The London Resort Development Consent Order

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Environmental Statement
Volume 1: Main Statement

Chapter 21 – Cumulative, in-combination and transboundary effects

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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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Chapter Twenty-One ◆ Cumulative, in-combination and transboundary effects

INTRODUCTION

21.1 This chapter considers the cumulative, in-combination and transboundary effects of London Resort. The requirement for cumulative effects assessment (CEA) originated in the Environmental Impact Assessment (EIA) Directive 2014/52/EU which amended EIA Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

21.2 Schedule 4 paragraph 5 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires '*A description of the likely significant effects of the development on the environment resulting from, inter alia: (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*'. The text goes on to state that '*the description of the likely significant effects on the factors specified in regulation 5(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development'*.

21.3 The assessment of cumulative effects with other projects has been undertaken in line with the guidance set out in Planning Inspectorate Advice Note 17: *Cumulative Effects Assessment* (PINS, August 2019) and Advice Note 9: *Rochdale Envelope* (PINS, July 2018), which are considered to represent best practice for cumulative effects assessments in relation to DCO projects. The EIA for the London Resort has considered the cumulative effects of the construction and operational phases of the Proposed Development.

21.4 In-combination and cumulative effects are defined as:

- *Inter-project* effects or '*cumulative effects*' (additive): These effects occur as a result of the combined action of a number of different projects cumulatively with the project being assessed and on a single resource or receptor; and,

- *Intra-project* effects or '*in-combination*' effects: These effects occur between different environmental topics within the same proposal and as a result of the development's direct effects.

21.5 This chapter summarises both the cumulative effects that arise from the London Resort with other projects and the interaction between these effects and the in-combination effects of the Proposed Development (for example, changes in air quality, noise levels and visual impact) on groups of key receptors.

METHODOLOGY

Cumulative effects

21.6 An assessment of cumulative effects has been undertaken. Advice note 17 (PINS, August 2019) recommends that: '*Other existing development and/or approved development likely to result in significant cumulative effects should be identified and assessed by the applicant in the Cumulative Environmental Assessment (CEA)'.*

21.7 The principles of the four stage assessment approach to cumulative assessment, as outlined in Advice Note 17, has been adopted as follows:

- ***Stage 1:*** Establish the NSIP's Zone of Influence (ZOI) and a long list of other existing development and/or approved development;

- ***Stage 2***: Establish a shortlist of other existing development and/or approved development and apply a threshold criteria based on temporal scope, the scale and nature of development and any other relevant factors to assist in deciding whether to include or exclude the other existing development and/or approved development identified;

- ***Stage 3:*** Information gathering – compile detailed information on the other existing development and/ or approved development shortlisted at Stage 2 including design and location, programme of construction, operation and decommissioning and environmental assessment information;

- ***Stage 4:*** Assessment – assess the cumulative effects of the Proposed Development with the short list of other existing development and/or approved development based on factors including duration of effect, extent of effect, type of effect, frequency of effect, value and resilience of receptors and likely success of mitigation.

21.8 To enable a reasonable and proportionate assessment, the following criteria have been used to identify schemes that could result in potential cumulative effects with the Proposed Development in accordance with Table 2 in Advice Note 17:

- Projects under construction;
- Permitted application(s), but not yet implemented;
- Submitted application(s), not yet determined;
- Projects on the Planning Inspectorate's Programme of Projects where a scoping report has not been submitted;
- Identified in the relevant Development Plan (and emerging Development Plans – with appropriate weight);
- Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably

likely to come forward.

21.9 Using these categories, other existing development and/or approved development were identified with reference to identified Zones of Influence for each environmental topic (Figure 21.1: *Zones of Influence* (document reference 6.3.21.1) and Figure 21.2: *Zones of Influence Noise and Vibration* (document reference 6.2.21.2)), local knowledge, published information, council websites and through consultation on the EIA Scoping Report and Preliminary Environmental Information Report (PEIR). These developments were compiled into the 'long list'. Using the 'long list' as the basis, a 'shortlist' was established through applying threshold criteria, based on temporal scope, the scale and nature of development and any other relevant factors. These thresholds assisted in deciding whether to include or exclude the 'other existing development and/or approved development'.

