

DARTFORD
BOROUGH COUNCIL



Ebbsfleet
DEVELOPMENT CORPORATION



Section 56

Relevant Representation

LONDON RESORT DCO

Planning Act 2008

Reference BC080001

Dartford Borough Council

Ebbsfleet Development Corporation

Kent County Council

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1. EXECUTIVE SUMMARY

- 1.1 This joint relevant representation is made by Dartford Borough Council (DBC), Ebbsfleet Development Corporation (EDC) and Kent County Council (KCC) (collectively "**the Authorities**") in relation to London Resort Company Holdings ("**LRCH**" or the "**Applicant**") application for a Development Consent Order (DCO) in relation to land within the Authorities administrative boundaries. DBC is a lower tier authority and District Council, Kent County Council is an upper tier authority. EDC is the development corporation established by the Secretary of State for Communities and Local Government by the Ebbsfleet Development Corporation (Area and Constitution) Order 2015. It's development management planning functions in relation to its administrative area were conferred upon it by the Ebbsfleet Development Corporation (Planning Functions Order 2015). All three bodies are consultees with important and relevant functions and expertise in relation to the proposed LRCH scheme and community representation.
- 1.2 The Authorities welcome the submission of the DCO application and the benefits which the scheme has the potential to bring to the area. The Authorities look forward to positively engaging with the Applicant, the examination process and with other participants in the process.
- 1.3 This response highlights, in summary form, the Authorities' work in progress assessment of the application proposals to date and matters identified so far. Ongoing assessment is being undertaken. Clearly, as is the case with any such assessment, the Relevant Representation focuses on areas where more information is needed or there are outstanding concerns and issues that need addressing. This is not to detract from the positive benefits of the proposals or the work undertaken to date but it is clearly very important that the development proposals come forward on a firm foundation with all required assessment undertaken and mitigation secured so the benefits of the scheme can be properly realised.
- 1.4 The Authorities' objective is to ensure future development does not result in unacceptable planning impacts on residents, businesses and the environment in the immediate area and the wider sub region and that any impacts are understood, mitigated, and managed to an acceptable level necessary for planning purposes.
- 1.5 This response also reflects the Authorities statutory responsibilities and other functions. Comments are submitted in summary form which will be further developed and detailed through Written Representations, the Local Impact Report, Statements of Common Ground, and other submissions to the examination as appropriate in due course.
- 1.6 The principle of the use of parameter plans, using "Rochdale Principles" (and that the development to ultimately come forward would be within those parameters), is well understood by the Authorities. This response is set in the context of this parameter based approach and its environmental assessment.
- 1.7 The Authorities recognise the contextual, regulatory, and forward operational framework within which the application will be considered. It is important to emphasise the proposed development is within the urban, residential, mixed use and infrastructure environment of north Kent. This area is already subject to significant growth pressures on strategic and local networks as well as community and environmental assets. The proposed development has a direct impact on Ebbsfleet Garden City, an area of nationally recognised ambition for growth, as well as other important national and strategic infrastructure assets such as HS1 and potentially the extension of Crossrail to Ebbsfleet.
- 1.8 The Authorities are seeking appropriate and reasonable provisions through the terms of the draft DCO and its requirements and development consent obligations. A key point to flag is that the Authorities, alongside the other relevant planning authorities as appropriate, will need to approve the detailed phasing, sub-phasing and associated mitigation measures relevant to each phase, in consultation with those statutory authorities with relevant functions. A "monitor and manage" approach to a number of "impact topics" will also be needed given (a) the flexible nature of the

proposals; and (b) importantly the lack of detail in assessment information accompanying the application.

- 1.9 The Authorities have been engaging with the Applicant on the terms of the draft DCO and on draft Heads of Terms for development consent obligations. These matters are ongoing, and positive dialogue is progressing, though needs accelerating.
- 1.10 In relation to technical assessment matters, despite the quantity of documentation submitted by the Applicant, the Authorities have identified that there remain important gaps in the assessments accompanying the application. The Authorities are mindful of the Examining Authority's duties under regulation 20 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, in certain circumstances, to require further environmental information. The Authorities are considering the need for further environmental information in the same way that it would were it the planning authority determining an application for EIA development under regulation 22 of the Town and Country Planning (Environment Impact Assessment) Regulations 2017 and will indicate what information constitutes a requirement for further environmental information. The Examining Authority will be asked to consider these matters carefully and to request further environmental information accordingly.
- 1.11 It should also be noted that a significant number of important assessments and detailed technical information have only been made available to the Authorities at the pre-examination stage of the DCO process (and not pre-application). Whilst the Authorities have been reviewing these documents, they are significant and extensive. More detailed comments will necessarily need to be made in due course through the Authorities' Written Representation and Local Impact Report.
- 1.12 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.
- 1.13 A summary of key initial points are highlighted in this Executive Summary below, with more detailed explanation set out in the subsequent sections of this Representation:

Initial Points in relation to Design, Master-Planning and Parameter Plans

- 1.14 There are several detailed design matters which need further consideration as well as the overall contextual approach to masterplan/design and parameter plan proposals. In summary, at present, the bulk, mass and relationships of buildings and structures that could be built as part of the scheme masterplan and within the suggested parameters is not considered acceptable in terms of impacts on the established townscape, landscape and protected local environments.
- 1.15 In a number of instances, the suggested parameter tolerances are too great in terms of building height and footprint margins to be reasonably and appropriately assessed. These need to be reviewed and lowered if an acceptable form of development is to be secured. The lower parameter tolerances across the site in turn need to be reconsidered and reassessed and the Environmental Statement (ES) updated. The Authorities wish to engage with the applicant positively to resolve these issues as far as possible prior to the DCO Examination hearings.
- 1.16 Key matters in relation to design matters include:
- (a) There is a need for a massing strategy that determines volume and impacts on street character of the A226.
 - (b) There is a need for a commitment to housing quality established in either the Design and Access Statement (DAS) (document reference 7.1) or the Design Code (document preference 7.2) in relation to the Staff Accommodation.
 - (c) There is a need for an analysis of the proposal's overall impact on the existing urban structure, including existing and proposed residential dwellings immediately adjacent to the site, and key reference points. This needs to include reference to the requirements of the Design for Ebbsfleet Character Guide.

- (d) There is a need to reduce significantly the heights of Hotel 4, the Foadarche and Gate 1 structures (see landscape below).
- (e) There is a need for an approach to reduce significantly the massing of the 13 storey car parking structures on the site so they will be assimilated more sensitively within the landscape.
- (f) The design proposals need to respond more appropriately to the Ebbsfleet River Valley as a key feature linear park that runs its entire length from the source under the A2, through to its termination within Northfleet Harbour in the north, to protect and enhance the habitats of the calciferous stream.
- (g) There needs to be provision of shared footpath/cycleway to the west of the access road under the A2260.
- (h) The illustrative masterplan, DAS and Design Code should be updated to show a decked solution over the proposed development's access road, for the section of the access road that runs between the A2260 and the Ebbsfleet International Station in order to allow for the successful delivery of the already planned Ebbsfleet Central scheme.
- (i) There is a need to integrate the ambitions of the Outline Sustainability Strategy into the DAS and Design Code. The integration is currently inadequate.

1.17 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Socio-Economic Impacts

1.18 In relation to the substantial positive effects identified in ES Chapter 7, they are welcome and strongly supported.

1.19 However, there are several major missed opportunities. There is little sense of London Resort being an integral part of Kent and the wider Thames Gateway. It needs to be positioned far more as a local/sub regional catalyst, signposting other attractions for visitors within the area, and positioning itself as being 'of' and 'for', rather than simply 'in' Kent.

1.20 The ES Chapter 7 does not take sufficient account of the scale, impact, and timescales of the London Resort in socio-economic terms. The proposals are a very significant development located in a constrained urban area, in a local/sub regional economy which is complicated with a tight labour market. It is recognised whilst London Resort undoubtedly will bring positive opportunities for the local area, many of its negative effects also need mitigating because of the scale of the impact locally and sub-regionally.

1.21 ES Chapter 7 considers various socio-economic effects. However, whilst the evidence base for what has been assessed has merit, the scope of the socio-economic assessment presented is overly narrow, distorting the reliability and utility of the assessment. The geographical area included in the Core Study Area is large and so the scale of effects is artificially and inappropriately diluted in assessment terms, with substantial negative effects downplayed. This is particularly important in the context of identified and understanding local impacts alongside specific proposals for mitigation.

1.22 In relation to the socio-economic effects identified within the ES Chapter 7, for the negative effects, two types of mitigation are proposed by the applicant: 'embedded' and 'additional'. However, in the main, the mitigations are high-level and imprecise. For example, the Authorities wish to work constructively with the Applicant to progress the relatively thin Outline Employment and Skills Strategy such that it provides genuine assurance that the skills and training benefits of the proposals are optimised and adverse effects appropriately mitigated.

