 12.7 Non-statutory consultee responses to the Preliminary Environmental Information Report

Document reference: 6.2.12.7  
Revision: 00

December 2020

Planning Act 2008  
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009  
Regulation 5(2)(a)  
The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017  
Regulation 12(1)

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**The London Resort**

**Appendix 12.7 Non-statutory Consultee Responses to the Preliminary Environmental Information Report (Relevant to Terrestrial and Freshwater Ecology)**

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
Kent Wildlife Trust	National Policy	<p>We wish to bring to your attention the lack of reference to the Government’s 25 Year Plan for the Environment in the consultation documents. Of particular consideration to this proposal are the government’s targets for (underlining is our own):</p> <ul style="list-style-type: none"> <li>•Creating or restoring 500,000 hectares of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits.</li> <li>•Reversing the loss of marine biodiversity and, where practicable, restoring it.</li> <li>•Taking action to recover threatened, iconic or economically important species of animals, plants and fungi, and where possible to prevent human induced extinction or loss of known threatened species in England.</li> <li>•Embed an ‘environmental net gain’ principle for development, including housing and infrastructure.</li> </ul>	No response required
		<p>In our opinion, this proposal does not commit to supporting the Government’s aspirations for the environment due to loss of large areas of priority habitat, negative impacts to Swanscombe MCZ, the loss of a Nationally important brownfield invertebrate site, loss of habitat supporting protected and priority species, and resultant net losses of biodiversity as a result of the scheme</p>	Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity (Document Reference: 6.1.12) of the ES provides a range of mitigation measures to ensure the Proposed Development meets national and local planning policy, and provides an overall net gain to biodiversity.
	European Designated Sites - Thames Estuary & Marshes and Medway Estuary & Marshes SPA/Ramsar	<p>Thames Estuary and Marshes SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar have correctly been scoped in for further assessment due to likely impacts to functionally linked land. The PEIR has identified that a large proportion of the peninsula is designated as functionally linked land and is protected at international level. This land provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status and these effects must be considered via a Habitats Regulations Assessment.</p>	No response required

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>There is not yet enough information to fully establish impacts to functionally linked land or ascertain the suitability of proposed mitigation. In order to assist consultees in understanding the likely impacts the following should be provided:</p> <ul style="list-style-type: none"> <li>•An assessment of the noise modelling presented in Appendix 15.1 should be used to predict the likely impacts of both construction and operation of the of the scheme on specific ecological receptors. There is a body of evidence available for assessing impacts of noise of birds.</li> <li>•Modelling of light spill during both construction and operation. It is noted that this is proposed to be submitted at the DCO stage, however this will not allow sufficient input from consultees at this early stage. The lighting assessment should focus on key ecological receptors.</li> <li>•Assessment of water level and quality changes post development and the impacts of these on qualifying bird species.</li> <li>•Mapping of both breeding and wintering bird survey results to visually demonstrate where qualifying features of the SPAs have been recorded. It would be useful if this also represented survey results from previous years.</li> <li>•Clear justification of which qualifying features are functionally linked to which designated site.</li> <li>•On the basis of the above, a detailed plan of mitigation measures following the mitigation hierarchy.</li> </ul> <p>Kent Wildlife Trust does not agree with the assessment within Table 12.5: Ecology Impact Assessment Summary which states that the direct loss of functionally linked land as a result of construction activities is only significant at the district level. Functionally linked land is given the same protection as internationally designated sites and the significance should be updated to reflect this. The same should be applied to the impact of visual and aural disturbance.</p>	<p>Further information on those items referred to in Buglife’s response is now provided within Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity of the ES (Document Reference 6.1.12). Furthermore, Appendix 12.3: Ecological Mitigation and Management Framework (Document Reference: 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.</p> <p>The wintering wildfowl and wader assemblage within the Project Site has been valued at the international level and functionally linked land is considered within Chapter 12 of the ES (Document Reference 6.1.12) and HRA (Document Reference 6.2.12.4) as a part of a European Site. However, within an EclA the effect may not necessarily be significant at the level at which that IEF is valuable. Therefore, although impacts are upon an IEF valued at the international level, effects are considered to be significant at the District level only. It is true that the Proposed Development will not result in the loss of all functionally linked resources to the designated bird species populations.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>The PEIR states that the “potential effects of the proposed development on the IEFs [...] during the operational phase could include increased lighting, noise and traffic leading to disturbance of species within retained and newly created habitats”. However, the assessment of operational impacts within Table 12.5 does not present an accurate reflection of impacts to functionally linked land. The existing saltmarsh, and proposed creation of salt marsh are likely to be impacted by visual, aural and lighting disturbance from the ferry port and entrance to the park. Further, Kent Wildlife Trust are concerned about the impacts of lighting and noise on Botany Marsh and Blackduck Marsh, both of which lie directly adjacent to the proposed theme park footprint and associated infrastructure. These impacts should be assessed using a detailed lighting assessment and noise assessment for ecological receptors and impacts should be avoided through redesigning the resort to create significant and suitable buffer zones.</p>	<p>Lighting, noise and visual disturbance effects have been considered within Chapter 12 of the ES (Document Reference 6.1.12) and HRA (Document Reference 6.2.12.4) upon retained habitats, including those functionally linked to European Sites.</p>
	Mitigation Hierarchy	<p>It is also concerning that paragraph 12.168 acknowledges that despite future updates to the ecological mitigation and enhancement strategy it is predicted that significant negative residual effects will remain, including “the wintering waterfowl and wading bird assemblage, wintering terrestrial bird assemblage, breeding bird assemblage” (i.e. including impacts to qualifying features of SPAs). In line with the mitigation hierarchy these impacts should only be subject to offsite compensation as a last resort with avoidance being the priority. Ecological and environmental constraints and reports should inform the evolution of site selection and scheme design. Compensation should not be used as a tool to justify a predetermined design.</p>	<p>To provide further detail on the application of the mitigation hierarchy a briefing note was submitted to NE on 21 August 2020 (Ecology Briefing Note - Natural England Consultation, a copy of which is enclosed at the rear of Appendix 12.5; Document Reference 6.2.12.5)). In addition, Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity (Document Reference 6.1.12) has been updated to include information on how the mitigation hierarchy has been applied.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	European Designated Sites - North Downs SAC and Peter's Pit SAC	The applicant states that North Downs SAC and Peters Pit SAC have been screened out on the basis of previous conversations with Natural England. Transport infrastructure for this scheme is likely to increase levels of air pollution, providing a potential pathway for impact to both SACs through the exceedance of critical values for air pollutants. Supplementary advice for Peters Pit SAC states that "The supporting habitat type is considered sensitive to changes in air quality. Exceedance of critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and reducing supporting habitat quality and population viability of this feature." Further, supplementary advice for the North Downs Woodland SAC states "This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it." On this basis, we advise that these impact pathways are further explored and that Natural England be re-consulted, particularly given heightened focus on associated transport infrastructure.	The potential for traffic-generated air quality impacts on the North Downs Woodland SAC has been screened within Appendix 12.4: Habitat Regulations Assessment (Document Reference: 6.2.12.4). Although traffic modelling data does not extend to that distance, significant air quality effects are not considered likely because significant traffic increased (AADT >1000) are east- and northbound, towards the M25 and away from both SACs.
	Sites of Special Scientific Interest (SSSIs)	<p>Impacts to the Medway Estuary and Marshes SSSI and the South Thames Estuary and Marshes SSSI are broadly covered in our comments relating to the SPA and Ramsar sites. Further, on a number of occasions, the PEIR erroneously refers to the Inner Thames Marshes SSSI as Rainham Marshes SSSI.</p> <p>A construction environment management plan is required to ensure that Darenth Woods SSSI will not be indirectly impacted by construction traffic through measures such as dust suppression, noise mitigation and light pollution mitigation. Further, operational impacts arising from air quality impacts should be assessed using an air quality assessment which accounts for increased Annual Average Daily Traffic (AADT).</p> <p>West Thurrock Lagoon &amp; Marshes SSSI is approximately 1 km from the Kent Project Site and is designated to protect wintering waders and wildfowl that use the intertidal mudflats. Impacts from the construction of the theme park, including lighting, noise disturbance (particularly short sharp loud noises from activities such as piling), impacts to water quality and disturbance from construction vessels must be accounted for. At present, the assessment for this site only refers to functionally linked land.</p>	<p>Impacts upon Medway Estuary and Marshes SSSI and the South Thames Estuary and Marshes SSSI are considered under the umbrella of their respective over-arching SPA/Ramsar designations within both Chapter 12 of the ES (Document Reference 6.1.12) and the HRA (Document Reference 6.2.12.4). References to 'Rainham Marshes SSSI' have been updated.</p> <p>A Construction Environmental Management Plan will be secured as a requirement of the Development Consent Order (DCO). The Environmental Statement includes a thorough assessment of the potential for traffic-generated air quality impacts to Darenth Woods SSSI both during construction and operation. Chapter 16 'Air Quality' of the ES (Document Reference 6.1.16) concludes that (during construction) "With implementation of recommended mitigation, it is anticipated that residual effects will be insignificant."</p> <p>Disturbance, water and air quality effects upon West Thurrock Lagoon and Marshes SSSI are considered within Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity (Document Reference: 6.1.12) of the ES.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Local Wildlife Sites	<p>The PEIR states that only four LWSs are scoped in for further assessment. It is acknowledged that a description of all LWSs is provided but no ecological justification is given for scoping out all but those within or adjacent to the DCO boundary. It should be assessed whether impacts will arise from associated transport infrastructure, from increased transport in the local area and air quality impacts (i.e. the exceedance of a sites critical load)</p>	<p>Five LWSs are scoped in to the EclA within Chapter 12 of the ES (Document Reference 6.1.12) based on recommendations made through consultation and the scoping opinion. No effect-receptor pathways were identified for further sites and those sites are therefore scoped out of the assessment</p>
		<p>Of particular concern are impacts to Botany Marsh LWS, which supports species including otter, water vole, reptiles and both breeding and wintering birds. Botany Marsh LWS is recorded to be functionally linked to nearby European sites as a high tide roost for qualifying species such as shelduck, and other species which contribute to the designated non-breeding waterbird assemblages. The Red List species Nightingale and Starling were also recorded during the breeding bird survey at Botany Marsh LWS.</p>	<p>Potential impacts on Botany Marshes LWS are discussed within the Terrestrial and Freshwater Ecology &amp; Biodiversity chapter of the ES (Document Reference 6.1.12). The LWS itself is not considered to be functionally linked to any European Sites (based on survey work of the Project Site). Shelduck roosts were present on Botany Marsh West only.</p>
		<p>Paragraph 12.169 of the PEIR acknowledges the likely negative impacts from aural and visual disturbance to Botany Marsh LWS. We dispute that these impacts will be “minor negative” due to the fact that development is proposed directly adjacent to the LWS with no proposed buffer zone. Impacts arising from changes to the water table as a result of ditch habitat and increased hardstanding must also be considered. These residual impacts must be reduced to an acceptable level with offsite compensation being a last resort inline with the mitigation hierarchy. It is likely that a suitable buffer zone will be required to mitigate impacts and therefore we advise on the retention and enhancement of Botany Marsh west to support and enhance the LWS.</p>	<p>Retention of Botany Marsh West is not considered possible. Effects upon the LWS are split into disturbance and damage effects and are assessed as between moderate and major negative. Some buffering from the development is included in the form of ditches and hedgerow planting.</p>
		<p>We are also concerned about the impact of the loss of Floodplain Grazing Marsh and ditches in Botany Marsh west in terms of loss of habitat that is functionally linked to the LWS. We consider this in more detail in the section on priority habitats set out below.</p>	<p>No response required</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Ancient woodland	<p>It is concerning that Chapter 12 of the PEIR does not properly make an assessment of impacts to ancient woodland. Table EDP 12.3 should also refer to “ancient semi-natural woodland” as opposed to solely “broadleaved semi-natural woodland”. This substitution is down playing the value of ancient woodland sites such as The Thrift Wood and Parkhill Wood, both of which are designated as ancient woodland. We seek clarity as to whether the red line boundary extends into these areas of ancient woodland. Paragraph 175(c) of the National Planning Policy Framework states that “development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists”. Direct and indirect impacts to ancient woodland should be taken into account when determining the suitability of this proposal. Potential impacts may arise from air quality and dust as a result of increased construction traffic and operational traffic.</p>	<p>The ES considers air quality and direct impacts upon designated sites and habitats along the A2 corridor. ASNW has been considered as part of the AQ assessment in Chapter 17 of the ES (Document Reference 6.1.17) and is included as an IEF within Chapter 12 of the ES (Document Reference 6.1.12) following feedback from consultees.</p>
	Priority Habitats - OMHPDL	<p>We are concerned that the PEIR and phase 1 habitat maps attached in Appendix 12.1 significantly under represent the area onsite classified as Open Mosaic Habitat on Previously Developed Land (OMHPDL). We would draw your attention to the qualifying criteria for classification as OMHPDL priority habitat, which are stated as follows:</p> <ul style="list-style-type: none"> <li>•Be at least 0.25 hectares in size</li> <li>•Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added.</li> <li>•The site contains some vegetation. This will comprise early successional communities consisting mainly of stress tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of a) annuals or b) mosses/liverworts or c) lichens or d) ruderals or e) inundation species or f) open grassland or g) flower-rich grassland or h) heathland.</li> <li>•The site contains un-vegetated, loose bare substrate and pools may be present.</li> <li>•The site shows spatial variation, forming a mosaic of one or more of the early successional communities plus bare substrate, within 0.25 ha.</li> </ul>	<p>The extent of OMHPDL across the Project Site has been re-assessed based upon the priority habitat inventory, historic satellite data and site knowledge. The area described as OMHPDL is significantly larger than previously assessed, but does not include areas of dense scrub or obviously capped/landscaped habitat. Although the Priority Reference was used as part of the re-assessment process, professional judgement was used to include/exclude areas considered to not meet the criteria for inclusion as OMHPDL. The updated assessment is shown in Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity (Document Reference 6.1.12).</p>



Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>We are particularly concerned that a very narrow approach to defining OMHPDL has been adopted, particularly in the areas of habitat that will be directly lost in the northern part of the main theme park development. The OMHPDL priority habitat inventory identifies an area of 45ha of land covering a large part of the Swanscombe Peninsular, approximately 25ha of which will be directly lost to this development. However the phase 1 habitat maps only identifies as OMHPDL a section covering approximately 3ha within in the area identified in the PEIR as “Main Access Track, Tunnel Section Storage and Adjacent Ephemeral Habitat”.</p>	
		<p>It appears that the main criterion that has been used to define OMHPDL is the presence of large and obvious areas of bare substrate which are readily apparent in satellite imagery. We would draw your attention to the definition of bare substrate in the UKBAP Priority Habitat Description for OMHPDL: “Bare substrate can occur at a range of spatial scales, from unvegetated patches easily seen from a distance, to small, open spaces between individual plants within a community. On some substrates, for example coal spoil, the patches of bare ground may be 10cm across or less. A site with a wide variety of patch sizes could also qualify”.</p>	
		<p>While we have not been able to survey the site in detail, we are of the opinion on the basis of a limited walk over visit and assessment of satellite imagery that this definition for presence of bare substrate would be applicable to a far wider range of habitats across the site. This would apply to most of the are identified as “Main Access Track, Tunnel Section Storage and Adjacent Ephemeral Habitat”, most of the are identified as “North East Tip”, the northern part of the are identified as “South West Tip” and southern parts the are identified as “Broadness Grassland”. The other 4 qualifying criteria outlined above are also clearly applicable to these areas.</p>	
		<p>We would also draw your attention to the following paragraph in the UKBAP Priority Habitat Description for OMHPDL: “One of the principal reasons for the habitat being a priority is its importance for invertebrates. Many have very precise requirements for habitat ‘niches’ within their landscape. As well as areas of bare ground and food plants, these may be for sheltered places at various times of the year, or for rough vegetation or cover at others. At any particular site, features such as scrub may be essential to maintain the invertebrate value of the main habitat. Therefore, scattered scrub (up to 10–15% cover) may be present and adds to the conservation value of the site. Other communities or habitats might also be present (e.g. reed swamp, open water), but early successional communities should comprise the majority of the area”.</p>	