21.10 This process is set out in tabular format in Appendix 21.1: *Establishment of long-list/short-list of developments* (document reference 6.2.21.1). The locations of the 'long list' of developments are shown in Figure 21.3: *Long-list of developments* (document reference 6.3.21.3).The locations of the short listed developments are shown in Figure 21.4: *Short-list of developments* (document reference 6.3.21.4).

21.11 Refused planning applications that are not subject to a planning appeal have not been considered, as their implementation is not considered to be reasonably foreseeable.

21.12 A quantitative assessment approach has been undertaken where appropriate. For those EIA topics where a *quantitative* assessment is inappropriate, for example cultural heritage and archaeology, a *qualitative* evaluation has been carried out using professional judgement.

In-combination effects

21.13 This ES has considered the in-combination effects of the Proposed Development where receptors experience multiple potentially non-significant effects from a range of impacts, which taken together might become significant. This approach ensures that, rather than the ES being a series of separate assessments, all the effects identified are considered as a whole.

21.14 The in-combination effects identified within the technical topic based chapters have been assessed using professional judgement and a qualitative assessment approach. To determine whether there is potential for a significant in-combination effect on an individual receptor, all residual adverse effects for the London Resort are listed against the individual receptors affected, so that receptors which will be affected by more than one impact can be identified. Where only neutral or negligible effects are identified, it would normally be considered that there is no potential for in-combination effects.

21.15 The study area for in-combination effects is defined by the study areas for each of the individual environmental topic assessments, which are described in each topic chapter.

Consultation

21.16 During the consultation on the EIA Scoping Report 2020 (document reference 6.2.1.3), relevant planning authorities were invited to advise on which projects should be considered in the assessment of cumulative effects. Where responses were received, projects have been incorporated into the ES. During the statutory public consultation in July-September 2020, a consultation response from the Ebbsfleet Development Corporation highlighted additional projects, and these have been included in the ES for cumulative effects.

CUMULATIVE IMPACTS

21.17 Table 21.1 below summarises the outcome of the cumulative assessments undertaken in the individual topic based chapters of this ES. The table presents a summary only and further detail on these assessments is provided in the preceding topic-based chapters of this ES.

Table 21.1: Summary of topic based cumulative assessments

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
Land use and socio-economics	The land use and socio-economics assessment presents future projections of baseline conditions, including population and employment. Therefore, as the assessment takes into account changes in baseline conditions over time, changes to the population and employment occurring as a result of potential new developments are implicitly included within the assessment. As the assessment takes account of trends over time (for each of the core assessment years), changes to population and employment occurring as a result of potential new developments are implicitly assessed within the model and the assessment with respect to these indicators is inherently cumulative. This approach does not, however, capture the future baseline for all socio-economic elements, such as construction workers or changes in public services, because projections are not available for these aspects. To account for this, identified contributions toward, and changes to, these socio-economic conditions are established through a review of future developments where relevant, and if the development has the potential to result in significant environmental impacts. For many of these effects, the approach is inherently cumulative, where this is not the case, projections or assessments of future developments are contained in the future baseline for each effect. Further details on this approach is set out within ES Appendix 7.2 *Detailed methodology* (document reference 6.2.7.2). The effects assessment presented in ES chapter 7 (document reference 6.1.7) therefore provides the inherent cumulative assessment to be considered.	
Human Health	Most technical assessments (socio-economics, transport, air quality, water and flooding, waste, climate change) which underpin the health assessment are inherently cumulative, meaning that the health assessment itself is also inherently cumulative. Where they are not (noise), the cumulative effects have been considered inherently within the health assessment and the effects identified through the assessment in the chapter, *Human health* (document reference 6.1.8). Where they are inherently cumulative, a separate assessment of the cumulative impact of committed schemes would risk double counting. Based on this approach, the need for a cumulative effects assessment which considers the overall impact of other, committed schemes is redundant.	
Land Transport	The Transport Assessment factors in future committed development, general population growth and job growth. The model considered all significant planned and/or committed development in the Project Site area including Highways England's proposed Lower Thames Crossing. Where the detailed information of the specific development was known	