- 1.23 There is a specific need to take more account of labour supply conditions, particularly in the context of labour supply, macro-economic uncertainty over the construction and operational phases of the development.
- 1.24 There is a particular concern in relation to the overly conceptualised treatment of displacement and negative effects in an overly simplistic manner. These matters are complicated and include many different facets which are not sufficiently tackled at present.
- 1.25 The Authorities initial points in relation to Human Health Impact Issues are at present confined only those aspects of ES Chapter 7 Land use and Socio-economic effects (APP-056) that have particular relevance to health issues. The Authorities have not yet reviewed Chapter 8 – Human Health (APP-057) or its appendices (APP-089, APP-090, APP-091 and APP-092), a review of which will follow in the Authorities Local Impact Report. ES Chapter 7 determines that healthcare provision, particularly GP provision, is constrained. Local A&E services are also falling short of national waiting time targets (Table 7.30). This is concerning given the scale of jobs and visitors associated with the London Resort. The evidence and the assessments in relation to the potential temporary effect of the construction workforce on local healthcare (construction phase) and the potential effect of workers and visitors on healthcare provision (operational phase) are subject to a degree of uncertainty due to a lack of clarity about the impact of Covid-19 and the timescales and deliverability of possible additional health provision in the future baseline.
- 1.26 As such, the assessment of health-related effects needs a commitment to monitor and review local healthcare provision and mitigation to ensure that adequate resources are made available to do so. Embedded mitigations referenced in ES Chapter 7 are uncertain. To some extent, the monitor and review process would serve to reassure the Authorities, however there will be a time lag associated with response. The Authorities will consider additional mitigations that will need to be secured through DCO Obligations.
- 1.27 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Employment and Skills Impacts

- 1.28 The Applicant has provided an Outline Employment and Skills Strategy (Document reference APP-086) as Appendix 7.7 to the ES Chapter 7 on Land Use and Socio-economics.
- 1.29 Given that the London Resort is a nationally significant project, the Applicant should be using the Employment and Skills Strategy (the Strategy) to set much more aspirational overall objectives, along with specific targets for the delivery of local employment, apprenticeships, work placements and engagement with schools, colleges, and training providers.
- 1.30 Given the significance of the anticipated changes to the labour market, it is surprising that the Strategy does not explain the implications of the scheme on the current balance of demand and supply for key skills in the labour market. The risk that the scheme could exacerbate existing skills shortages is a real one which requires further assessment by the Applicant.
- 1.31 The Strategy is very weak in its consideration of the scheme's potential to provide supply chain opportunities for local businesses, with only vague references to the anticipated supply chain benefits during the construction and operational phases. There is no reference to the potential to develop 'higher value' supply chain opportunities (e.g. in creative content) and no reference to the benefits that might accrue to London Resort from resilient local supply chains.
- 1.32 The Strategy does not explain what steps will be taken to help ensure that the employment and skills development opportunities created by the scheme will be made available to the most disadvantaged and/or under-represented groups places or communities. Without this targeting, the Strategy is unlikely to maximise the potential benefits on skills and training.
- 1.33 The Applicant's pledges are very short on specific commitments, either to the funding of skills and training or to the delivery of specific targets. The Strategy provides no details on the key

pledge to deliver the London Resort Academy, nor does it consider the range of alternative options that may be available to deliver skills training.

- 1.34 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Human Health Issues arising from ES Chapter 7 on Socio-economics

- 1.35 The summary highlights those aspects of ES Chapter 7 Land use and Socio-economic effects (APP-056) that have particular relevance to health issues. The note does not review Chapter 8 – Human Health (APP-057) or its appendices (APP-089, APP-090, APP-091 and APP-092), a review of which will follow in the Authorities Local Impact Report.

- 1.36 Overall, the evidence underpinning the effects assessed in Chapter 7 explicitly relates to health is high quality but is understandably narrow given that this is not the Human Health chapter. It is noted that wider issues such as mental health, encouraging healthy lifestyles, cohesion, and care of the community through community facilities, access to sufficient housing and inclusive design are discussed in ES Chapter 8 – Human Health para 7.73. ES Chapter 7 references the guidelines and best practice that it has considered in para 7.41-2.

- 1.37 ES Chapter 7 determines that healthcare provision, particularly GP provision, is constrained. Local A&E services are also falling short of national waiting time targets (Table 7.30). This is concerning given the scale of jobs and visitors associated with the London Resort. The evidence and the assessments in relation to the potential temporary effect of the construction workforce on local healthcare (construction phase) and the potential effect of workers and visitors on healthcare provision (operational phase) are subject to a degree of uncertainty due to a lack of clarity about the impact of COVID-19 (7.33) and the timescales and deliverability of possible additional health provision in the future baseline (7.78).

- 1.38 As such, the assessment of health-related effects needs a commitment to monitor and review local healthcare provision and a reassurance that adequate resources are available to do so.

- 1.39 Embedded mitigations referenced in ES Chapter 7 are uncertain. To some extent, the monitor and review process would serve to reassure the Authorities, however there will be a time lag associated with response. The Authorities consider additional mitigation will need to be secured through DCO Obligations.

Initial Points in relation to Land Transport the Local Road Network (LRN) and Transportation Impacts

- 1.40 The Authorities are concerned that fundamental baseline information appears to be missing from the Transport Assessment and associated documents. The Local Road Network (LRN) has not been appropriately assessed, with a lack of traffic distribution off the Strategic Road Network (SRN) and only one local junction being modelled.

- 1.41 An 8-9 AM and 5-6 PM peak hour weekday assessment has been provided, yet no assessment has been provided of;

- (a) The shoulder peaks which is relevant in this congested part of the network.
- (b) The Resort peak hour (interpeak), or
- (c) A weekend peak.

- 1.42 The Authorities do not currently consider the trip attraction and mode share information contained within the Transport Assessment to be sufficient to support a robust assessment. As such the Authorities are not currently able to agree with the conclusions of the Applicant's assessment of the effects to the local highway network. In the absence of evidence to the contrary, the

Authorities are concerned that the effects may be severe and that further information is required for assessment.

- 1.43 In relation to the Public Rights of Way (PRoW) network, further detail is required to understand implications of diversions and re-routing of the network on the site (particularly in relation to temporary closure of PRoWs during construction), the ambition to achieve high levels of pedestrian route penetration needs to be balanced against ecological sensitivities and the interface of pedestrian and cycle strategies needs to be clarified, as does the legal status of PRoW routes (in particular whether it is intended that KCC adopt any new or altered PRoW or other highway).

Initial Points in relation to River Transport Considerations

- 1.44 There are several matters concerning ferry services and patronage which the Authorities would like further clarification;
- (a) Understanding of work-force patterns and movement from South Essex/Thurrock and consideration of impacts on existing and construction related provision with the maintenance and management of the current service during the extended construction period particularly and the increased in vessel activity in the localised area.
 - (b) Understanding of proposed passenger facilities at Tilbury Landing Stage is needed and the integration with other ferry services between Gravesend and Tilbury. As it stands benefits to Kent (and South Essex) residents are not clearly articulated or well defined.
- 1.45 There are no details in the submission as how the proposed ferry service is to be managed, operated, and secured. Details are limited or missing as to how services will be maintained due to disruption for example. There could be significant and unexpected demands placed on alternative modes such as road, bus and rail creating a negative impact, when River services are not available.
- 1.46 A River Services Adverse Weather Plan is needed, which will need to consider how a combination of advanced information for visitors and the provision of alternative transport solutions could avoid an adverse and unexpected impact through demand on other public transport services and the highway network and affect modal shift patterns.
- 1.47 Further sensitivity testing is needed to determine potential impacts beyond the baseline transport mode shift commitments identified affecting other public transport modes is needed.

Initial Points in relation to Landscape and Visual Impacts

- 1.48 The assessment of the Rochdale Envelope parameters within the identified views highlights the vertical extent of the Kent Project Site but not scale or massing of the buildings or structures as provided within the Parameters. In the absence of such massing information, it is difficult to agree with the Applicant's assessment of the impacts to the assessed views. The scale and massing of the proposal needs to be more clearly stipulated through appropriate provision in the DAS and Design Code.
- 1.49 Chapter 11 of the ES states there would be significant effects from areas of Swanscombe along Galley Hill Road and Leonard Avenue, dwellings along the waterfront and western edge of Kent Project Site at Ingress Park, Riverside properties Greenhithe and waterfront dwellings at Grays on the northern bank of the Thames opposite the Kent Project Site. However, it is not clear how these impacts will be satisfactorily mitigated, further detail needs to be provided and measures secured or the impacts reduced.
- 1.50 Hotel 4 is set at a parameter height of 128m, almost twice the height of the other 3 hotels proposed. This has previously been raised as a concern, as the building is excessively tall compared to the remainder of the resort proposals and the surrounding context, resulting in visual harm. The height of this building needs to be significantly reduced.

- 1.51 Foadarche in the arrivals plaza is a 130m tall structure. The 130m height proposed is considered to be excessively and unjustifiably tall within an open landscape and adversely increases the already substantial visual envelope of the proposal and further exacerbated by illumination of the structure. The structure negatively impacts on the setting of Grade II* All Saints Church and on the skyline of views from Swanscombe Heritage Park. The height of this structure needs to be significantly reduced.
- 1.52 In relation to the Broadness Marsh and Black Duck Marsh interfaces with the Resort, a consistent approach throughout the documents to these key interfaces is required to ensure a reasonable level of screening is achieved.
- 1.53 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings.

Initial Points in relation to Ecology and Biodiversity Impacts

- 1.54 In general, there is insufficient survey data on baseline habitat and species across the application site and area of influence. The impacts of the proposed development, identified harm and in turn required mitigation is, therefore, not fully understood.
- 1.55 Concern is raised as to how the 'importance' of certain habitat and species, for example the recent Swanscombe Peninsula SSSI designation has not been considered by the ES. The ES needs to be updated to take account of this and move certain designations from 'local interest' to 'national interest' – mitigation measures will need to take account of this change.
- 1.56 The likely significance of works to the River Thames sea defences on winter bird assemblages have not been properly considered. The ecological impacts of the defences cannot be clearly understood. Additional hydrology and ecology assessment to be undertaken to identify impacts.
- 1.57 Clarification is required on areas of habitat loss, on site habitat creation and enhancement and off site mitigation. Further clarity is required in relation to the Applicant's proposed and substantial (160ha to 210ha) off-site mitigation. This has knock-on effects to the reliability of the Applicant's Biodiversity Net Gain assessment.
- 1.58 An assessment of present recreational impacts to ecology and that of the proposed development has not been undertaken to properly understand impacts on the site.
- 1.59 The loss of 47% of the existing habitat will result in significantly greater pressure on the retained habitat to accommodate the diversity of species found across the site. The management of the retained habitat to provide for this multi-species diversity needs to be considered holistically and clearly defined.
- 1.60 The air quality impacts on ecology are considered under Air Quality below and are significant.
- 1.61 The water and drainage impacts on ecology are considered under water resources below and are significant.
- 1.62 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings make progress ahead of the Local Impact Report.