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>This highlights the importance of considering the core purpose of OMHPDL, namely its value as invertebrate habitat, and therefore highlighting that there is scope for including a far wider area within this habitat type than has been defined in the PEIR. The exceptional value of this site for invertebrates is clearly demonstrated in the PEIR and associated documents in Appendix 12.1, therefore we see no reason why wider sections of the site have not been classified accordingly.</p>	
		<p>The definition of OMHPDL clearly allows for inclusion of areas of grassland, wetland and scrub provided that these fit within a wider mosaic of other habitat components that are necessary support a significant invertebrate community. For this reason we are of the opinion that the priority habitat classification of OMHPDL should be extended to include at least the majority of the 25ha area that will be will be loss to development as described above.</p> <p>This will have clear implications for the level of net biodiversity loss that will occur as a result of this development, with significant implications for habitat compensation required under paragraph 175 of the NPPF. These issues are discussed in greater detail below.</p>	
	<p>Priority Habitats – Coastal Floodplain Grazing Marsh (CFGM)</p>	<p>As stated above in reference to Botany Marsh LWS, we are concerned about the loss of Botany Marsh west to development, which will consequently lead to the loss of a large section of priority Coastal and Floodplain Grazing Marsh habitat, likely causing severe detrimental impacts on connected habitat in Botany Marsh LWS to the immediate east. These impacts can be summarised in terms of:</p> <ul style="list-style-type: none"> <li>Loss of habitat for water voles, breeding habitat for red listed birds such as Mistle Thrush and Lapwing, and foraging habitat for bats, including the nationally scarce Nathusius pipistrelle. These impacts are dealt within in more detail in respective species-specific sections below. We note that a rump area of approximately 1.65 ha CFGM will be retained in Botany Marsh east(LWS). CFGM habitat is usually found in large contiguous areas, which are classified for their value supporting wetland birds and ditch/open water species. It is difficult to see how this remaining area will be able to retain its value for wetland species once it has lost connection to the larger block of similar habitat to the west. This has implications for proposed habitat enhancement on this remaining area of habitat, which is discussed in more detail below.</li> <li>Impact on ditch system and water table. Habitats in Botany Marsh east and west are dependent on a shared ditch system. The loss of half of this ditch system is likely to have negative impacts on the water dependent habitats of Botany Marsh LWS in terms of loss of overall habitat for a range of aquatic species and disruption to local hydrology</li> </ul>	<p>The BNG has been updated and now includes Botany Marsh East as part of the Floodplain Wetland Mosaic. Although the majority of CFGM will be lost, the wider wetland mosaic will be enhanced through addition of new ditches and ponds to replace those lost and scrub and reedbed management. Hydrological impacts on the LWS are considered within Chapter 12 of the ES (Document Reference 6.1.12).</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>We would recommend that further work is undertaken to assess these impacts and how they can be mitigated and compensated for. We are not convinced that sufficient work has been done to avoid loss of CFGM at the design stage, and thus be in full compliance with the mitigation hierarchy. We advocate for the retention of Botany Marsh west to mitigate for indirect impacts on the LWS and loss of priority habitats and species, as we have stated as our preference the section on LWS above.</p>	<p>Retention of Botany Marsh West is not considered possible. To provide further detail on the application of the mitigation hierarchy a briefing note was submitted to NE on 21 August 2020 (Ecology Briefing Note - Natural England Consultation, a copy of which is enclosed at the rear of Document Reference 6.2.12.5). NE have provided no further comments. In addition, Chapter 12 of the ES (Document Reference 6.1.12) has been updated to include information on how the mitigation hierarchy has been applied. Multiple sites suitable for the delivery of the project were considered (do we have evidence of this) and it was deemed that the site being put forwarded presented the best option from a delivery, economic and ecology perspective. Therefore the process of site selection was the point at which avoidance measures were considered.</p>
	<p>Priority Habitats - Other Wetland Priority Habitats</p>	<p>We are concerned about the loss of priority wetland features within the developed area of the site, and the further indirect impact this may have on wetland features within the DCO boundary and adjacent to the developed area. We require confidence from the applicant that there will not be impacts to the water table as the result of the development as a whole. The section of the peninsula which is to be developed includes a series of ditches, standing water, reedbed and swamp. It seems likely that the conversion of these areas to hard standing will impact on water levels and water quality if adequate mitigation is not implemented. Further, it is not clear if the ditch system and associated wetland habitat which follows the existing footpath across the peninsula is to be lost as a result of development. Clarity is required and impacts must be assessed relating to the wider impact of loss of priority wetland habitats which support a variety of species including water vole, otter, breeding birds and wintering birds</p> <p>We would also like to see clarification about the status of the area referred to as "CTRL Wetlands". We understand that this area represents previous compensation for loss of habitat as a result of construction of the Channel Tunnel Rail Link, therefore we would like to understand what this was originally compensating for (for instance is it for loss/impact on designated sites), the terms of any agreement and any wider implications this might have.</p>	<p>Hydrological impacts upon the Project Site are considered within Chapter 17 of the ES and in relation to ecological features within Chapter 12 (Document Reference 6.1.17 and 6.1.12). A drainage strategy has been designed in order to limit hydrological change across the Project Site.</p> <p>We also understand that the CTRL Wetlands represent previous compensation for the Channel Tunnel Rail Link. Information on mitigation as part of HS1 is not freely available due to its age.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Invertebrates	<p>Invertebrate studies from 2012, 2015 and 2020 have highlighted that the Swanscombe Peninsula is of National importance for terrestrial invertebrates and of County and Regional importance for aquatic invertebrates. The site supports a huge diversity of species with over 250 terrestrial species being of conservation concern and 50 Red Data Book species. This assemblage includes the critically endangered distinguished jumping spider (<i>Attulus distinguendus</i>). Further, both the 2015 survey report and updated survey results clearly demonstrate that the value of Swanscombe Peninsula for terrestrial invertebrates exceeds many of the UKs SSSIs which are designated for their brownfield habitats and species assemblages. Kent Wildlife Trust are extremely concerned about the loss of key habitats which support this Nationally important assemblage and are not confident that proposed mitigation is suitable or sufficient. We have consulted with Buglife regarding this issue and on the basis of their expert knowledge of these species and habitats, we offer our full support to their more detailed comments on this matter.</p>	Covered in response to Buglife below.
	Birds	<p>In our comments above we have already discussed the importance of the proposed development site as functionally linked land supporting qualifying breeding and wintering birds of the Thames Estuary and Marshes SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar. It should be noted that the 'breeding bird assemblage' of breeding migratory waterfowl is a feature of the Medway Estuary and Marshes SPA. The presence of such species should be accounted for in the Habitats Regulations Assessment and subsequent mitigation, including the timing of proposed works. As per our previous comments, avoidance of impacts should be prioritised in line with the mitigation hierarchy.</p> <p>Further, a detailed mitigation strategy should be drafted for further consultation which safeguards and enhances habitat for breeding and wintering birds, including red list species such as nightingale and linnet. We refer you to more detailed comments made by the RSPB for a detailed discussion of ornithological issues, which we fully support.</p>	<p>Impacts upon qualifying features of the Medway Estuary and Marshes SPA/Ramsar are assessed within the HRA. Timing and mitigation measures are considered within the 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3)</p> <p>Chapter 12 of the ES (Document Reference 6.1.12) provides details on the proposed enhancement measures to be provided by the Proposed Development. In particular, details on habitat creation and enhancement, and long term management and monitoring are provided within the 'Ecological Mitigation and Management Framework' (Document Reference 6.2. 12.3)</p>
	Bats	<p>In the absence of the emergence/re-entry surveys it is not yet possible to make a full assessment of impacts to bats. The importance of the site should be reviewed and updated following the results of emergence/re-entry surveys. We await these survey results ahead of the DCO submission, however we have made some initial comments below.</p>	<p>Emergence/re-entry surveys have been carried out on buildings and tunnels with bat roost suitability. Full details of the surveys undertaken are provided within Appendix 12.1: Ecology Baseline Report (Document Reference 6.2.12.1).</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>The peninsula is likely to be one of the few sites for bats in the local area that provides high quality foraging habitat. This is demonstrated by both the quantity of bats using the site, with over 21000 recordings in May alone, combined with the presence of nationally rare species such as barbastelle. It is noted that a large proportion of records of barbastelle to date were from automated detector 8 near to Blackduck Marsh. The Bat Conservation Trust information sheet on barbastelle estates that “Very few breeding sites are currently known in the UK and it is important that surrounding environments of these and winter hibernation sites are maintained. It is thought that they prefer pastoral landscapes with deciduous woodland, wet meadows and water bodies, such as woodland streams and rivers[...] Bats foraging over wet meadows mostly prey on micromoths, therefore measures to improve the quality of water meadows for the benefit of micromoths will provide better foraging opportunities for barbastelles.” Barbastelle is a UK BAP species and is therefore a conservation priority on both a local and national scale. The loss of foraging habitat on the peninsula, including the loss of woodland to the south of Blackduck Marsh, combined with indirect impacts through increased noise and light at key foraging sites is likely to negatively impact this species. Compensation should be considered as a last resort with avoidance of impacts prioritised in line with the mitigation hierarchy. Without details of the location of proposed biodiversity offsetting it is not possible to determine impacts to the local bat populations and if offsetting will ensure that these populations continue to have access to sufficient foraging habitat.</p>	<p>Appendix 12.10: General Principles for Offsite Ecological Mitigation (Document Reference 6.2.12.10) are provided in lieu of information on a specific site, which include providing off-site land within the Greater Thames Nature Improvement Area. Appendix 12.3: Ecological Mitigation and Management Framework (Document Reference 6.2.12.3) of the ES establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.</p>
		<p>Other rare species such as Nathusius’ pipistrelle use a variety of habitats for foraging, including water logged areas and woodland edges. This is supported by their presence along the ditch corridor (automated detector 2 and 4), Botany marsh (detectors 5 and 6), Blackduck marsh (detector 8) and the small woodland area at detector 10. A large proportion of these key foraging sites are set to be lost under the current proposals.</p>	<p>General Principles for Offsite Ecological Mitigation' are provided within ES Appendix 12.10, which include providing off-site land within the Greater Thames Nature Improvement Area. The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.</p>
		<p>The applicant should apply the mitigation hierarchy and prioritise the avoidance of these impacts through the retention of key foraging habitats and through the use of sensitive lighting schemes and noise mitigation.</p>	<p>The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Dormice	<p>The results of the dormouse surveys indicate the presence of a population of dormice at Blackduck Marsh and along the 'transport corridor' to the south. It is concerning that the vast majority of suitable dormouse habitat on the peninsula will be lost as a result of the proposed theme park. Of additional concern is the loss of connectivity between the population along the 'transport corridor' and that at Blackduck Marsh. A detailed mitigation strategy, which employs the mitigation hierarchy, should be prepared and consulted on prior to DCO. This strategy should ensure that connectivity for dormice is maintained and enhanced both across the site and with the wider landscape. We would advise that any mitigation should take account of in-combination impacts of other development, including that at Ebbsfleet Central.</p>	<p>The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.</p>
	Water vole and otter	<p>It is of great concern that despite both Botany Marsh east (LWS) and Botany Marsh west being shown to support a breeding population of water vole, Botany Marsh west is set to be lost to the development. 12.168 of the PEIR recognizes that significant residual negative effects remain for water vole. It is stated that "Subject to further refinement of the off-site compensation land strategy, there is scope that many of these effects can be reduced to non-significant levels." The applicant's proposal to compensate for impacts via a biodiversity offsetting scheme are also highlighted in table 12.5. On this basis, the proposals do not appear to follow best practice with respect to water vole and otter and the mitigation hierarchy has not been implemented. The Water Vole Mitigation Handbook (2016) states that the options to avoid impacts on water voles should be considered at the design stage. Such measures should include retaining watercourses/wetland habitats in their current location, protecting a buffer zone around the watercourse/wetland habitat and incorporating suitable habitat for water voles into the schemes design. It is clear from both the water vole survey results and other species surveys (including breeding and wintering birds surveys), and echoing our comments above relating to priority habitats, that Botany Marsh west provides important grazing marsh and ditch habitat for a range of species and should be protected and enhanced accordingly. In order to comply with the mitigation hierarchy described by the NPPF and best practice guidance, we urge the applicant to urgently reassess the current proposal for mitigation and compensation. In spite of plans to increase connectivity between Botany Marsh east and Blackduck Marsh, Kent Wildlife Trust will not support a mitigation strategy of this kind due to the loss of a substantial amount of suitable habitat for water vole and otter.</p>	<p>Although Botany Marsh West will be lost to the development, Botany Marsh East will be enhanced for its potential to support water vole and otter and connected to Black Duck Marsh through a new boundary wetland. Further details of the water vole mitigation strategy can be found within the 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3).</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		Connected to our previous statements above, the applicant should seek to increase opportunities for both species by both protecting and enhancing the entirety of Botany Marsh and increasing connectivity to Blackduck Marsh, taking account of likely disturbance in ditches adjacent to the theme park.	The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.
	Reptiles	A reptile mitigation plan should be submitted for consultation prior to the DCO to allow consultees opportunity to advise on its suitability. The plan should seek to enhance reptile habitat and increase connectivity across the landscape.	The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.
	Nationally scarce plants	<p>It is noted that eight nationally scarce plants were recorded on the peninsula in 2020, with 13 recorded in 2016. Consequently, these populations result in Swanscombe peninsula being classified as nationally important for nationally scarce plant species. Of these species, it appears that areas of yellow vetchling, which is designated as vulnerable, and hairy vetchling will be lost as a result of the development of the theme park itself. We also have concerns about potential impacts from ditch profiling and habitat management to the north of Botany Marsh west. These activities should be planned and carried out in a manner that does not negatively impact nationally rare plant species or impact the status of the assemblage as nationally important.</p> <p>A suitable, detailed mitigation and compensation strategy will be required to protect and enhance opportunities for this nationally important assemblage of plant species. Despite the fact that Man Orchid were not recorded during the 2020 surveys we would recommend that this be included in the mitigation plan on a precautionary basis, with updated surveys prior to development.</p>	The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.
	Biodiversity Metric Calculations and Compensation for Loss of Habitat	<p>We are concerned that the Defra Biodiversity Metric 2.0 calculations attached as Appendix 12.3 significantly underestimate the current level of biodiversity on site, and that proposed habitat creation and enhancement measures will not be nearly adequate to compensate for this loss, let alone meet the applicant's commitment to achieving biodiversity net gain. This has significant implications for the ability of this application to be in compliance with relevant part of paragraphs 170 and 175 of the National Planning Policy Framework detailing the need to minimise impacts on and provide compensation for loss of biodiversity.</p> <p>We are of the opinion that the calculations outlined in Appendix 12.3 significantly underrepresent the quantity of high distinctiveness priority habitat on site, particularly areas of Floodplain Wetland Mosaic and OMHPDL which will be lost within the footprint of the main theme park.</p>	The BNG calculations have been updated in line with the recommendations made by consultees and is considered to be accurate in its portrayal of the Project Site's biodiversity value. Botany Marsh west and east have been incorporated into the Floodplain Wetland Mosaic grouping, and large areas of the peninsula and Ebbsfleet Valley have been included as OMHPDL. Condition ratings have been updated and are considered appropriate based on the guidance and detailed survey of the Project Site. Justifications and explanation of assumptions made can be found within Appendix 12.2: Biodiversity Net Gain Assessment report (Document Reference 6.2.12.2).