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	this was inputted into the model directly. Other developments are included under the assumptions embedded in the model during its development. Cumulative effects in relation to land-side transport and traffic effects are therefore inherent within the modelling work undertaken. As a result any effects resulting from the assessments based on the model values are also cumulative effects.	
River Transport	Any cumulative effects on river transport would manifest as an increased incident risk during navigation. The total numbers of anticipated vessel movements associated with the other identified projects is considered small in comparison to the existing numbers of vessel movements, it is therefore considered that any associated risk increase would not be significant. The navigational risk assessment, appendix 10.1 *Navigational Risk Assessment* (document reference 6.2.10.1), has been produced and will appropriately address any hazards or risks associated with an increase in ships in transit in the Thames Estuary.	
Landscape Effects	Potential significant cumulative effects with Local Landscape Character Areas (LLCA) have been identified through the landscape assessment. These are primarily identified with the Kent Project Site as the main proponent, in conjunction with consented schemes. In addition, should those non-consented schemes identified come forward, further significant effects are anticipated. LLCAs affected include: • Marshland LLCA • Northfleet Industrial LLCA • Springhead LLCA • Ebbsfleet LLCA • Ingress Park • Gravesend Southern Fringe LLCA • Tilbury Marshes LLCA The Tilbury Marshes Landscape Character Area (LCA) would experience a significant effect when the proposed London	

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	Resort is considered cumulatively with other consented schemes. For all other LCAs when combined with the consented schemes, the effects are not deemed to be significant. However, should the other developments in the short list be granted consent, then effects on these LCAs become significant.	
Visual Effects	The assessment has identified that a number of cumulative effects are predicted, predominantly in views from within 2km, where the Project Site would be seen to increase the horizontal scale of development within the local context. In summary: • The area would be more urbanised and less susceptible to change and less sensitive to the introduction of urban components within the landscape • Some views that are likely to experience change as a result of the Proposed Development would have views blocked or modified by cumulative baseline development, particularly for receptors within and around Northfleet, Castle Hill and Springhead. While the effect of the Proposed Development would not differ, the magnitude of change experienced across the wider area would clearly be greater when taking the combined effect of the other schemes into consideration. However, it is considered that the proportion to the total visual change attributable to the Proposed Development would be proportionately less because: i) the wider area would be more urbanised and therefore less sensitive to the introduction of urban components within the landscape; and ii) photo-viewpoints that are likely to change as a result of the Proposed Development may have view blocked or altered by other developments. Overall as a result of the implementation of the Proposed Development and the cumulative developments, there would be an increase in the massing of built development within the local context as a whole which is already urbanised.	
Terrestrial and freshwater ecology and	The assessment of the Proposed Development in chapter 12 (document reference 6.1.12) concludes that through the adoption of appropriate mitigation measures, the project would not give rise to significant adverse effects in its own right. The cumulative assessment identified that at both the construction and operational phase of the Proposed	