Initial Points in relation to Heritage and Archaeology Impacts

- 1.63 The application site lies in an area which contains nationally important historic environment remains from almost all periods of human history. In general, the historic environment assessment and archaeological field evaluation is insufficient which means it is not possible to understand the significance of heritage assets within the Kent part of the application site and the impact of the proposals upon them. Further evaluation should be undertaken before the end of the Examination period. Specific concern is raised in relation to;

- (a) Impact on Swanscombe Peninsula SSSI and Bakers Hole Scheduled Ancient Monument and adjacent non-designated archaeological remains from the main access road and light transit route ('people mover') – internationally important Palaeolithic archaeological remains and Pleistocene geological remains are present.
- (b) Designated and non-designated Neolithic remains adjacent to the River Ebbsfleet – Historic England will lead on advice in this respect.
- (c) Industrial heritage assets in general have not been sufficiently well assessed or evaluated.
- (d) Buried archaeological remains within alluvial deposits on Swanscombe peninsula – archaeological field evaluation has not yet been undertaken.
- (e) Marine and intertidal heritage assets – assessment has been based on desk-based assessment – field evaluation is required to determine significance.
- (f) Further assessment is required for the historic built environment including assessment of the impact of the proposals on the setting of heritage assets.
- (g) The impact on Roman remains adjacent to designated site of Springhead – should be assessed further and preservation in situ should be provided for where appropriate; full archaeological excavation may be considered acceptable in some areas.

1.64 Historic Landscape Characterisation (HLC), by Wessex Archaeology is welcomed, however, the evidence of the historic assets present and the conclusions drawn in relation to impacts arising are not balanced and should be reviewed.

1.65 The definition of a "landscape" should be considered; the significance of the historic landscape is not solely concerned with what one can physically see. There is a lack of consideration of the significance of, and impacts to, the surviving areas of open salt marsh, creeks and foreshore from the increased proximity of proposed development on the majority of the Peninsula to the south.

1.66 Aspects of the site's heritage should inform the DAS and Design Code, providing a design language with a clear connection to the industrial and earlier heritage of the area, which should provide the stimulus and inspiration for the themes of art, education and exploration of the wider site. The Authorities wish to work positively with the Applicant with a view to agreeing appropriate amendments to the DAS and Design Code that would embed appropriate reference to the site's extensive cultural heritage.

1.67 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Noise and Vibration Impacts

1.68 The duration of potential construction activity operations and vehicle traffic movements and exposure should be considered in the determination of impacts and may result in some impacts currently assessed as 'Negligible' to be increased in significance.

1.69 By relying solely on an assessment methodology that uses dB change only, the context of absolute traffic noise levels is not considered. This would be required for evaluating the efficacy of different mitigation options.

1.70 The assessment in Environmental Statement Chapter 15 considers noise from rides and attractions, fixed plant, and external events. However no operational noise mitigation measures are included in Environmental Statement Chapter 22 and it is not clear how such "embedded mitigation" is secured in a way that can be relied upon in the assessment.

- 1.71 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Air Quality Impacts

- 1.72 The main potential effects on air quality arising from the construction phase of the Proposed Development are dust deposition and elevated particulate matter concentrations associated with the construction activities. The assessment determined that the impacts will not be significant assuming appropriate mitigation will be put in place.
- 1.73 In the operational phase no significant impacts have been identified on existing or proposed human receptors as a result of traffic and energy centre emissions during the operation of the proposed development. This is based on the transport assessments submitted as noted above the Authorities consider that further Transport Assessment should be carried out on the local roads.
- 1.74 However, there is a degree of uncertainty associated with the verification process undertaken as part of the dispersion modelling which may have led to the traffic impacts associated with both the construction and operational phases being understated, especially in relation to the local highway network. Clarification is sought with regards to the number of monitoring sites applied and the overall methodology used for the verification process.
- 1.75 No significant impacts have been identified by the Applicant in terms of vessel emissions. However, further clarity is sought over the extent of which the vessel movements will change between the construction and operational periods when compared to the baseline. Specifically, further information on emissions from the cruise liner which is proposed as static accommodation for the construction workers on the scheme is sought. The operational impacts associated with vessel emissions may have been understated and more information is required to fully assess the impact.
- 1.76 The operational phase impacts in relation to ecological receptors show that the contribution from the proposed development is predicted to exceed 1% of the minimum critical load for nitrogen deposition at the following ecological sites: Coombegreen Wood, Darenth Wood, Parkhill Wood, Ebbsfleet Marsh and The Thrift. For the ambient NO_x critical level, the contribution from the Proposed Development is predicted to exceed 1% of the critical level at the following ecological sites: Ebbsfleet Marsh, Darenth Wood, The Thrift, Coombegreen Wood, Parkhill Wood, Rams Wood, Disused Hospital, Cobham Hall Wood, Hobbs Hole and, Jackson Wood. The exceedances of 1% has the potential to adversely affect sensitive species at these sites and additional clarity is required from the ecological project consultant to determine the impact fully.
- 1.77 With regards to human receptors, as no significant impacts have been identified during the proposed development's operation, there is not currently a need for mitigation to be applied. However, this is pending the evaluation of the verification process to ensure the robustness of the model.
- 1.78 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Water Resources and Flooding Impacts

- 1.79 The design approach as presented in Chapter 4.7 of the Surface Water Drainage Strategy has been agreed with the Applicant including unattenuated discharge rate and consideration of surcharged outfall. The level of detail provided for the scheme however is insufficient to assess the basis for discharge rates calculations, impacts in relation to level information or attenuation volumes which may be required to be included within the development. The information presented is not sufficient to give a clear plan of drainage elements which will be constructed and there are concerns as to the remaining marsh land will be able to accommodate the volumes of surface water drainage.

- 1.80 There are significant concerns as to the feasibility of the marsh operation with a single discharge point accepting flows which have increased by a factor of 4. It is proposed to provide scour protection, but consideration will also need to be given to direction of water movement and the risks of short-cutting with possible ecological impacts. Though drainage surveys have been undertaken, it is clearly stated there is lack of knowledge of the outfalls from both Black Duck and Botany Marsh (page 128 of the Surface Water Drainage Strategy). This information would better inform how surface water will be managed in discharging from the marsh.
- 1.81 It is stated that during extreme tidal events the extents and depths of flooding to Botany Marsh will increase but that the design will ensure there is enough capacity to accommodate additional water volumes from flooding contributions and the new development (paragraph 4.31). No detail is provided to demonstrate how this will be accommodated with a significant reduction in marsh area with infilling. The calculations of water depth increases relates only to the contribution from the increased development area and does not appear to include any flood contribution.
- 1.82 The site area is traversed by a number of ordinary watercourses. The drainage strategy does not include any reference to modifications required to these local drainage systems.
- 1.83 The Surface Water Drainage Strategy does not include any information pertaining to development phasing and associated temporary drainage provision or infrastructure phasing. There is no certainty that surface water or pollution will be managed appropriately during the construction phase(s), and flood risk will not be exacerbated within the local area.
- 1.84 Water resources current targets are considered to be too generic and not in line with current industry practice. "A minimum target reduction of 25% from business-as-usual standard demands has been targeted" ES Chapter 17 (APP-066) – 17.325, however this is not typology specific and cannot be assessed and validated.
- 1.85 The commitments around water reuse are currently poorly formulated, piecemeal and unambitious. A clear approach and further detail regarding the potential use of treated sewage effluent to meet non-potable demands across the site is missing. The opportunity of a holistic site-wide approach to the treatment and subsequent reuse of water must be assessed and compared to the building-by-building approach to grey-water reuse described in the Design Codes. The level of commitment and information currently provided is not considered sufficient to justify the reduction of impact on the water supply network (a receptor of high sensitivity given the predicted growing deficit in supply and demand) from major to minor adverse.
- 1.86 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Materials and Waste Impacts

- 1.87 The proposed development is expected to generate a substantial amount of construction, demolition, and excavation waste during the construction phase, with ongoing generation of commercial waste during operation.
- 1.88 Paragraph 19.125 (APP-068) states that construction waste estimates exclude waste from Gates 1 and 2 due to lack of detail in the DCO application and it is suggested that a focus on off-site prefabrication means minimal waste will be generated. The lack of detail within the DCO application is not a valid reason for excluding construction waste estimates from the Environmental Statement, analysis from similar scale entertainment-type destinations should be used to provide an estimate of construction waste volumes.
- 1.89 Even with mitigation, the development will generate substantial quantities of waste requiring management off-site including disposal to Kent landfills, using the voids-pace at a quicker rate than that assessed in preparation of the recently adopted Kent Minerals & Waste Local Plan (KMWLP) and the rate of depletion of Kent inert landfills appears to have been under-estimated in the ES.

- 1.90 There would also be ongoing requirement for processing waste higher up the waste hierarchy (recycling and other recovery) of waste at facilities in Kent (and also London, Essex and potentially further afield e.g. for hazardous waste). This has not been explicitly assessed or quantified in the Environmental Statement.
- 1.91 It is essential that the proposed mitigation measures identified to reduce the amount of waste generated and exported from the site for management and for disposal (including potentially to Kent) are implemented, including through on-site waste treatment and management capacity.
- 1.92 The assumptions about the waste that will be generated, and the success of the proposed mitigation measures, are critical and will need to be monitored as the project progresses to ensure that they are realistic, and the potential implications for waste management.
- 1.93 Excavation waste is the largest component and amount, and the statement in the documentation that the amount (40%) to be used on-site being 'conservative' is not transparent and a 'worst case' could well be that a larger amount will require off-site disposal, likely to be in Kent. The priority, in line with the waste hierarchy, should be to make beneficial use of as much of this material as possible, and to minimise reliance on landfill.
- 1.94 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Sustainability Matters

Outline Sustainability Strategy

- 1.95 The Outline Sustainability Strategy recognises the Climate Emergency declared by the UK Government in May 2019 and the need to achieve net zero carbon by 2050.
- 1.96 As it stands the Authorities have concerns with the overall approach taken to assess and evaluate the significance of the Proposed Development's GHG emissions.
- 1.97 The Applicant's approach results in both a substantial underestimation of the scale of the project's lifecycle GHG emissions and the magnitude of impact and its overall significance.
- (a) In the Authorities view targets used as criteria for evaluating the 'magnitude of impact' should be expressed on an absolute basis (as against relative to 'business as usual'), in line with best practice industry guidance available and revised as appropriate throughout design of the development.
 - (b) In terms of operational transport emissions these represent 2,605,170 tCO₂e over the lifecycle, i.e. comprise the vast majority of operational emissions in excess of 70% (see Table 20.15, considering the total emissions excl. land use change emissions). Of these, 68% are attributed to private car travel (Table 20.15).
 - (c) For this highest contributing GHG emission source as currently identified, the Applicant has put forward no binding or absolute targets of performance that could be supported by mitigation.
 - (d) A commitment to net zero carbon does not guarantee a good level of performance. Specific absolute targets need to be included to ensure the Energy Hierarchy is implemented and the development adheres to high energy efficiency standards.
 - (e) The Energy Strategy (APP-069) paragraph 7.10 suggests that the proposal targets a 35% reduction of regulated emissions over Part L 2013. No further on-site carbon reduction targets are presented for the remaining 65% of the regulated emissions and for 100% of the unregulated emissions.