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>We note that much of Botany Marsh east and west is classified as low distinctiveness modified grassland in the calculations rather than as the more appropriate Floodplain Wetland Mosaic habitat type. In the Defra Metric Technical Supplement, criterion b for Floodplain Wetland Mosaic is given as: Floodplain areas providing important refuges for wetland wildlife whose natural habitats have been lost including: i. Land with breeding waders and/or wintering waterbirds, or other terrestrial wetland priority species or assemblages. ii. Species currently dependent on ditches and other seasonal or permanent standing water within, or surrounding the land</p> <p>Based on evidence provided in the PEIR, which highlights the presence of wintering and breeding water birds and the presence of an important invertebrate assemblage and priority species such as water vole in the ditch system, we are of the opinion that this area clearly meets the criteria for classification as high distinctiveness Floodplain Wetland Mosaic habitat. This is underscored by the Phase 1 habitat survey undertaken in 2016 by Christopher Blanford Associates, which classified this area as Coastal and Floodplain Grazing Marsh Priority Habitat (the corresponding habitat to Floodplain Wetland Mosaic in the Phase 1 habitat classification system). Additionally, paragraph A1.54 of Appendix 12.1 Baseline Ecology Report states that “it is likely that this area qualifies as the priority habitat ‘coastal/floodplain grazing marsh’. Using this habitat classification and applying a moderate condition assessment would lead to the addition of 112.32 units to the overall baseline total.</p> <p>As we noted previously, we are of the opinion that the extent of OMHPDL habitat on site has been significantly underestimated. We are unable to provide exact area estimates at present owing to lack of necessary information, but estimate that potentially at least 20 ha of OMHPDL has been wrongly classified as lower distinctiveness habitat. There classification of large areas of the site which are currently classified as moderate distinctiveness neutral grassland and mixed scrub to high distinctiveness OMHPDL would also lead to a significant increase in the number of biodiversity units in the baseline total, likely in the hundreds of units.</p>	



Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>Much of the habitat across the site is classified as in poor or fairly poor condition. We are concerned that the condition assessment has not taken account of the condition criteria set out in the Defra Metric Technical Supplement and would request that a more comprehensive justification is given for applying these condition scores in a way that corresponds with relevant Defra guidance. We are also concerned that the assessment has also not taken account of finer grain variations of condition across the site and therefore that areas of habitat in better condition have not been adequately accounted for. We would recommend a finer grain assessment of habitat type and condition accompanied by a detailed report explaining how condition scores have been arrive at.</p> <p>Open Mosaic Habitat on Previously Developed Land: Appendix 12.3 classifies all OMHPDL as being in fairly poor condition. Condition assessment criteria for good condition for this habitat type are set out Defra Metric Technical Supplement are as follows: Vegetation provides multiple opportunities for a high number of species to live and breed (complete their life cycles). Bare open ground is common throughout the area. Plant species are flowering extensively and so providing ready nectar sources for insects. Insects and butterflies are common and using the site extensively. None of the indicators of poor condition are present. The invasive non-native species are low or absent from the site, or in the process of being eradicated if beneficial to wildlife to do so.</p> <p>The comments on condition for the entry of OMHPDL in Appendix 12.3 state “relatively botanically poor, lots of buddelia (sic), large areas of hard standing still intact in places”. None of these points have any relevance to the condition criteria set out above (note that buddleia is not included on the list of undesirable species associated with this habitat type as set out in the Technical Supplement, and is likely to be beneficial in the context of providing invertebrate habitat). Of greater relevance is the importance of this habitat type for invertebrate communities. Given the exceptional and nationally important invertebrate communities that depend on OMHPDL across the proposed site it is difficult to understand why a condition assessment of good has not been given for at least some if not all areas of OMHPDL, and even more difficult to see how a classification of fairly poor could be applied on any part of the site. While we do not have sufficient detailed information to make give a firmer estimate for the unit value of OMHPDL on this site, taking account of the probable underestimate of the extent of OMHPDL we are of the opinion that this underestimate of condition has led to the unit score for this habitat type has being underestimated by several hundred units.</p>	

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>Mixed scrub habitat type: Appendix 12.3 classifies all mixed scrub areas across the site as being in fairly poor condition. The condition assessment criteria for good condition this habitat type as set out Defra Metric Technical Supplement are as follows:1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover).2. There is a good age range –a mixture of seedlings, saplings, young shrubs and mature shrubs.3. Pernicious weeds and invasive species make up less than 5% of the ground cover.4. The scrub has a well-developed edge with un-grazed tall herbs.5. There are many clearings and glades within the scrub</p> <p>We can see no evidence in the PEIR or Appendix 12.1 to justify why scrub habitat condition deviates from these criteria sufficiently to justify a fairly poor condition score, and would ask for further clarification. A reclassification of this habitat type to moderate condition, which would appear from the information provided to be more realistic, would lead to a significant increase in the baseline total of 229.65 units</p> <p>In addition to these particular habitats, we would recommend a review of condition scores, referring closely to relevant condition assessment guidance, is made for all medium and high distinctiveness grassland habitats, high distinctiveness woodland habitats, salt marshes and reedbeds. We suspect that condition scores have been significantly underestimated for each of these habitat types.</p> <p>The scores given for connectivity in Appendix 12.3 do not appear to make logical sense and do not correspond with relevant Defra guidance. The Defra Metric User Guides states that “in the beta version of the biodiversity metric 2.0 all High and Very High distinctiveness habitats should be assigned a Medium connectivity multiplier, other habitats a Low connectivity multiplier”, or alternatively the Defra Metric connectivity tool should be used, which applies only to high and very high distinctiveness habitat. This guidance has not been followed in the connectivity entries in Appendix 12.3 and therefore this section should be amended accordingly.</p>	<p>Connectivity scores have been given using the DEFRA Metric connectivity tool where appropriate and using the interim guidance where the connectivity tool was not applicable.</p>
		<p>We note that all habitat parcels have been scored as “Area/compensation not in local strategy/ no local strategy” in the strategic significance column. Kent Nature Partnership is currently devising criteria for using this multiplier across the county, and we would recommend consultation with the KNP in order to conform to emerging local practice. Much of the site is located within the Thameside Green Corridors Biodiversity Opportunity Area and would therefore likely justify higher strategic significance scores for some habitat types that correspond to relevant Biodiversity Opportunity Area targets.</p>	<p>The strategic significance column of the Metric has been updated to value habitats targeted within NIAs and BOAs correctly.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>Given that there is limited detail about onsite compensation measures we are unable to make detailed comments in this respect. However given our preceding comments on the baseline metric calculations we are concerned that the value of onsite habitat enhancement has been significantly over-estimated owing to underestimates of baseline condition.</p>	<p>Details of enhancement and management measures have been detailed within Appendix 12.3: Ecological Mitigation and Management Framework (Document Reference 6.2.12.3), which will be secured as a requirement of the Development Consent Order (DCO).</p>
		<p>For instance we have already noted that the areas of grassland in Botany Marsh east and west should be classified as Floodplain Wetland Mosaic rather than modified grassland. We note that Appendix 12.3 details restoration of 1.65ha of modified grassland to Floodplain Wetland Mosaic, presumably in Botany Marsh east (LWS), delivering 10.42 units. A correct baseline habitat and condition classification would reduce the biodiversity net gain from this habitat enhancement measure to a fraction of the value stated in Appendix 12.3.</p>	<p>Botany Marsh west and east have been incorporated into the Floodplain Wetland Mosaic grouping for the purposes of assessing Biodiversity Net Gain.</p>
		<p>More specifically we are concerned that little attention has been given to enhancing and creating habitats to support the existing nationally important assemblage of terrestrial invertebrates. We would recommend that specific attention is given to restoring suitable areas of OMHPDL for invertebrates in the retained areas of habitat in Broadness Marsh.</p>	<p>The 'Ecological Mitigation and Management Framework' (Document Reference 6.2.12.3) establishes a framework for the long term delivery of ecological mitigation and management, which is to be secured through the Development Consent Order.</p>
		<p>We are also sceptical about the feasibility of achieving some of the condition scores outlined in the habitat enhancement section of Appendix 12.3. In the case of the retained section of Floodplain Wetland Mosaic on Botany Marsh east, which extends to 1.65 ha, we note that this will be detached from the larger area of functionally connected land that will be lost to development in Botany Marsh West. As noted previously, the loss of such a large section of Floodplain Wetland Mosaic is likely to severely impact on the ability of the remaining section of Botany Marsh east (LWS) to sustain the populations of water birds and ditch depended species that characterise the value of this habitat type. Therefore the ability to achieve the target condition score of fairly good as stated in Appendix must be cast into doubt.</p>	<p>The condition scores given to enhanced and created habitats within the updated BNG assessment are considered appropriate.</p>
		<p>Similarly, in the case of salt marsh habitat where habitat enhancement and creation are proposed we question the feasibility of achieving a fairly good target condition score. The areas of saltmarsh in question are small, narrow and disconnected from larger areas of saltmarsh further downstream, therefore we are doubtful that the relevant condition criteria set out in the Defra Metric Intertidal Habitat Technical Guidance for Intertidal Habitats will be met. We would recommend that both of these target condition criteria are reviewed, and should be amended or accompanied by detailed justification as appropriate.</p>	