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
biodiversity	Development there was the potential for cumulative effects to arise, these are in relation to the temporary and/or permanent loss/disturbance of habitats, recreational disturbance, temporary and permanent air quality impacts and temporary and permanent hydrological impacts. However, on review of the short list of developments, given that legislation and planning policy require schemes to avoid or mitigate negative impacts, there are not anticipated to be significant cumulative effects.	
Marine ecology and biodiversity	There would be potential for effects of minor adverse significance at the following sites: • Tilbury2: Construction phase dredge (Option C) for the Proposed Development should it be undertaken at the same time as the Tilbury2 maintenance dredging. • Thurrock Flexible Generation Plant: Noise and vibration effects on fish and marine mammals should there be piling occurring concurrently on construction of the two projects. Should this be the case mitigation should include adjusting timing of works across both projects. Construction phase dredge (Option C) for the Proposed Development should it be undertaken at the same time as the Thurrock capital dredging. • The Pier, Crest Nicholson and Purfleet Centre Regeneration Operation: potential for overlap in construction with the Proposed Development, if piling effects occur simultaneously during sensitive ecological periods such as fish migration there is potential for noise and vibration effects on fish and marine mammals.	There would be potential for effects of minor adverse significance at the following sites: • Thurrock Flexible Generation Plant: Construction phase dredge (Option C) for the Proposed Development should it be undertaken at the same time as the Thurrock capital dredging. All other effects identified are of negligible significance.

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	All other effects identified are of negligible significance.	
Cultural heritage and archaeology	*Terrestrial archaeological remains* None of the of development schemes assessed has been identified to have the potential to give rise to cumulative adverse direct effects to any of the individual assets or discrete archaeological features on the Project Site. A number of asset groups have been identified to have potential cumulative effects where the associated deposits extend beyond the Order Limits. These are: • Archaeological remains associated with Springhead Roman Town and Ritual Site • Palaeolithic deposits similar to those at Baker's Hole and associated deposits • Geo-archaeological deposits upon Swanscombe Peninsula • Portland Cement Works Where a decision has been made on the cumulative developments archaeological conditions or requirements have been placed where there is the potential to affect below ground remains. Assuming appropriate preservation by record, or where possible preservation *in situ* is achieved then this potential cumulative loss of these archaeological remains will be mitigated. This would result in a minor adverse cumulative effect. Cumulative indirect effects could result from the increased degradation to the significance of buried archaeological remains through change in setting, the Palaeolithic Sites near Baker's Hole and Springhead Roman Site have the potential to be affected. Effects as a result of the Proposed Development is identified as 'not significant' and the addition of the cumulative schemes is not anticipated to increase this effect. *Marine archaeological remains* Development proposals with marine components in the vicinity of the Project Site will be subject to archaeological assessment in the same manner as this project and each project will be required to identify mitigation measures to minimise adverse effects, therefore direct and indirect cumulative effects on marine archaeology will be negligible. This archaeology assessment work has the potential to contribute to wider understanding of the palaeogeography of the area, which is a significant beneficial effect, particularly when the data is disseminated to the wider public.	

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	Built heritage The built heritage lying within the Project Site will not be directly affected by the cumulative developments and so there are not anticipated to be any direct cumulative effects on built heritage. Tilbury Fort & Officers Barracks and New Tavern Fort were identified as having the potential for indirect cumulative effects from a number of the identified development proposals. The riverside location and defensive arrangements of these assets are not considered to be in any way changed by the Proposed Development in cumulation with the other identified developments. Whilst the visual setting is altered the linkage between the forts is unchanged and the ability to understand their function is unharmed. No cumulative effect is identified and the heritage significance of these assets is unchanged.	
Noise and Vibration	Whilst it is not practicable to undertake a quantitative assessment of the cumulative noise and vibration effects of the cumulative developments prior to their implementation, it is likely that there will be an adverse effect. However, this is reliant on the location of the receptors relative to the Project Site and the other developments. It is not unusual for demolition and construction activities to take place on more than one development site in proximity to each other and the contractor(s) for the London Resort will undertake regular liaison meetings and reviews with neighbouring sites to plan works so that they do not cause unnecessary disruption. Additional noise impacts at the identified receptors may occur if demolition and construction activities take	Cumulative noise from fixed plant and equipment during the operational stage of all developments assessed should follow the legislative requirements for fixed plant and will be designed in accordance with the requirements of the relevant local authority. As such the noise effect from operational fixed plant cumulatively will be negligible. Intensification of traffic on local roads due to the cumulative effect of the Proposed Development at the Kent Project Site and other consented developments will cause an increase in noise at sensitive receptors. Noise from vehicles moving along the A2(T) may cause a change greater than 1 decibel (1dB) compared to existing conditions.