- (f) The Energy Strategy (APP-069) lacks feasibility studies for off-site renewable energy generation with private wire connection to the site, including off-shore wind, off-site PV arrays and others.
- (g) As it stands this on-site carbon reduction target is not considered to be consistent with industry best practice and is not considered sufficient to meet the ambitions of the project's Outline Sustainability Strategy and commitments made by the Applicant.
- (h) The embodied carbon assessment excludes the assessment of a number of significant contributors including construction materials for Gates 1 and 2, highways works and utilities infrastructure and civil works, and potential releases of ground gases from land remediation work and terrain remodelling. Therefore, this aspect of the life-cycle carbon footprint is thought to be severely underestimated. Given that even with this underestimate, the embodied carbon emissions are 1.5 times greater than the 60-year operational carbon emissions, the proposed 10% reduction in embodied carbon is considered inadequate.

- 1.98 Importantly APP-055 ES Chapter 6 paragraph 6.23 states: "The EIA has not assessed decommissioning because the London Resort is intended to be a permanent development and consideration for decommissioning at this stage would be too hypothetical to be meaningful." Whilst it is recognised that there is difficulty in defining end of life for long term assets such as infrastructure and buildings, end-of-life considerations are fundamental to achieving a Circular Economy. The Authorities consider the applicant based on their experience and knowledge should be able to assess this significant consideration and its magnitude.
- 1.99 The Authorities have recognised the UK climate emergency, there is commitment to reducing the county's greenhouse gas emissions to Net Zero by 2050. The *Kent and Medway Energy and Low Emissions Strategy* was published in July 2020 and sets out how the County Council, in partnership with Medway Council and the Kent district councils, will respond to the UK climate emergency and drive clean, resilient economic recovery across the county. The *Climate Change Risk and Impact Assessment for Kent and Medway* describes the changes Kent is likely to face and the potential risks to society, economy and environment.
- 1.100 Research undertaken by the Tyndall Centre for Climate Change Research, based at the University of Manchester indicates that combined greenhouse gas emissions emitted from Kent and Medway must fall by 13.3% a year to meet Paris Agreement targets, with 80% of emissions reduced by 2030.
- 1.101 The London Resort has the potential to significantly increase the county's emissions. It will have a significant negative impact on the environment and the County and UK's ability to meet their climate change targets, if construction, operations and end of life impacts are not adequately mitigated.

Carbon offset

- 1.102 The proposal does not commit to a maximum percentage of carbon offset by means of carbon offsetting certificates. This is important as a Sustainability Strategy that relies on carbon offsetting of a large proportion of the associated emissions by means of offsetting certificates instead of prioritising carbon reductions through the application of the energy hierarchy is not considered robust or in line with best practise and to meet the high-level ambition of its Sustainability Strategy.

Climate resilience

- 1.103 The approach in assessing climate resilience and evaluating climate change risks is simplistic for a project of this scale, complexity, and timescale. Consequences expected for the different risks should be assessed using IEMA Guide, 2020, Chapter 7, Step 3.
- 1.104 The Authorities would expect to see a commitment for developing a comprehensive Climate Change Resilience and Adaptation Plan post-approval in line with Step 6 of the IEMA Guidance

(Chapters 10 & 11) and would also expect a commitment for Monitoring and Adaptive Management in line with Step 7 of the IEMA Guidance (Chapter 12).

- 1.105 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

Initial Points in relation to Lighting Impacts

- 1.106 The site is currently unlit and there is proposed to be a significant amount of lighting installed as part of the development, this will be a significant change from baseline.
- 1.107 There are sensitive ecological receptors surrounding the site which have the potential to be habitats of light sensitive species and be affected by light spill from the development. Mitigation measures need to be developed in this respect and secured.
- 1.108 The lighting has been designed to minimise environmental impacts as far as possible using low-level lighting and lighting with zero upward light spill. There are several sensitive night-time viewpoints which have been determined to be negatively affected because of the development and mitigation needs to be developed in this respect and secured.
- 1.109 The Authorities wish to work constructively with the applicant to address these matters as far as possible prior to Examination hearings and make progress ahead of the Local Impact Report.

2. DETAILED MATTERS FOR CONSIDERATION BY THE EXAMINING AUTHORITY

- 2.1 The Authorities have jointly undertaken a critical review of the application documents to understand if the assessments for a number of important topic areas have been undertaken in a robust manner. To assist the Examining Authority (once appointed) the Authorities have sought to complete as much of the review as is practicable within the time and resources available to them. However, the Authorities anticipate more detailed comments will be included in its Local Impact Report and Written Representation in due course. The Authorities have sought to be as constructive as possible in undertaking the review.
- 2.2 The topics below broadly follow the chapter order of the Applicant's Environmental Statement. The Authorities' reviews have considered if the environmental information provided is adequate to assess the baseline position of the site and in turn if the methodology applied and technical information provided is appropriate and reasonable in its testing of both construction and operational environmental impacts.
- 2.3 Where adverse effects from the proposed development have been identified a review of the mitigation measures proposed by the Applicant has been undertaken to understand if these are necessary, appropriate, and sufficient to overcome the impacts identified.
- 2.4 It is the Authorities' intention to work positively with the Applicant to ensure the proposal mitigates its impacts satisfactorily, is sustainable and meets the needs of those residents, businesses and communities who live and will live close by.

3. DESIGN AND PARAMETER PLANS

- 3.1 This part of the Authorities' relevant representation reflects the results of the Authorities initial evaluation of matters relating to Design and the Parameters of the authorised development. The Authorities acknowledge and understand the Applicant's desire to retain a degree of flexibility to allow for a detailed design to emerge from the parameters sought in its application for development consent. However, appropriate safeguards must be included to ensure that the development that comes forward meets an appropriate high standard of design and does not harm the existing community which is in close proximity. The Authorities welcome the Applicant's commitment to preparing a Design Code to regulate the form of the authorised development as it comes forward. This is a widely accepted approach to balance the competing requirements of design flexibility and good design and further work on the Design Code is sought.

- 3.2 The Authorities are, however, concerned that the requirements (see requirement 3(1) in Schedule 2) to the Applicant's draft DCO (APP-027) do not provide local planning authority approval of the detail of the scheme's design as would typically be the case for a large outline planning application and which would ensure that appropriate consideration is accorded to matters of good design.
- 3.3 The Applicant's draft requirement only requires relevant planning authority approval where the Applicant proposes to depart from the design set out in the DAS and the Design Code. The Authorities are suggesting a more appropriate form of approval process as would be expected in relation to an equivalent outline planning application.
- 3.4 Whilst supportive of the overall approach of regulating the detailed design through a Design Code; the Authorities have some concerns with the contents of the DAS (APP-136 and APP137) and Design Code (APP-438 and APP-439) as are outlined in the remainder of this section.
- 3.5 The Authorities and the Applicant are engaged in positive discussions in relation to these matters and the Authorities are optimistic that many of the issues can be satisfactorily addressed through agreed amendments to the appropriate documents.
- 3.6 The parameters and the setting out for the works numbers include the ground floor level. However, no details have been provided of the existing levels in order for the Authorities to understand the impacts and changes to ground levels are not clear.
- 3.7 Sections BCO800001 (document ref 2.4 rev 0) are at a large scale so (1:2500 at A1) which given the scale of the proposed development does not show clear detail of proposed ground levels or relationships with the existing buildings, which include residential dwellings. In addition, the sections shown 01-10 avoid residential dwellings within Ingress Park (between section 01 and 02) and do not take account of the planning permission granted for residential development south of Tiltman Avenue (between sections 02 and 03). All adjacent to works 9b and works 2. The relationship of works 14b to the residential dwellings and listed building to the west is not shown by sections 06 or 07 due to their direction and position. Works number 14d is not shown in relationship to the dwellings to the west due to the direction of section 08 and the scale of the drawings.

Design Code – Gate 1 back of house (character area)

- 3.8 Section 14.1 of the Design Code (document references APP-438 and APP-439) sets out the design principles for the Gate 1 back of house works (Work No. 9a). The maximum heights established by the Parameters Plans (APP-024) of 25-30m AOD across the majority of the numbered works would allow for a building of up to 7-8 storeys, which at this height, would be incongruous and severely impactful upon the character of buildings along the A226, which includes two storey housing predominantly along the south side.
- 3.9 There is also a strip that has a 50m AOD upper limit which is a source of additional concern, though further clarification will be sought from the Applicant.
- 3.10 The ground levels across the application site and how they interface with the adjoining environment needs to be assessed to better understand impacts.

Design Code – Gate 2 back of house (character area)

- 3.11 Section 14.2 of the Design Code (document references APP-438 and APP-439) sets out the design principles for the Gate 2 back of house works (Work No. 9b). This shows at 14.2.4 a main access to the Back of House through Tiltman Avenue. Although 14.2.4.2 states that any vehicle access to the back of house will be controlled and security screened, there is no detail in the DCO requirements of how this will be controlled. This access has not been assessed within the Transport Assessment and does not appear to have been referred to. The maximum heights established by the Parameter Plans (APP-024) of 25.00AOD with a ground floor level of +9.00m AOD. The adjacent residential levels are approximately 7.20m AOD and this needs further assessment and analysis in terms of impact and mitigation.

Design Code: Sports Ground Back of House

- 3.12 Section 14.4 of the Design Code (document references APP-438 and APP-439) sets out the design principles for the Sports Ground back of house works (Work No. 14b). This part of the site lies adjacent to residential development and a listed building to the west which are set on top of the cliff. No levels are given of the existing dwellings or the ground level of the existing “sports ground” set at the lower level in a former quarry. The maximum heights established by the Parameter Plans (APP-024) of 35.00 AOD with a ground floor level of +7.00m AOD. The Authorities seek clarity on the relationships of proposed works 14B to the adjacent residential dwellings and listed building.