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Off-site compensation	<p>There is very little information about offsite compensation other than the statement in paragraph 12.151 of the PEIR that “the Applicant is committed to the funding and delivery of an offsite compensation scheme involving habitat creation and enhancement sufficient to deliver the necessary credits to achieve a net gain”. While in principle we support this commitment, given our comments above we are not convinced that this will be achieved or achievable in practice.</p>	<p>General Principles for Offsite Ecological Mitigation' (Document Reference 6.2.12.10) are provided in lieu of information on a specific site, which include providing off-site land within the Greater Thames Nature Improvement Area.</p>
		<p>Appendix 12.3 identifies that the development will lead to an estimated on site biodiversity net loss of 335.2 units or 15.01%. As our comments above demonstrate, it is likely that this is a significant underestimation of total biodiversity loss once relevant guidance for habitat type, distinctiveness and condition are applied and appropriate amendments to the calculation made. Consequently the overall net loss, and therefore the amount of habitat required in compensation, is likely to be at least double (and possibly much more) that stated in Appendix 12.3.</p>	<p>The amount of off-site habitat creation required has been updated following the update to the BNG assessment, the details of theoretical scenarios for off-site mitigation have been given in the BNG Assessment report (Document Reference 6.2.12.2).</p>
		<p>We would further recommend that the following considerations are taken into account in developing an offsite compensation and net gain project:</p> <ul style="list-style-type: none"> <li>• There should be adequate compensation for loss of OMHPDL and associated habitats supporting invertebrate communities</li> <li>• Any off site compensation should be located outside nationally and internationally designated areas where maintaining good condition is an obligation under relevant legislation and are therefore inapplicable as habitat compensation and biodiversity net gain receptor sites</li> <li>• Metric calculations should exclude any species specific compensation for negative impacts on legislatively protected species.</li> <li>• If (as would seem likely given the constraints on land in the Dartford/Gravesend area) compensation needs to take place at a significant distance from the proposed development site, then metric calculations should be appropriately discounted using the spatial risk multiplier in line with Defra guidance</li> </ul>	<p>General Principles for Offsite Ecological Mitigation' (Document Reference 6.2.12.10) are provided in lieu of information on a specific site ,which include providing off-site land within the Greater Thames Nature Improvement Area (NIA). The spatial risk multiplier allows for no reduction in value when habitat is created within the same National Character Area (NCA) or LPA. The Greater Thames NIA lies within the Greater Thames NCA.</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Site selection and alternatives	<p>The EIA Directive requires that the Environmental Statement should include an assessment of reasonable alternatives studied by the developer and the main reasons for selecting the chosen option. This assessment should also provide a comparison of the environmental effects. In addition, Under the Habitats Regulations 2017, as consideration of alternatives is required if the scheme is likely to have a likely significant effect on a European Site. Chapter Three of the PEIR states that in the absence of a National Policy Statement (NPS) for business or commercial NSIPs, regard is given to the National Networks NPS and the National Planning Policy Framework (NPPF) and relevant local plans. The National Networks NPS states that applicants must comply with the requirements to assess alternatives under the EIA Directive and Habitats regulations.</p> <p>It is therefore concerning that the assessment of sites in PEIR Chapter 4 and associated assessments in Appendix 4.1 have not been updated since 2014. Kent Wildlife Trust does not believe that the assessment of the Swanscombe site during the site selection process and alternatives test was accurate with regards to the criteria of “land use” and “environmental constraints”</p> <p>The Swanscombe site is referred to as a brownfield site with the connotation that this equates to a previously developed site which is devoid of nature. This is not an accurate description of the site and would have been easily ascertained even prior to detailed ecological surveys. In fact, the description in Appendix 4.1 states “A number of drains, lagoons and other features are also present. Much of the peninsula has re-vegetated naturally but areas of bare ground remain. Parts of the site comprise saltmarshes, although a flood defence embankment protects the site from inundation from the Thames.” It does not seem that the criteria for classifying brownfield sites were accounted for during the site selection process, as the description provided in Appendix 4.1 clearly identifies this site as open mosaic habitat on previously developed land (see criteria summarised in priority habitats section above).</p> <p>It also does not appear that the nationally protected Swanscombe Marine Conservation Zone (MCZ) has been accounted for. Whilst it is understood that the original assessment of sites, undertaken pre-2014, predated the Swanscombe MCZ designation in 2019, this new proposal should take account of the most up to date information and be assessed and altered accordingly. As such, Appendix 4.1 should be updated and the suitability of the sites in 2020 should be assessed. The statement “The Swanscombe Peninsula does not contain any international or national wildlife or heritage designations” is no longer true, particularly as the River Thames was, and continues to be, identified for travel to and from central London and Essex.</p>	The full consideration of alternative sites and site selection process is detailed in full in Chapter 4: Project development and alternatives (Document Reference 6.1.4), and within Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity (Document Reference 6.1.12).

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>The assessment of the Swanscombe Peninsula also did not take account of the important location of this site on the River Thames and the likelihood that it would serve as functionally linked land for nearby Special Protection Areas (SPAs) (this has now been confirmed). Functionally linked land is afforded the same protection as European designated sites.</p> <p>Further, it has come to our attention that there are inconsistencies within Appendix 4.1, particularly relating to the classification of environmental effects. For example, with regards to the environmental constraints:</p> <ul style="list-style-type: none"> <li>• North Northamptonshire is assessed as neutral with respect to environmental constraints on the basis of its strong rural character, presence ancient woodland and nature conservation designations in the local area.</li> <li>• Marston Vale has been assessed as neutral with respect to environmental constraints due to the presence of local nature reserves and the nationally designated Marston Thrift SSSI.</li> <li>• The M11 corridor appears to be assessed as neutral on the basis of its rural character despite there being no constraining statutory designations.</li> <li>• Great Leighs racecourse, Essex, is assessed as positive with respect to environment constraints as it is free from environmental constraints and well separated from statutory protected sites</li> </ul> <p>On the basis of the assessments and justifications referenced above, the assessment that the Swanscombe Peninsula is positive with respect to environmental constraints appears to be totally inconsistent with the assessment of the other sites. Given the presence the nationally designated Swanscombe Marine Conservation Zone and Bakers Hole SSSI within the development footprint, close proximity to West Thurrock Lagoon and Marshes SSSIs and Swanscombe Skull SSSI, functional linkage to the internationally designated Thames Estuary and Marshes SPA and/or Medway Estuary and Marshes SPA and the presence of Botany Marsh, Alkerden Pit and Ebbsfleet Marshes Local Wildlife Sites. The environmental constraints should also have extended to look at the wider impacts of associated transport infrastructure, including Darenth Wood SSSI and a number of ancient woodlands. We ask that this assessment be updated to accurately represent the importance and significance of the Swanscombe Peninsula from an environmental aspect. It does not seem that the constraints at the Swanscombe site were properly assessed in 2014, with even further constraints being present in 2020. At present, the assessment appears to have been retrofitted to suit the already selected Swanscombe site.</p>	

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	Cumulative Impacts	Both the EIA Regulations and the Habitats Regulations require an assessment of cumulative impacts of the project. We understand that the list of projects to be assessed in combination is yet to be refined, however it is concerning that the Lower Thames Crossing and Ebbsfleet Central are not included in Appendix 20.1.	A cumulative assessment has been included within Chapter 12 of the ES (Document Reference 6.1.12) and the HRA (Document Reference 6.2.12.4) and includes both the Lower Thames Crossing and residential development around Ebbsfleet.
Buglife - Jamie Robins, Project Manager	Impacts on a nationally important population of terrestrial invertebrates	<p>The proposed London Resort development would likely have significant impacts on the diverse assemblage of nationally rare and scarce species recorded on site. Many of the species recorded in previous surveys are dependent on the small habitat features associated with the flower-rich, dry, brownfield areas of the site which are entirely lost. The diverse life cycles of invertebrates, many of which require a number of different habitat types in close proximity, would be significantly interrupted by the proposed development, leading to complete losses of species from the site. More mobile species will also suffer from the loss of habitat on the Swanscombe Peninsula as they rely on large patches of scattered habitat throughout the landscape.</p> <p>Considering the exceptional assemblage identified and the extent of direct habitat loss, Buglife strongly counters the proposal of the Environmental Impact Assessment that residual impacts will be only 'Moderate Negative' and significant at the County level only. The site can only be considered to be of national importance, as confirmed by the data, and the direct loss of the core area for invertebrates must therefore be identified as being highly significant at the national level.</p>	The impacts upon the invertebrate assemblage are assessed within the Terrestrial and Freshwater Ecology & Biodiversity chapter of the ES (Document Reference 6.1.12). The PEIR predicted that some significant residual negative effects could occur, subject to further development of the ecological mitigation and enhancement strategy, including the off-site mitigation land. Since the PEIR was submitted, a significant amount of additional baseline information has become available across a range of disciplines, which has enabled more detailed consideration of potential impacts and further development and refinement of the ecology mitigation strategy. Having completed the full assessment informed by this additional information and the proposed mitigation, Chapter 12 of the ES (Document Reference 6.1.12) concludes that there would be no significant residual effects on important ecological features. Detail of the invertebrate mitigation strategy can be found within Annex 9 of the EMMF (Document Reference 6.2.12.3).
	Impacts on Open Mosaic Habitat on Previously Developed Land	The PEIR and Phase 1 habitat maps have failed to accurately calculate the extent of OMHPDL in the application, which prevents any meaningful assessment of the impact on the habitat type from being made. The Priority Habitat description for OMHPDL clearly identifies that only small, localised areas of bare ground are required, alongside spatial variation, a history of disturbance, a mosaic of habitats which can include open grasslands and even allows for open water and scattered scrub over 10-15% of the area. Buglife considers the vast majority of the habitat area being directly lost to the footprint of the proposed development to meet the OMHPDL criteria. However, the PEIR suggests that the site supports only 3ha, as a result of a misinterpretation of the OMHPDL criteria in the Phase 1 habitat assessments which have focused the obviously bare ground and early successional areas of the site, which is far too narrow an assessment of the habitat. Incorrectly identifying and assessing the individual habitat types within the site mosaic, rather than assessing in combination as OMHPDL can lead to extremely different assessments of the value of sites for invertebrates, as individual habitat areas are assessed as being small and of lower value than the overarching mosaic created.	<p>The extent of OMHPDL across the Project Site has been re-assessed based upon the priority habitat inventory, historic satellite data and site knowledge. The area described as OMHPDL is significantly larger than previously assessed, but does not include areas of dense scrub or obviously capped/landscaped habitat. Although the Priority Reference was used as part of the re-assessment process, professional judgement was used to include/exclude areas considered to not meet the criteria for inclusion as OMHPDL.</p> <p>The assessment of potential effects upon the OMHPDL and associated invertebrate population has been reviewed and updated following consideration of comments from consultees. A range of inherent mitigation measures, as well as additional onsite and off-site mitigation, are provided as part of the Proposed Development. Full details are provided in Chapter 12: Terrestrial and Freshwater Ecology and Biodiversity (Document Reference 6.1.12). Specifically, in regard to invertebrates, mitigation is detailed within the 'Invertebrate Mitigation Strategy' enclosed within Appendix 12.3: Ecological Mitigation and Management Framework (Document Reference: 6.2.12.3). Principles for the off-site mitigation are provided within Appendix 12.10: General Principles for Offsite Ecological Mitigation (Document Reference 6.2.12.10).</p>