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	place simultaneously. The cumulative impact will be dependent on the exact activities taking place at each location. However, the introduction of site hoardings and compliance with the mitigation measures detailed in Appendix 15.3 (document reference 6.2.15.3) will reduce these impacts as far as possible assuming that the other schemes will also incorporate best available mitigation measures during their demolition and construction phases.	
Air Quality	Institute of Air Quality Management (IAQM) guidance indicates that with appropriate mitigation measures in place, the impact from construction dust will be not significant. Guidance also suggests that cumulative effects may occur from sites within 500m of one another. In line with proposed mitigation measures, the contractor should hold regular liaison meetings with other high-risk construction sites within 500m of the Project Site boundary including residential and commercial developments proposed in the vicinity of Ebbsfleet International Station, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is assumed that an appropriate assessment of potential construction effects will have been carried out at cumulative schemes and necessary mitigation will have been identified. Mitigation for this Proposed Development will therefore compliment the mitigation	The Transport Assessment factors in future committed development, as such the cumulative air quality transport-related effects during operation are inherently built into the assessment. In-combination air quality effects arising from the Proposed Development on the Thames Estuary and Marshes Special Protection Area (SPA) / Ramsar site are assessed to be insignificant.

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	identified for the other cumulative developments and ensure overall impacts are negligible.	
Water resources and flood risk	Potential for cumulative effects in relation to pollutant loading within the River Thames during concurrent construction projects. Compliance with respective CEMP measures will ensure that this is not significant. Water quality within the River Thames subject to potentially minor adverse effects at other cumulative schemes close to the river. Compliance with respective CEMPs will ensure that this is not significant.	As standard the surrounding residential and industrial cumulative developments will discharge surface water into a combined sewer network or directly into the River Thames. The Proposed Development at the Kent Project Site will discharge directly into the River Thames and therefore no adverse cumulative effect is identified in relation to drainage infrastructure as a result of the Proposed Development. Cumulative water quality impacts are not anticipated to be significant, assuming the implementation of Sustainable Drainage Systems is in line with policy guidance to continue to support the improvement of water quality and help the Middle River Thames to meet 'Good' water body quality in line with WFD targets.
Soils, hydrogeology and ground conditions	No significant effects anticipated at the construction phase in relation to ground conditions. Each development will be required to address the relevant ground conditions at their specific site as part of a grant or permission, as such, there are no plausible effects related to ground conditions that could combine with the Proposed Development to result in significant cumulative effects.	No significant cumulative effects anticipated post implementation of mitigation measures at the Proposed Development. The cumulative impact of site specific remediation will improve general conditions at the local scale leading to negligible to minor beneficial effects which are not significant.
Waste and materials	Significant cumulative effects are predicted on future landfill capacities, due to existing sensitivity across both	Significant cumulative effects are predicted on landfill infrastructure due to existing sensitivity across both Kent and

Topic	Potential cumulative effects during construction	Potential cumulative effects during operation
	Kent and Essex. It is assumed that each new development considered will prepare a Construction Waste Management Plan (CWMP), and that the phased approach to each new development will reduce the pressure on existing waste infrastructure.	Essex. All developments considered will need to comply with best practice principles of the waste hierarchy, a circular economy and relevant design standards, this will ensure minimisation of waste and material demands as well as recycling provision and segregation.
Greenhouse gases (GHG) and climate change	Effects from GHG emissions are not localised but contribute to the global atmospheric concentration of GHG and consequently to the global climate change effect. Therefore, assessing emissions from the Proposed Development in terms of combined effects with other nearby developments is extraneous and immaterial in terms of localised effects. The Proposed Development should be viewed, rather, in the context of developments and construction projects globally as it contributes to a global climatic effect. As there are GHG emissions associated with almost all new developments globally and that we are approaching a global climate tipping point, it may be stated that cumulative effects are significant. Due to the nature of effects relating to climate change on the Proposed Development, the majority of risks identified will not increase or decrease when taking into account cumulative developments. The only identified climate risk which may be affected is drought. As more developments are built, water supply is likely to become increasingly strained, meaning that drought conditions are increasingly likely. However, with the identified mitigation measures in place for the Proposed Development, the effects are not anticipated to be significant.	