Design Code: Bamber Pit Back of House

- 3.13 Section 14.5 of the Design Code (document references APP-438 and APP-439) sets out the design principles for the Bamber Pit back of house works (Work No. 14d). Residential development lies to the west of the site, although set at a high level on top of the cliff. No levels are given of the existing dwellings or the ground level of the existing Bamber Pit. The maximum heights established by the Parameter Plans (APP-024) of 35.00 AOD with a ground floor level of +6.00m AOD. The Authorities seek clarity on the relationships of proposed works 14d to the adjacent residential dwellings and listed building.

DAS / Design Code – Staff accommodation (housing quality)

- 3.14 There is no commitment to housing quality established in either the DAS (document references APP-436 and APP-437) or the Design Code (document references 7.2 APP-438 and APP-439), see in particular section 16 of the Design Code. The staff accommodation lies within the Borough of Dartford and the Authorities are committed to ensure all new residential development is well designed not only to provide a good standard of accommodation but also to enrich quality of life. The adopted Dartford Development Policies Plan requires dwellings to meet National Standards, to provide accessible accommodation, and adequate amenity spaces. Other policies seek to ensure good design and the good residential amenity, addressing issues such as overlooking, overshadowing, loss of light and noise disturbance.
- 3.15 The Authorities also wish to work with the Applicant to update the Design Code to ensure all housing meets the following design criteria to ensure the health and wellbeing of residents:
- (a) All dwellings should meet the Nationally Described Space Standards.
 - (b) All dwellings should include a private outdoor space that meets the standards set out in the emerging Dartford Local Plan (currently pre-submission document February 2021).

DAS / Design Code Staff accommodation (housing mix)

- 3.16 The proposed housing types and corresponding block structures proposed for the staff accommodation works within the DAS (document references APP-436 and APP-437) and the Design Code (document references APP-438 and APP-439) as well as the illustrative masterplan would appear to be relatively homogeneous, which will impact on the range of employees able to live on site.
- 3.17 The Authorities are unclear from the submission what need the proposed staff accommodation is meeting. Without this information it is difficult to assess the appropriate need of the submission. At present, the accommodation illustrated appears to be providing flats and shared accommodation, (houses in multiple occupation). This does not provide the range of house types which are likely to be required. An appropriate mechanism to secure an appropriately diverse range of accommodation ought to be reflected in the Design Code or other appropriate legal mechanism.

DAS / Design Code – Staff accommodation (inclusive design)

- 3.18 Section 16.1 of the Design Code (document references APP-438 and APP-439) does not establish any commitment to the provision of M4 Part 2 residences (lifetime homes), which is not aligned with Dartford Local Plan policy DP8. The Authorities recommend that the Design Code is updated to require all residences to be M4 Part 2 compliant, on the basis that the accommodation as current shown is apartment led, requiring lift access, which would make M4 Part 2 compliance considerably easier to achieve. There should also be provision of M4(3) wheelchair adaptable dwellings provided within the site as required by Policy DP8 of the Dartford Development Policies Plan.

DAS / Design Code – Staff accommodation (masterplanning strategy)

- 3.19 Section 16.1 of the Design Code (document references APP-438 and APP-439) and section 6.27 of chapter 6 of the DAS (document reference APP-436 and APP-437) both fail to establish a sufficiently detailed vision or a comprehensive set of design parameters to inform the masterplanning of the residential accommodation to an acceptable quality.
- 3.20 The Authorities recommend the DAS is updated to include a detailed Opportunities and constraints assessment of the housing site.
- 3.21 The DAS should then set out how the analysis of the site opportunities and constraints, together with how appropriate regard to the Detailed Design Guidance published by Ebbsfleet Development Corporation, has informed a master planning strategy. This master planning strategy should then be illustrated using diagrams within the Design Code to show how the following design challenges presented by the proposed development have been resolved:-
- (a) Negative impact of overshadowing of a large number of dwellings by the cliffs to the south and west, as well as the overshadowing by the blocks themselves, negatively impacting the quality of daylighting and solar access to habitable rooms.
 - (b) Negative impact of overshadowing from cliffs and blocks on the outdoor spaces and public realm, severely undermining the quality of these outdoor spaces for much of the day/year.
 - (c) Negative impact of poor levels of privacy within dwellings due to insufficient separation distance between blocks causing chronic issues of overlooking.
 - (d) The proportional relationship and level of enclosure established by the height of blocks and the scale of open spaces between them is excessive, leading to a perception of apartment blocks towering over outdoor spaces and public realm, creating an oppressive and problematic character and sense of identity for the neighbourhood.
 - (e) Absence of a defined street hierarchy, character areas or public realm network will undermine the sense of address and the formation of an identity for residents within individual blocks.
 - (f) Absence of a parking strategy is problematic, and a transport strategy needs to be developed specifically for the staff accommodation site.
- 3.22 The Authorities recommend using the Design for Ebbsfleet character guide to develop this approach and ensure the urban structure provides a clear street hierarchy, legible movement framework, and a characterisation of the site to support a positive built form. This will also ensure there is some consistency of approach across the area beyond the Order limits as Ebbsfleet Garden City and other planned development is brought forward.

DAS / Design Code – Staff accommodation (loop road)

- 3.23 Section 16.1 of the Design Code establishes the principle of a loop road around the perimeter of the staff accommodation. This is an inefficient approach as it wastes valuable land that could be

better used for outdoor space and parks. The Authorities recommend retaining the southern section of the loop road to the south of the site within the area likely to be heavily overshadowed by the cliffs, and avoid the need for loop to the north of site, and promote walking and cycling connections to the north instead through a landscape parkland. These measures should be reflected in the Design Code.

DAS / Design Code – Route from Ebbsfleet International to London Resort

- 3.24 The route between Ebbsfleet International Station and the proposed London Resort will pass through a relatively inactive part of the local area, this will have a significant impact on the perceived safety and security of pedestrians and cyclists using the route. Active and passive surveillance are required along the length of the route between Ebbsfleet International Station and the entrance plaza to deliver a safe and attractive environment.
- 3.25 The DAS and Design Code should be reviewed to locate active uses along the route, potentially within the Sports Ground Back of House Works site, and the Bamber Pit back of house site, to add activity and passive surveillance onto the route.

DAS / Design Code – London Resort Car Parks (Work No.3a)

- 3.26 Section 13.1 of the Design Code (document reference APP-142) discusses the London Resort Car Parks (Work No.3a). The Design Code and Parameter Plans (APP-024) only re-iterate the size of the developable envelope expressed through the Parameters Plan. This is insufficient to mitigate the visual impact of the scale of the parking structures.
- 3.27 The Parameter Plans allow for blocks of up to 13 storeys (55m AOD) in height. The illustrative masterplan and scheme show three no. 13 storeys blocks for the parking structures, which would make the blocks dominant within the local landscape and setting. In effect it would authorise a box with a maximum height of 52m above ground level with no other measures within the Design Code to address the impact of its massing.
- 3.28 The Authorities wish to work with the Applicant to update the DAS and Design Code to identify an approach to the massing of the parking structure that will assimilate their mass/scale and silhouette more sensitively within the landscape, and develop a clear design strategy for the articulation, materiality and detailing of facades that can be clearly defined within the Design Code.

Design Code Ebbsfleet Multi Storey Car park (Work No.23)

- 3.29 Section 13.2 of the Design Code (document reference APP-438 and APP-439) sets out the location for 5500 spaces within a single parking structure within the Northfleet Rise area of Ebbsfleet Central (a development with an extant planning permission). This will have a hugely detrimental impact on the number of vehicle movements/congestion through the consented major Ebbsfleet Central development around the area of Ebbsfleet International Station, causing particularly significant pressures on the junction of the B2660 and the Thames Way at peak times.
- 3.30 This directly conflicts with a best practice distributed parking strategy for Ebbsfleet Central, which would aim to distribute parking across multiple car parks structures that are located so as to balance pedestrian proximity to Ebbsfleet International Station with vehicular accessibility to the A2, to minimise vehicle movements through the Ebbsfleet Central Area. A distributed approach would reduce congestion on the strategic road network within Ebbsfleet Central, reduce associated noise and pollution (air and water quality), enhance pedestrian and cyclist safety, and also make it easier to accommodate the parking structures within the built form.
- 3.31 The Authorities also consider that the car parking structure could prejudice the objectives to create a pedestrian link between Northfleet Station and Ebbsfleet International Station. This link provides connection between the North Kent Line train service and the Ebbsfleet international services and HS1. The pedestrian link is also critical to the successful delivery of a Crossrail extension to Ebbsfleet as Crossrail trains would have to stop at Northfleet.

- 3.32 We recommend reviewing the location of the parking structure, with preferably two or more locations that achieve a greater balance in proximity between the station and the A2, to reduce vehicle movements through Ebbsfleet Central and the Thames Way junction specifically.

Design Code/Public Art

- 3.33 The Authorities support the principles established in the Public Arts Strategy section 5.11 of the DAS (document reference APP-436 and APP-437), and particularly the proposal for an Arts Panel to advise on procurement and design. This commitment should also be reflected and appropriately integrated throughout the Design Code.

Design Code/Routes and Roads

- 3.34 Access Road: Para 17.1.4.1 of Design Code (document reference APP-438 and APP-439) show a road cross section with no central planted reservation, which creates an excessive width of hard surfacing. The Authorities recommend exploring opportunities to incorporate planting where possible within the central reservation and the process for securing this should be reflected in the Design Code.

Design Code / Routes and roads (Type A) (Type I)

- 3.35 Para 17.1.4.1 of the Design Code APP-439 (document reference 7.2) discusses “Type A Routes” which are understood to refer to pedestrian and cycle routes at ground level. The minimum 2-way cycle track width for general cycle tracks (i.e. non-leisure cycle tracks) within Ebbsfleet is 3m, which should be segregated as shown from the footpath which has a minimum width of 2m, which would establish a minimum combined width of 5m. These design specifications should be reflected in the Design Code.