Consultee	Topic	PEIR Consultation response	Response/ Action Taken
		<p>The failure to accurately map and assess OMHPDL has led to the Environmental Impact Assessment outlining the impacts as only being 'Moderate Negative' and significant at the Local level only. Considering the clear importance of the invertebrate fauna associated with this habitat type, this represent a gross under-estimation of the impacts of the proposals on a Priority Habitat which is already suffering from ongoing declines in the Thames Estuary. Buglife is of the view that the OMHPDL resource on site is of national importance and that the more or less complete loss of those habitats represents a highly significant permanent loss of biodiversity.</p> <p>The proposed London Resort development would lead to the loss of the entire resource of OMHPDL on the Swanscombe Peninsula, a significant loss for biodiversity in the Thames Estuary. The difficulty in successfully recreating brownfield and OMHPDL habitats must also be a consideration in the value of the habitats, which due to the complexity in their creation, following from decades of diverse industrial activity, make them irreplaceable.</p>	
	<p>Impacts on other Habitats of Principal Importance and a mosaic of wetland features</p>	<p>Although much of the direct habitat loss occurs in areas which Buglife consider to meet the criteria for OMHPDL, the development has the potential to impact on an extensive area of Coastal and Floodplain Grazing Marsh Priority Habitat, much of which is within or connected to the Botany Marsh Local Wildlife Site (LWS) adjacent to the application site. Across the wider site, the complex network of ponds, wet grasslands, reedbed, swamp and fine-scale wetland features are hydrologically dependent on the site's current ditch network. The proposed development would lead to the loss of much of the ditch network in the west of the peninsula and the introduction of extensive areas of hardstanding, with the potential to significantly impact on the site's aquatic invertebrate populations. The site-wide changes in drainage and hydrology has the potential to permanently alter the nature of the habitats across the wider peninsula due to changes in the water table.</p> <p>There are also expected to be direct losses, with some wetland features within the development area itself and as a result of other activities within the Development Consent Order (DCO) boundaries.</p>	<p>The BNG has been updated and now includes Botany Marsh East as part of the Floodplain Wetland Mosaic. Although the majority of CFGM will be lost, the wider wetland mosaic will be enhanced through addition of new ditches and ponds to replace those lost and scrub and reedbed management. Hydrological impacts upon the Project Site are considered within Chapter 17 of the ES and in relation to ecological features within Chapter 12 (Document Reference 6.1.17 and 6.1.12). A drainage strategy has been designed in order to limit hydrological change across the Project Site.</p>



Consultee	Topic	PEIR Consultation response	Response/ Action Taken
	Impacts on an aquatic invertebrate assemblage of county/regional importance	<p>The Swanscombe Peninsula also supports an assemblage of aquatic invertebrates of significance at the county and regional level. Previous surveys referred to have recorded an impressive 199 species of aquatic macroinvertebrate, including the Vulnerable water beetle <i>Graphoderus cinereus</i>, 3 Near Threatened water beetle species, 11 Nationally Scarce species and 51 Local Species. Across the site, two thirds of sites were assessed as being of Very High Conservation Value using the Community Conservation Index (CCI). For water beetles alone, the Water Beetle Species Quality Index produced a score of 2.9, with grazing marshes of a similar score being placed between county and regional status, and county importance being defined as a candidate SSSI.</p>	<p>The impacts upon the invertebrate assemblage are assessed within the Terrestrial and Freshwater Ecology &amp; Biodiversity chapter of the ES (Document Reference 6.1.12). The PEIR predicted that some significant residual negative effects could occur, subject to further development of the ecological mitigation and enhancement strategy, including the off-site mitigation land. Since the PEIR was submitted, a significant amount of additional baseline information has become available across a range of disciplines, which has enabled more detailed consideration of potential impacts and further development and refinement of the ecology mitigation strategy. Having completed the full assessment informed by this additional information and the proposed mitigation, Chapter 12 of the ES (Document Reference 6.1.12) concludes that there would be no significant residual effects on important ecological features. Detail of the invertebrate mitigation strategy can be found within Annex 9 of the EMMF (Document Reference 6.2.12.3).</p>
		<p>The proposed development would likely lead to significant changes to the site's hydrology as outlined as well as some habitat features being directly lost to development, which could significantly alter the habitats available on site for this significant assemblage. Considering the direct loss of features and the potential to impact on the site-wide hydrology, it is unclear how the Environmental Impact Assessment has assessed the residual impacts as being 'Minor positive'.</p>	<p>The BNG has been updated and now includes Botany Marsh East as part of the Floodplain Wetland Mosaic. Although the majority of CFGM will be lost, the wider wetland mosaic will be enhanced through addition of new ditches and ponds to replace those lost and scrub and reedbed management. Hydrological impacts upon the Project Site are considered within Chapter 17 of the ES and in relation to ecological features within Chapter 12 (Document Reference 6.1.17 and 12). A drainage strategy has been designed in order to limit hydrological change across the Project Site.</p>
	Inadequate mitigation and compensation proposals	<p>The habitats on the Swanscombe Peninsula have developed as a result of its complicated history, with its coastal grazing marsh and grassland habitats subject to landfill and the dumping of cement waste over many decades. It also play host to water treatment works, the HS1 railway and jetties, creating a diverse range of habitats in a mosaic across the site established on the varying underlying substrates, hydrologies and topographies. It is often incorrectly stated that because brownfield habitats are artificial in their origin, that they are therefore easily replicated. However, there has yet to be any evidenced, large-scale replication of a diverse and complex brownfield habitat, effectively meaning that OMHPDL habitats of this type should be considered as irreplaceable. The failure of the PEIR to accurately survey, assess and quantify the habitats on site due to their complicated nature is evidence of the inherent difficulties.</p> <p>It is also notable that the mitigation proposals on-site focus almost entirely on maintaining the value of the wetland features on site, leading to a significant net loss of dry, terrestrial habitats of key importance for invertebrates. Considering the national significance of the terrestrial invertebrate fauna and by association the Priority OMHPDL habitat, this represents an unacceptable outcome</p>	<p>Details of the invertebrate mitigation strategy can be found within Annex 9 of the EMMF (Document Reference 6.2.12.3). Whilst it is acknowledged that creation of OMHPDL is difficult, the proposed mitigation strategy draws upon existing examples of habitat creation, such as the Port of Tilbury's London Distribution Park project. Enhancement works are proposed to retained areas of the Broadness Grasslands, which have a history of disturbance but have started to progress towards a more closed habitat mosaic.</p>