IN-COMBINATION EFFECTS

21.18 The receptors for the in-combination assessment can be divided broadly into a number of main groups.

- ***Human receptors***: these include residents and transport and travel related (on foot, the road and river network).
- ***Ecological receptors***: these include protected species and habitats.
- ***Heritage receptors***: these include designated heritage assets.
- ***Water bodies***: these include the River Thames, other waterbodies on site and groundwater.

21.19 Receptors that are significantly adversely affected by two or more residual effects have been identified in the table below.

Table 21.2: Interaction of residual adverse effects upon receptors

Receptor group	Identified effects	Summary
Humans (Residents)	• Air quality (ES chapter 16) • Noise (ES chapter 15) • Visual effects (ES chapter 11) • Health and well-being (ES chapter 8)	These effects and interactions are covered in the relevant ES chapters. The effects in combination are considered further in the subsequent sections of this chapter.
Humans (Transport and Travel related)	• Air quality (ES chapter 16) • Visual effects (ES chapter 11) • Noise (ES chapter 15) • Health and well-being (ES chapter 8) • Traffic and travel (ES chapter 9)	These effects are dealt with in the relevant ES chapters and addressed through mitigation measures specified. As such these are not considered further in this chapter.
Ecological Receptors	• Air quality (ES chapter 16) • Noise (ES chapter 15)	These effects and interactions between the receptors are dealt with in the Terrestrial and freshwater ecology and biodiversity chapter (ES chapter 12) and the marine ecology and biodiversity chapter (ES chapter 13). In addition, the issue of in-combination effects is addressed as part of the shadow Habitats Regulations Assessment (HRA) (document reference 6.2.12.4). As such these effects are not

Receptor group	Identified effects	Summary
		considered further here.
Heritage assets	• Air quality (ES chapter 16) • Visual effects (ES chapter 11)	These interactions and effects are assessed as part of the cultural heritage and archaeology assessment contained within chapter 14 of the ES. As such, they are not considered further at this stage.
Water bodies	• Ecological effects (ES chapters 12 and 13) • Contamination (ES chapter 18)	These interactions and effects are assessed as part of the water resources and flood risk ES chapter (chapter 17) and the soils, hydrogeology and ground conditions chapter (ES chapter 18). As such, these effects are not considered further here.

21.20 The synergistic effects upon ecological receptors (including terrestrial, freshwater and marine), humans (transport and travel related) and heritage assets are addressed within their respective technical topic chapters and as such are not considered further as part of this assessment.

21.21 Further assessment of the in-combination effects upon other human receptors is considered appropriate and therefore is addressed within this chapter. The key effects identified upon human receptors are in relation to air quality, noise and visual impact.

21.22 In order to understand the likely impacts upon residential receptors at the local scale, those receptors where residual effects are identified in relation to two or more of the issues have been considered in further detail.

Assessment of in-combination effects upon human receptors

Construction

21.23 The effects identified at the construction phase of the Proposed Development in relation to air quality, noise and visual effects, will be temporary in their nature and likely to be intermittent. Construction would be phased across the Project Site over the course of the construction stage and therefore not all receptors will be affected at the same time. The largest effects are predicted to occur in 2023, which is the peak construction year for the London Resort. Once Gate One is open in 2024, there will be a period of combined construction and operational effects upon these receptors until the Gate Two opening year. At the completion of the Proposed Development, all construction-related effects would cease.