Design Code / Routes and roads (Type F)

- 3.36 Para 17.1.9.1 of Design Code APP- 439 (document reference 7.2) discusses “Type F Routes”, these are understood to be roads intended primarily for motor vehicles. The Authorities recommend the Design Code should be updating to include structural planting with a minimum height of 1m or greater along the access road to screen the carriageway surfacing, and align with the Ebbsfleet Public Realm Strategy design specification for tier 1 streets.

Access Road (Work No. 11)

- 3.37 The Ebbsfleet Implementation Framework identified the Ebbsfleet River Valley as a linear park that runs its entire length from the source under the A2, through to its termination within Northfleet Harbour in the north, to protect and enhance the habitats of the calciferous stream. To support this approach, the consented planning permission for Ebbsfleet Central development focuses development away from the River corridor in the southern areas of the site to the south of the A2660, to balance the intensity of urban development and the associated impact on the River corridor as it passes through Northfleet Rise. This southern area of the River corridor is planned to be a naturalised landscape character, to promote biodiversity. This approach has been incorporated into the Ebbsfleet Implementation Framework following discussions with the Environment Agency.
- 3.38 The alignment of the Access Road as currently proposed would therefore have a significant impact on this southern area of the Ebbsfleet River Park. The Access Road would firstly impinge on access to the park from the consented Station Quarters North and South development, but more importantly, a surface-level based access road would compromise the landscape character, ecology, water systems, air and water quality, and the general visual amenity of the park itself in this southern half of the park.
- 3.39 The Authorities recommend that the DAS, Design Code and Landscape Strategy are updated to provide a land bridge across the Access Road within the Station Quarter South area of Ebbsfleet Central, with a minimum width of 25m, to provide a critical unimpeded connection for pedestrians, cyclists and wildlife that will mitigate the severance caused by the proposed Access Road.

- 3.40 The Authorities also recommend that the DAS, Design Code and Landscape Strategy are updated to include provision for a shared footpath / cycleway to be provided to the west of the Access Road as it passes through the tunnel under the A2260, to enhance connectivity between Station Quarters North and South, and mitigate the severance caused by the Access Road.
- 3.41 The alignment of a surface-level access road through the heart of the Ebbsfleet Central development area conflicts directly with the Ebbsfleet Implementation Framework, compromising the quality of that proposed development, and will cause the following negative impacts on the design quality of Ebbsfleet Central:
- (a) Sever connectivity between the eastern and western halves of the Ebbsfleet Central development area.
 - (b) Compromise the coherent and contextual nature of development parcels in urban design terms.
 - (c) Reduce the walkability and significantly compromise the quality of pedestrian experience within Ebbsfleet Central.
 - (d) Negatively impact on the landscape character, ecology, water systems within Ebbsfleet River Park, as well as access to the Park.
 - (e) Create excessive noise disturbance to the Ebbsfleet River Park its habitats, and development parcels running alongside the access road.
- 3.42 The Ebbsfleet Implementation Framework established the clear principle of using a decked access road within station quarter north to integrate the two projects successfully (London Resort and Ebbsfleet Central), without impacting on the quality or deliverability of the Ebbsfleet Central scheme.
- 3.43 The Authorities recommend the DAS and Design Code and Schedule 1 to the draft DCO are updated to show a decked solution over the proposed development's access road, for the section of the access road that runs between the A2260 and the Ebbsfleet International Station.

DAS and Design Code – Sustainability

- 3.44 The DAS (APP-436 and APP-437) does not reflect the sustainability objectives set out within the Outline Sustainability Strategy (APP-445):
- (a) No reference is made to a potable water demand reduction strategy and targets in the Design Code, and a generic building-by-building approach is presented to water recycling. The Design Code describes Works that “should consider grey water harvesting for toilet flushing” without considering the actual availability or usage impact of the specific Works.
 - (b) Paragraph 9.1.7 states The Water Park “should consider grey water harvesting for toilet flushing”. The Water Park will generate high volumes of greywater due to pool filter backwash while toilet flushing is not likely to be a significant demand in the Water Park. Therefore greywater harvesting must be considered and the distribution and reuse must be considered more widely in site wide context.
 - (c) 10.1.5 and 11.1.5 state that the Coliseum and Conferention Centre “should consider grey water harvesting for toilet flushing”. The likely source of greywater here is unclear with limited showering undertaken within the Centre, whilst non-potable water demands in the form of toilet flushing are likely to be high Greywater harvesting and reuse must be considered in a site wide context.
 - (d) No consideration is given to form factor and other passive design principles. No microclimate study is included in the DAS, illustrating sun path and wind directions, therefore it is not clear how the proposed development responds to microclimate

conditions to minimise energy demand in buildings and provide a comfortable pedestrian microclimate.

- (e) Limited consideration is provided for inclusion of low carbon materials. Targets for supporting low carbon construction such as high recycled content, locally sourced materials and biobased materials are absent.

3.45 The masterplan design layout is in conflict with the ambition to promote sustainable and active travel to and from the London Resort:

- (a) Concourses and pedestrian arrival areas are bereft of trees and planting which can provide natural shading and evaporative cooling for visitors as well as a lack of connectivity to the important natural biodiversity within the Peninsula.
- (b) The location of Hotel 2 directly in front of the London Resort Ferry Terminal fails to provide a sense of arrival and excitement for the visitors arriving by sustainable transport means, with the main visitor entrance in the south, flanked by multi-storey car parks.
- (c) There is no inclusion of cycle parking and cyclist facilities within the Design Code.
- (d) Cyclists are currently not included as a priority within road layout (17.1.2.3, 17.1.12.1 and 17.1.3.1).
- (e) It is unclear how the 7m crest level of flood defences will be integrated in to River side pedestrian and cycle routes, to promote the use of active transport by visitors.

4. **SOCIO-ECONOMIC IMPACTS**

4.1 There are uncertainties around key elements of scope. It is not clear from Chapter 7 of the Environmental Statement or its Appendix 7.2 Detailed Methodology (APP-081) how the list of effects that are assessed in Chapter 7 of the ES, document reference APP-056 was selected. A clearer indication of what effects are considered in which document to assist the reader which effects have been covered and where the relevant detail can be found.

4.2 The socio-economic consequences of other matters, in particular traffic and congestion, linked to the construction and operational phases are not considered within Chapter 7 of the ES, document reference APP-056. The separate transport assessment suggests limited effects. However, the Authorities have a number of concerns with the Applicant's approach to the assessment of those matters (as set out below). The Authorities are not confident that the socio-economic consequences of traffic and congestion can be robustly discounted at this stage, and appropriate provision ought to be made to mitigate such effects.

4.3 The land use and socio-economic effects assessed in Chapter 7 are too narrow in focus. This is particularly significant because of the sheer scale and magnitude of the proposed development, its socio-economic effects, both positive and negative, are likely to be of a correspondingly large scale. The Authorities would have expected: a consideration of at least some of the indirect jobs (table 7.38 Chapter 7 APP-056). The Authorities would also expect an assessment of the socio-economic effects of congestion, air pollution and traffic, within Chapter 7, or at least a reference to where an assessment of these effects could be found, or justification for their absence.

4.4 The scale of the Applicant's proposals are such that the Authorities remain concerned that there appears to be a lack of certainty around many of the 'embedded' mitigations relied upon in the assessment of specific effects in Chapter 7 of the ES, document reference APP-056). To give one example, paragraph 7.238 of Chapter 7 of the ES, document reference APP-056 discusses the potential temporary effect of employment generation on the accommodation during construction. It refers to the Applicant's approach of housing workers in "1,000 to 2,000 rooms on a decommissioned cruise ship and 500-700 mobile homes on the Gate Two site during the construction of Gate One". It acknowledges that without this embedded mitigation "the effect would likely be major adverse".

- 4.5 There is reference in Chapter 22 of the Environmental Statement (APP-071) to this embedded mitigation being secured by an 'Outline Construction Method Statement' (APP-077). The Outline Construction Method Statement goes on to state (at paragraph 3.9) that the accommodation proposals "are under development" and that there is only a "strong indication" that the solution will be in the form that is relied upon in the assessment to turn the potential "major adverse" effect into a "minor adverse (not significant)" effect. The Applicant has provided a Construction Workforce Accommodation Strategy (APP-087) which then outlines three preliminary options which will comprise a mixture of the mobile homes, cruise ship and reliance on existing accommodation, underpinned by stakeholder engagement and "managing and monitoring" (paragraph 5.6 APP-087).
- 4.6 Whilst the Authorities acknowledge that not all details of the approach to managing the sizeable construction workforce may be known at this stage, the Authorities would expect to be assured that the proposed strategy is deliverable and that there are unambiguous and legally binding mechanisms in place that ensure that the 'embedded mitigation' is delivered at the appropriate scale and at the right time, following stakeholder engagement and thereafter "managed and monitored" and mitigated, to avoid the potential major adverse effects reported by the Applicant. The proposed requirements in the Applicant's draft DCO do not include such a clear and transparent mechanism and the intended relationships between the various documents referred to in the paragraph is not as clear as it could be. Proposed amendments will be discussed with the Applicant.
- 4.7 Similar concerns exist in relation the certainty of embedded mitigation for the potential effects of workers and visitors on healthcare provision, where reliance is placed on an on-site medical centre (paragraph 7.236 Chapter 7 APP-056) to result in a "minor adverse" effect to healthcare provision during construction, yet there does not appear to be any mechanism in the Applicant's draft DCO that would ensure that such provision is of an appropriate scale, location and in place when it is needed.
- 4.8 There will also be wider public health implications associated with a large inflow of temporary workers, including those associated with ensuring satisfactory accommodation and mental health. This is likely to impact on local services. Whilst the Authorities note that these issues are to some extent referenced in paragraph 7.77 Chapter 7 APP-056, they are set out specifically in relation to the impact of COVID-19 rather than being considered with broader reference.
- 4.9 There does not appear to be an additional mitigation specified for adverse effects on residents and homes or potential effects to resort visitors and resort workers on local accommodation options and the housing market, for which a moderate adverse effect is identified in 2030 and 2038 for residents and homes (paragraph 7.354 Chapter 7 APP-056). There is no commitment to monitoring the possible adverse consequences of this effect. There is no consideration of possible specific mitigations for the most vulnerable groups in housing need (despite high growth in homelessness identified in the baseline, paragraph 7.161 Chapter 7 APP-056). The Authorities would expect that a mechanism be in place to monitor this effect and identify mitigations where necessary, particularly for vulnerable groups.
- 4.10 It would seem opportunities to enhance the benefits of the London Resort are missed. These could in themselves help to mitigate some of the adverse effects:
- (a) The presence of the London Resort has the potential to raise the profile of the local and sub-regional area. If it was promoted as a whole (e.g. as a 'whole Kent' package), this could help to offset the adverse effect of trade creation and diversion relating to local and sub-regional attractions and cultural facilities such as local theatres and arts venues. The Applicant should encourage this through a clear commitment with appropriate resources.
 - (b) The contribution that London Resort should make to the local creative economy with a positive 'circular' relationship between London Resort and the development of a local creative economy as a beneficiary as well as contributor to the Resort. This could be supported by a commitment to participate, with resources, in a local creative economy strategy.