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		<p>The information available for the offsite compensation is currently so limited as to prevent a meaningful assessment being made, however, the difficulty in recreating OMHPDL habitats must be addressed appropriately.</p>	<p>Off-site compensation land is in the process of acquisition and further details will be made available once it is secured. Natural England will be consulted on the scope of mitigation land being proposed. For the purpose of the DCO application, a set of general principles for the creation of off-site mitigation is included as an Appendix to the ES (Document Reference 6.2.12.10).</p>
		<p>Buglife is also concerned about the Biodiversity Net Gain metric calculations, as outlined in detail by the Kent Wildlife Trust and would like to support their position that the application significantly underestimates the net losses associated with the development. The value of the onsite enhancements is over-estimated due to the failure of the initial baseline assessments to accurately capture the onsite habitats and their value. This includes the failure to correctly identify the extensive on-site OMHPDL resources properly.</p>	<p>The BNG calculations have been updated in line with the recommendations made by consultees and is considered to be accurate in its portrayal of the Project Site's biodiversity value. Botany Marsh west and east have been incorporated into the Floodplain Wetland Mosaic grouping, and large areas of the peninsula and Ebbsfleet Valley have been included as OMHPDL. Condition ratings have been updated and are considered appropriate based on the guidance and detailed survey of the Project Site. Justifications and explanation of assumptions made can be found within the Biodiversity Net Gain Assessment report (Document Reference 6.2.12.2).</p>
	National Policy	<p>As there is no National Policy Statement (NPS) for business or commercial Nationally Significant Infrastructure Project (NSIP) applications, the PEIR states that regard is given to the National Networks NPS, National Planning Policy Framework (NPPF) and relevant local plans. However, Buglife consider the application to fail to meet the guidance laid out in both the NPS and the NPPF</p>	<p>The Proposed Development is considered compliant with the requirements of the NPPF and relevant NPS.</p>
		<p>Buglife has outlined the inaccuracies in both assessing the value and impacts of the application on Priority habitats and species. Paragraph 5.22 states within the 'Applicant's assessment' that "Where the project is subject to EIA the applicant should ensure that the environmental statement clearly sets out any likely significant effects ... on habitats and other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems". However, the current failure to adequately assess or consider areas of nationally important OMHPDL and the Species of Principal Importance that it supports, prevents such a position from being reached. Paragraph 5.35 also confirms that the "The Secretary of State should ensure that applicants have taken measures to ensure these species and habitats are protected from the adverse effects of development", however, this application represent the permanent loss of one of the best remaining areas of Priority OMHPDL habitat.</p>	<p>The valuation and assessment of impacts on Priority Habitats and Species has been reviewed and updated in the ES following feedback from Buglife and other consultees. This included reviewing the extent of OMHPDL on the Project Site. A suite of on-site mitigation measures are provided to mitigate effects on priority habitats and species, with additional off-site mitigation to be provided to address any residual effects remaining after the application of on-site measures.</p>

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		<p>Paragraph 5.32 also outlines how “The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss.” Buglife views complex OMHPDL sites as irreplaceable, despite their artificial origins, due to the complex nature of their creation, particularly with sites such as Swanscombe due to the diverse and long-term nature of their creation. There is little evidence available to suggest that such habitat is replicable and as such, it should be considered irreplaceable.</p> <p>Although the NPPF is subordinate to the NPS, it may still be considered as a material consideration. Buglife consider the application to also fail to meet the biodiversity requirements of the NPPF. Paragraph 170 of the National Planning Policy Framework (NPPF) states that “Planning policies and decisions should contribute to and enhance the natural and local environment by... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.” The current proposals would lead to direct losses of habitat for nationally rare and scarce invertebrate assemblages and threaten the viability of the invertebrate populations in the area</p> <p>Paragraph 174 states “To protect and enhance biodiversity and geodiversity, plans should... promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.” The current proposals include the loss of OMHPDL Land demonstrate a clear net loss for biodiversity in the area, despite surveys indicating an invertebrate population of national importance.</p> <p>Buglife is of the view that at present, the application fails to meet the requirements of the National Networks NPS and NPPF in the absence of a relevant NPS for business or commercial NSIPs, due to the unacceptable losses of biodiversity, with current restoration and mitigation proposals unlikely to prevent net losses</p>	<p>Whilst it is acknowledged that creation of OMHPDL is difficult, the proposed mitigation strategy draws upon existing examples of habitat creation, such as the Port of Tilbury’s London Distribution Park project. Enhancement works are proposed to retained areas of the Broadness Grasslands, which have a history of disturbance but have started to progress towards a more closed habitat mosaic.</p> <p>Overall, it is considered that the Proposed Development is capable of delivering a net biodiversity gain subject to the adherence to impact avoidance and mitigation measures on-site, along with the enhancement and long-term management of the mosaic of habitats as currently present, and the delivery of off-site ecological mitigation. The Proposed Development is considered compliant with the requirements of the NPPF and relevant NPS.</p>
RSPB	25 Year Environment Plan	The government’s 25 Year Environment Plan commits to “creating or restoring 500,000 hectares of wildlife-rich habitat outside the protected site network focusing on priority habitats” <sup>1</sup> and developing a Nature Recovery Network (NRN). The Swanscombe Peninsula should lie at the heart of such a network within the Thames Estuary	No response required

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	Nationally Important Invertebrate Assemblage	Surveys conducted for and on behalf of the developer recognise that the project site is of national importance for its invertebrate populations (Appendix 12.1: Ecology Baseline Report, paragraph 3.95/page 44). The 2012 and 2015 surveys identified 1,992 terrestrial species, plus a further 200 aquatic macroinvertebrate species. 250 of these species are of conservation concern, i.e. Red Data Book or Nationally Scarce based on status reviews at the time. Additional surveys this year, not yet available, may add to the assemblage.	No response required
	Assessment of alternative sites	Appendix 4.1 of the Environmental Impact Assessment (EIA) Scoping Report provides an assessment of eleven reasonable alternative site options in accordance with the requirements of the EIA Directive. This comparison of environmental effects within such an assessment should be accurate. There is a clear and urgent need for the applicant to re-assess their alternative sites as the following have not been incorporated as part of the environmental effects at Swanscombe: •the newly designated Swanscombe Marine Conservation Zone (MCZ), •the site’s functional-linkage to the Special Protection Area network, •the nationally important invertebrate assemblage, •the extensive priority habitats(e.g. Open Mosaic Habitat on Previously Developed Land [OMHPDL]), •the regionally important breeding bird assemblage (82 species recorded this year).	The full consideration of alternative sites and site selection process is detailed in full in Chapter 4 ‘Project development and alternatives’ (Document Reference 6.1.4).
	Breeding bird assemblage	<p>We commend the quality of the ornithological surveys conducted to date which demonstrate the site’s significant importance. Surveys in 2015 recognised these as “regionally important” within the Ecological Appraisal (paragraph 1.7, page 508). These recorded 54 breeding species, eleven of these species are on the red list of Birds of Conservation Concern (BoCC)3/Species of Principal Importance4, seven are recognised as rare breeding birds5and three are Schedule 1 species6. For context, the 10-year mean (2010-2019) for breeding bird species at RSPB Rainham Marshes is 51 species.</p> <p>The report analysing the 2015 results show that records returned from the Kent Biological Records Centre indicate 89 species have bred at least once at the project site since 1980. Paragraph 2.3.4 (page 512) indicates that such an assemblage could be considered as nationally important as it exceeds the threshold of 85 species. We recognise that this figure does not relate to the breeding bird assemblage for that year, but it does highlight the ornithological diversity of the site.</p>	Breeding bird assemblage has been valued at the regional level due to the presence of 77 breeding species, in line with the 2015 report, which based the assessment on the criteria set out by Fuller (1980). Breeding bird surveys were extensive in 2020 and included targeted survey for some species, including black redstart and spotted crane. The figure of 89 breeding species was taken from desk study data spanning many years. Some of the diversity can be attributed to changes in national trends and the variability of habitats within the site over time.
	Functionally Linked Lane	Both the wintering bird surveys have not included the Benfleet and Southend Marshes Special Protection Area (SPA) when setting out the legislative context of their surveys. This omission should be rectified for the purpose of the Habitats Regulations Assessment (HRA)	Benfleet and Southend Marshes are situated c.19km from the Project Site. European Sites included as IEFs were agreed with Natural England through consultation.