21.24 The Air Quality assessment set out in ES chapter 16 *Air quality* (document reference 6.1.16) identifies that there is the potential for construction-related activities to give rise to dust at sensitive receptor points. Strict environmental controls will be implemented to control dust and dust generating activities as outlined in the outline Construction Method Statement (CMS, document reference 6.2.3.1) and the outline Construction Environmental Management Plan (CEMP, document reference 6.2.3.2). With these mitigation measures in place it is anticipated that significant air quality related effects from construction are unlikely.

21.25 The noise and vibration assessment in chapter 15 of the ES *Noise and vibration* (document reference 6.1.15) predicts that there would be minor adverse, non-significant, effects in relation to construction traffic movements at five locations.

21.26 The outline CMS (document reference 6.2.3.1) and CEMP (document reference 6.2.3.2) affirm that Best Practicable Means will be implemented during construction to minimise noise disturbance for sensitive receptors as a result of construction activities.

21.27 ES chapter 11: *Landscape and visual effects* (document reference 6.1.11) predicts that there would be significant visual effects during the construction phase. These would be temporary in nature and would not affect all receptors at all times. In addition, as later construction phases commence, earlier landscape and planting works would start to become established.

Operation

21.28 Operationally, the human receptors that are likely to experience in-combination effects in relation to air quality, noise and visual impacts are located primarily in the vicinity of the Kent Project Site.

21.29 As explained in chapter 16: *Air quality* of the ES (document reference 6.1.16), the impact of operational road traffic generated by the Proposed Development has been predicted using dispersion modelling for a number of assessment years. Using the worst case assumption that there is no change in existing background air quality conditions, one receptor location is predicted to experience a moderate adverse effect, relating to operational traffic generated by the Proposed Development at the Kent Project Site for the 2024 assessment scenario. Should background air quality conditions improve in line with Defra's projections, the predicted impact at this receptor would be negligible. The effect at all remaining receptors for all assessment years is predicted to be negligible, using the worst case assumption that there is no change in existing background air quality conditions.

21.30 The impact from emissions associated with the proposed energy centre has been predicted using dispersion modelling, and owing to the predominantly emission free heating strategy which utilises heat pumps, the contribution from energy centre emissions is shown to be very small and can be ruled insignificant in line with Environment Agency

guidance.

21.31 The noise assessment set out within chapter 15 of the ES (document reference 6.1.15) and appendix 15.4 (document reference 6.2.15.4) shows that in terms of operational traffic related noise, the majority of the links show 'negligible' and 'no change' magnitudes of impacts. For a number of links there is a 'low' impact on noise emissions from the additional traffic in 2038, for these links the associated effects on their Noise Sensitive Receptors (NSRs) is defined as being minor adverse. Effects in relation to rides and attractions, infrastructure compounds, the passenger ferry and outdoor London Resort events can be appropriately controlled and mitigated and so will not result in significant effects upon human receptors.

21.32 ES chapter 11: *Landscape and visual effects* (document reference 6.1.11) predicts that the effects on sensitive receptors will be less in the medium to long term than in the short term as mitigation in the form of tree and shrub planting becomes established. At Year 15 and beyond only 21 of the 74 viewpoints are predicted to experience significant effects, with residential receptors limited to those in relatively close proximity to the Project Site or at elevated vantage points. No significant effects are experienced beyond 2km of the Project Site.

Summary

21.33 The in-combination assessment has identified that there is the potential for human receptors to experience a number of effects during both the construction and operational phase of the Proposed Development. These effects are clearly understood and assessed as part of the individual topic assessments and all appropriate mitigation measures have been specified and are set out within the technical chapters and in chapter 22: *Conclusion and mitigation commitments* of this ES (document reference 6.1.22). When taking these measures into account and in considering the temporary nature of the construction related effects, the in-combination assessment has concluded that there are no additional significant effects arising that require consideration.