- (c) Potential effects of visitor and worker expenditure are not harnessed. i.e. how to maximise worker expenditure locally. The Authorities suggest that it may be appropriate to identify some mechanisms by which this positive effect could be enhanced. This could be in the form of a strategy, underpinned by appropriate resourcing.
- (d) Little or no detail is provided on the mechanism(s) by which supply chain opportunities will be maximised (paragraph 7.281 Chapter 7 APP-056). Nor is there any commitment to targeting these potential benefits on local businesses and stimulate local supply chains.

Labour Catchment Area (LCA)

- 4.11 The treatment of net additional jobs needs more consideration, and within this, the consequences of large numbers of indirect jobs needs to be addressed. The Applicant's estimates of net additional jobs created by the proposed London Resort in 2038 vary from 12,000 to 21,600 jobs at Labour Catchment Area (LCA) level (table 7.38 Chapter 7 APP-056); this is a large range. The socio-economic consequences, and therefore the required mitigations of those very different numbers of additional jobs, vary greatly particularly if the effective LCA is understood in more nuanced terms. Scenarios should be considered in this context, in relation to effects and mitigations.
- 4.12 The socio-economic consequences of indirect jobs do not appear to have been given due attention in the assessment of wider socio-economic effects. The scale of the effects will be significant (adverse and beneficial). If some of the indirect jobs were considered in the assessment of socio-economic effects it is likely that given the large numbers discussed (table 7.38 Chapter 7 APP-056) they could materially change the outcome of the assessment of effects; specifically those which relate to demand for healthcare, housing, skills and so on. This is likely to change the mitigations required. Equally there are obvious benefits to the creation of indirect jobs and opportunities to enhance these benefits may have been missed. The Authorities are seeking to tackle a number of these issues with the Applicant, including via planning obligations and DCO requirements.
- 4.13 The size of the LCA (table 7.5 Chapter 7 APP-056) and the skewing effect of London make it difficult to understand the labour market and therefore assessing the effects in relation to the local labour market is not clear. It would be beneficial to have acknowledgement of the limitations, the use of localised case studies and also comment on the consequences of those limitations in terms of mitigation requirements.
- 4.14 There is no reference to important macro-economic and geopolitical factors. For example, the implications of the UK's departure from the EU and what that might mean for labour supply. This is a significant matter which has not been assessed.
- 4.15 There is no assessment of the fact that, over the timescale of the development, even in its construction phase, the UK economy is likely to see several economic cycles, noting that the local area could shift from the current position of surplus of jobs (i.e. labour shortages) to low demand conditions.
- 4.16 Different forms of mitigation will be needed through different phases of the cycle and the implications of wider conditions will need to be monitored and managed.

Treatment of displacement

- 4.17 The assessment of displacement as it relates to trade diversion tends to rely on an assumption that London Resort represents (paragraph 7.316 Chapter 7 APP-056) 'a unique global attraction that is likely to generate new trips rather than diverting from existing theme parks in the UK'. The evidence underpinning what exactly is unique about the offer aside from its scale is not clear. Although the scale of the London Resort is unique, the individual elements that it is composed of would not necessarily be considered unique.

- 4.18 For example, a pizza restaurant outside of the 'Gates' and therefore outside of the payline, might displace a trip to another local pizza restaurant, causing impacts on local town centres for example. In addition, this does not only apply for 'like for like' equivalents; for example West End theatres may see trade diversion as a result of the London Resort "shows", and a local theatre may equally see a reduction in visitors. It appears that the Applicant may be overstating the benefit of the Resort by relying on an unproven assumption and further assessment by way of benchmark examples are sought, plus a monitor and review mechanism with interventions if unexpected effects do occur.
- 4.19 The assumption that a 'unique global attraction' (paragraph 7.316 Chapter 7 APP-056) is likely to generate new trips is also uncertain and unexplained. Whilst it is difficult to predict displacement effects, it would be helpful if the evidence was presented for this assumption and demonstrated a firm understanding of different types of visits and their implications for displacement. This should include displacement effects in relation to attractions and venues mainly reliant on local and sub-regional markets.
- 4.20 Likewise, the assessment of displacement is over-dependent on the argument that the UK can support a global calibre attraction (paragraph 7.320 Chapter 7 APP-056) and the argument is underpinned by only a few examples from contexts that appear to be contextually quite different from that of the London Resort. Evidence of consideration of alternative scenarios are needed.
- 4.21 More certainty in assessment and planning land use should be given to the contents of the Gates and the elements outside the payline, with an assessment of displacement impacts at a local level. This should then be reviewed on a regular basis in agreement with the Authorities. If the material content of the proposed development is to change in the future, these assessments will need to be updated. The active monitoring of displacement locally would identify whether specific categories of businesses are being adversely affected and if additional mitigations are necessary to avoid adverse effects.
- 4.22 Given the scale of the employment and visitor numbers, the Authorities would have fully expected more than two additional mitigations to be identified (paragraph 7.382 Chapter APP-056). The embedded mitigations identified also need to be subject to a higher degree of certainty backed by robust and legally enforceable mechanisms. In addition, there is a need for active and intelligent monitoring through construction and operational phases and a commitment to respond fully to further need for mitigations.
- 4.23 The full effects of the London Resort are to some extent uncertain and difficult to predict, partly because there are few precedents for a facility of this scale in the UK, though there are international benchmarks where more lessons can be learned which should be utilised in the assessment. Therefore, a strong approach to monitor and manage arrangements is clearly needed and the Authorities will be liaising with the Applicant about the detail around this.
- 4.24 Given the scale and impacts of the proposed development, the Authorities would expect a more evidence-based approach and assurance that appropriate phasing and mitigations have been considered and will be secured.

5. **OUTLINE EMPLOYMENT AND SKILLS STRATEGY**

- 5.1 The Authorities welcome the Applicant's intention to provide an Employment and Skills Strategy. Having considered the Applicant's Outline Employment and Skills Strategy (APP-086), the Authorities are concerned that it is neither aspirational nor detailed enough to support the conclusion that it will 'maximise' the positive socio-economic effects in relation to skills and training (construction and operation), as reported in Chapter 7 of the ES.
- 5.2 There are several key issues which the Authorities consider need addressing as set out below.

Aspiration Levels

- 5.3 Paragraph 1.8 of the Outline Employment and Skills Strategy (APP-086) explains that "the Applicant's key aim of the employment and skills offer is to positively impact on local people and

children.” This is far from aspirational for any development scheme, let alone one of this scale and significance in impact terms. It does not give any indication as to the sorts of real-world practical measures the Applicant would take to meet these aspirations and so would be of limited enforceability. It is important that the Applicant identifies specific targets to achieve local employment and training for the diverse range of people living near to the Resort.

- 5.4 Figure 5-2 of the Outline Employment and Skills Strategy includes a number of pledges for the construction and operational phases of the proposed development. The pledges proposed for the construction phase in Figure 5-2 of the Outline Employment and Skills Strategy are very modest for a scheme of this scale and importance. For example, seeking to achieve a local labour rate of 29% and to facilitate only 100 to 150 construction apprenticeship opportunities during the 5.5 year anticipated build out does not reflect an ambitious strategy that seeks to maximise the employment and skills benefits of the scheme.
- 5.5 The lack of aspiration and the paucity of detail contained in the Strategy are at odds with recent discussions with the Applicant on its content. It is hoped that the Applicant will be improving the Employment and Skills Strategy to align with the weight that it is afforded in the assessment. However, the Authorities reserve their position to make further and more detailed submissions as to what ought to be contained in the Employment and Skills Strategy in order to assess fully the socio-economic effects of the proposed development. This will need to include significantly more commitment to local labour rates through the construction and operational phases.

Impacts on the labour market

- 5.6 The Authorities would expect the applicant to set out clear and unambiguous targets relating to local employment opportunities for skilled and semi-skilled construction workers; workers in the tourism and hospitality sectors, support for allied sectors and community based social enterprises in training and development of disadvantaged groups in the employment market.
- 5.7 The Authorities would also expect the applicant to identify a series of targets and commit to a rolling annual review to assess performance. This will be sought in relation to DCO requirements and obligations.
- 5.8 Given the significance of the anticipated changes to the labour market, it is surprising that the Outline Employment and Skills Strategy does not explain the implications of the scheme on the current balance of demand and supply for key skills in the labour market with near future forecast assessments. The risk that the proposed development could exacerbate existing skills shortages is a real one which needs further and ongoing assessment and could affect investment decisions in other key sectors in the local economy as well as having socio-economic impacts across local communities.
- 5.9 This is a significant issue; however the ES is silent on the potential impacts of this supply on construction/labour costs, infrastructure delivery and local housing market impacts.

Supply chain opportunities

- 5.10 The Outline Employment and Skills Strategy is sparse in this area, with only general references to the potential supply chain benefits during the construction and operational phases. For instance, paragraph 6.5 simply states that the Applicant will “provide sufficient information about supply chain benefits to local businesses, residents and other key stakeholders through both the construction and operational phases of the development.”. This should have reference to different types of supply chain opportunities, including those relating to creative content development, as well as service and supply, and should consider the benefits to London Resort itself of strong local supply chains.
- 5.11 The Authorities would expect the Strategy to provide a more systematic assessment from the Applicant of the supply chain opportunities that they anticipate arising during the construction and operational phases, including express provision relating to developing supply chain opportunities for local businesses, residents and other key stakeholders.