TRANSBOUNDARY EFFECTS

21.33 Certain types of major development might exert environmental effects that extend beyond the boundary of the nation-state in which the development would be located. Planning Inspectorate Advice Note 12: *Transboundary Impacts and Process* (version 5, March 2018) offers guidance on the procedures for transboundary consultation associated with a DCO application.

21.34 PINS Advice Note 12 (paragraphs 2.1 and 2.2) explains that:

'The UK is a signatory to the United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context. The Convention was adopted in 1991 in the Finnish city of Espoo and is therefore known as the

'Espoo Convention'. The UK is also a signatory to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the 'Aarhus Convention') and its Protocol which provide people with the rights to easily access information, participate effectively in decision-making in environmental matters and to seek justice if their rights are violated.

The European Union (EU) Directive 85/337/EEC (as amended) (the EIA Directive) implements the Espoo and Aarhus Conventions in the EU and is transposed into UK law through the EIA Regulations.'

21.35 PINS Advice Note 12 (paragraph 4.1.2) explains the role of developers and offers the following advice:

'… the Applicant is requested to provide information to the Inspectorate to enable a view to be reached as to whether the development is likely to have significant transboundary effects on other EEA States. Information about the potential for transboundary effects should be provided by the Applicant as part of:

- *The suite of documents accompanying the application for development consent ...'*

21.36 A transboundary screening matrix for the London Resort project was provided with the EIA scoping request for the London Resort in June 2020. The following potential significant transboundary effects were identified at the time as a result of the high-level assessment undertaken:

- *Traffic and transport* - significant traffic and transport effects could occur where visitor trips between European Economic Area (EEA) States and the UK give rise to transport capacity problems (particularly in sensitive areas) that cannot be mitigated. The transboundary screening matrix concluded that, in the context of the daily people trips between the UK and EEA States, it is likely that the increase in trips that could be attributed to the London Resort would be negligible and that many of the overseas people visiting the London Resort would already be staying in the region anyway. It is therefore likely that the existing transport network would be able to accommodate the increase within the work associated with the Proposed Development.

- *Air quality* - significant air quality effects could occur where increases in trips between EEA States and the UK give rise to traffic-related emissions which have an adverse effect on residential properties in terms of local air quality, or ecologically sensitive designated sites and cannot be mitigated. The transboundary screening matrix concluded that, as the increase in trips between the UK and EEA states attributed to the London Resort is considered negligible, it is likely that emissions of traffic related pollutants in EEA States that are directly attributable to the London Resort will be insignificant in terms of effects on the local air quality of residential properties near major transport routes and environmentally sensitive designations.

- *Socio-economic* - significant economic effects could occur where the Proposed Development has either a positive or negative effect on the economy of an EEA State. Negative effects could occur through the redistribution of visitors from EEA State visitor attractions to the UK and / or where business opportunities are created in the EEA States (directly or indirectly) as a direct result of the Proposed Development. The transboundary screening matrix identified that the London Resort may result in a reduced number of people visiting entertainment resorts in EEA States which may result in reduced gross domestic product in certain states. However, in the context of the overall tourism numbers for the EEA States identified, any potential reduction is likely to be negligible and the effects on economies insignificant. It was considered that the overall level of GDP within EEA States would increase as a result of the operation of the London Resort, with more visitors attracted from outside Europe.

21.37 It was not considered at the scoping stage that the Proposed Development would give rise to significant transboundary effects on EEA States.

21.38 The screening of potential significant transboundary effects is an iterative process and continued to be reviewed as further assessment work became available. As was the case at the EIA scoping stage, the screening process continued to focus on the potential effects associated with traffic and transport, air quality and socio-economic considerations. The work also took into account the potential for effects on European protected habitats in other EEA States. This further work has confirmed that it is not considered that the Proposed Development would give rise to significant transboundary effects on EEA States.