- 5.12 The more detailed assessment of supply chain opportunities should specify the key sectors e.g. the creative, information and communications technology, sustainability/environmental sectors, in which supply chain opportunities will arise, including the potential value of those opportunities. It should also explain how the Applicant proposes contacting and maintaining a meaningful dialogue with relevant local suppliers.

Targeting employment and skills opportunities

- 5.13 The Outline Employment and Skills Strategy does not adequately explain what steps will be taken to help ensure that the employment and skills development opportunities created by the Resort will be made available to the most disadvantaged groups, communities and places.
- 5.14 The Applicant is aware that skills and training initiatives need to be more inclusive of groups such as people not in employment, education, or training (NEET), women, disabled people and ethnic minorities. Objective 4 focuses on “Celebrating diversity and inclusion” which explains in broad terms that the LRCH will work with the Taskforce to identify vulnerable and underrepresented groups to make employment opportunities accessible to them. However, the Strategy does not provide any specific programmes or mechanisms to explain how the Applicant would deliver on these broad aspirations.
- 5.15 LRCH needs to work with the Authorities to identify a key set of priority groups so that the Strategy can be better targeted in each phase of its delivery. Without this targeting, the Strategy is unlikely to achieve the potential benefits of skills and training locally and, given the tight labour market in the CSA, this should be considered an important priority.

Pledges and Commitments

- 5.16 The pledges are summarised in Figure 5-2 of the Outline Employment and Skills Strategy. Whilst the Authorities acknowledge that the document reflects an only outline strategy, it remains the case that the pledges are noticeably short on specific commitments, either to the funding of skills and training or to the delivery of specific targets.
- 5.17 The Strategy provides no details on the pledge to provide a London Resort Academy (i.e. when will it be in place, what will it offer/provide, who will it be open to, how will it be funded and maintained going forward). Without more detail on the Academy, it is not possible for the Authorities to assess fully the Applicant’s claims in ES Chapter 7 that the new employment at the proposed development would create beneficial effects on skills and training during both the construction and operational phases.
- 5.18 Chapter 6 of the Outline Employment and Skills Strategy outlines the Applicant’s approach to implementing the Strategy. There are very few specifics, with only references to the “developing nature of this strategy”. Para 6.5 explains that the Applicant will develop key performance indicators (KPIs) which reflect the pledges with quantifiable targets, including increasing the delivery of a target number of construction apprenticeship starts for each year of the construction phases. The Authorities regard this as essential and will work positively with the Applicant, and other stakeholders, to ensure that such measures are appropriately secured through the Outline Employment and Skills Strategy.

6. LAND TRANSPORT (INCLUDING PUBLIC RIGHTS OF WAY)

Construction Traffic Management Plan

- 6.1 Construction activities have the potential to have a significant impact on the local road network and the Authorities are concerned by both the number of vehicles predicted using the local road network, their impact and the timing of the opening of the Access Road from the A2 for use by construction vehicles.
- 6.2 Regarding the number of construction worker vehicles, the Authorities are concerned with the lack of information provided in the Construction Traffic Management Plan (APP-128) to determine the impact of construction worker movements on the local highway network. The key concerns

arise from the Applicant's assumptions set out in section 2 of that document. The Authorities are concerned about construction worker parking on the local highway network, which could not only affect existing residents but would also add in additional trips that have not been assessed. A strategy to prevent on street parking is required, the Construction Traffic assessment (6.1-6.10) also does not cover the risks of construction staff parking in neighbouring streets. . This is similarly the case for the operational phase.

- 6.3 Paragraph 2.2.2 assumes that workers living on-site will be prohibited from leaving on weekdays, being released only from Friday lunch time and being required to return Sunday evening. The Applicant considers that reliance on this assumption "will remove the need for an assessment of their travel patterns to be undertaken". Paragraph 2.3.2 (third bullet) assumes a vehicle occupancy of 3 workers per motor vehicle. Given the size of the construction workforce and the duration of the construction phase(s), the Authorities are concerned that should these assumptions not be observed in reality (and it is not clear how it will be enforced), there is a risk of significant adverse effects to the local highway network. The concern is compounded by the absence of peak hour assessments.
- 6.4 A sensitivity assessment is required, allowing for proportions of workers arriving and departing during the typical network peak hours on Mondays and Fridays and a lower vehicle occupancy.
- 6.5 With regard to the estimated quantity of construction delivery vehicles, whilst the Authorities welcome the target of achieving 80% of construction material being transported by River (paragraph 3.2.1 of the CTMP) (APP-128), this target is ambitious and the Authorities require assurance that this is clearly achievable given that this target has formed the basis of the assessment and as such appropriate enforceable measures to reflect this assumption must be set out in the Construction Traffic Management Plan compliance with which must be secured by a requirement of the draft DCO. The Authorities will seek to work positively with the Applicant with a view to agreeing an approach.
- 6.6 To reflect the Applicant's assessed road vs. r]River scenario, the refurbishment of Bell Wharf and facilities on Swanscombe Peninsula, the Port of Tilbury and Tower Wharf at Seacon should be completed at a very early stage in the construction programme to enable the River to be used as the primary point for materials delivery. The Authorities will work positively with the Applicant to agree an appropriate mechanism to ensure that this is appropriately delivered.
- 6.7 A sensitivity assessment assuming a smaller target of River based material has been undertaken in the ES (Paragraph 9.404 of the Environmental Statement Volume 1: Main Statement Chapter 9 – Land Transport (Paragraph 9.404 APP-058). However, the Authorities are concerned that none of the additional trips appear to have been distributed south of the River onto the Kent network and this distribution could have a significant effect on the local highway network. Without further evidence, it seems unrealistic that no additional trips would be made from the south of the River when the haul road and main access point into the resort are located on the Kent side, and there is a proposed construction access off Lower Road.
- 6.8 With regard to the access route for construction vehicles, the existing local road network should only be used for setting up the haul road and tunnelling activities and from then, construction vehicles should access the site from the main access, or to the east of the site if material is coming from / going to the wharf on the eastern side of the peninsular. This also applies to the construction of Gate 2, when Gate 1 is in operation. Once the site becomes operational, the site access must remain the sole vehicular access point to the resort for visitors, even during times of construction of following phases. Visitor access from the local road network should be prohibited at all times except during an emergency. In line with the draft plans, the Authorities require the Full Construction Environmental Management Plan (APP-077), Construction Traffic Management Plan (APP-128), Construction Workforce Accommodation Strategy (APP-087), Construction Traffic Management Plan (APP-128), and Construction Method Statement (outline doc ref APP-077 6.2.3.1 ES Ap 3.1), and related plans to be developed, approved and implemented prior to construction in order to ensure the impacts on the local road network are minimised. The Authorities will work positively with the Applicant with a view to agreeing appropriate amendments to the previously mentioned documents and requirements of the draft DCO (APP-027).

- 6.9 Given the timescales between start of construction and full maturity, the impact of the London Resort and indeed, the existing situation on the local highway network, has the potential to change. A Monitor and Manage Group should therefore be established and operate between these timeframes in order to monitor the impact on the local highway network and for impacts to be mitigated as and when they arise. The group should consist of a number of stakeholders including the Local Authorities and Public Transport Service Providers etc. with adequate contributions to a fund established by the Applicant to pay for the costs associated with participation in the group and for the resulting mitigation works required to be funded. This measure should be secured by way of an appropriately worded development consent obligation.
- 6.10 Construction mitigation for land transport should be secured through the Construction Workforce Accommodation Strategy (as proposed) (APP-087) but also through the Construction Environmental Management Plan (APP-078) and the Construction Method Statement (APP-077). The outline documentation should be secured by way of DCO requirements, to be developed into full strategies to be approved by the relevant planning authority following consultation with the relevant highway authority before construction begins and thereafter implemented. The Authorities will work positively with the Applicant to seek to agree suitably worded requirements.

Transport Assessment

- 6.11 One of the fundamental issues with the submission that causes the Authorities concern, and something which is relevant to both the ES Chapter and the Transport Assessment, is the lack of assessment of the local road network. This includes both the modelling itself and the assumptions that underpin it.
- 6.12 Only one junction has been modelled on the local highway network and this is not considered to be appropriate. For example, it is unclear why modelling of the A226 Galley Hill Road / Lower Road junction adjacent to the proposed access off Lower Road has not been undertaken given that vehicles are anticipated to use this access, nor why improvements are not proposed given the lack of existing crossing facilities but with the knowledge that staff are predicted to walk and cycle to the site via this junction. Further information is required from the Applicant to understand its rationale behind this omission.
- 6.13 An 8-9 AM and 5-6 PM peak hour weekday assessment has been provided, yet no assessment has been provided of the shoulder peaks when resort staff and visitors are likely to be travelling (which is relevant in this congested part of the network), nor for the resort peak hour, nor for a weekend peak, which given the leisure nature of the development, is considered essential to properly assess the proposed development's impacts. Given the number of visitors to the site during these peak periods the impact on the local road network could be significant and could be greater than the weekday AM and PM peak hours. Once the assumptions have been agreed, a further assessment should be undertaken using a cordon of the new Kent Highway Model, when available, which will allow an assessment of the local road network and further peak hours. The Authorities will work positively with the Applicant to support the production of this important additional assessment.
- 6.14 The traffic flow diagrams in Appendix TA-R of the Transport Assessment (APP-116 6.2.9.1 ES Ap 9.1) do not show where traffic routed east on the A2 travels to and one junction assessment on the local road network has been undertaken. This is a significant concern and further modelling is required to enable KCC to assess the impact on the network and ensure appropriate mitigation is identified and provided.
- 6.15 No assessment has been undertaken for one of the key congestion hotspots on the network – the A229/ M2 Junction near Bluebell Hill junction, which is on the route between the site and mainland Europe, along which a number of visitors and construction vehicles are expected to travel. This is a well-known congestion hotspot and KCC have recently consulted on an improvement scheme (costing £160 - 180m, but which requires 15% match funding to be approved). It is therefore important that the construction and operational impact of London Resort is assessed at this junction and, if appropriate, funding is secured in a timely manner.

- 6.16 While the Applicant has shared spreadsheets showing details of the trip generation calculations with the Authorities it is not yet clear what assumptions underpin the calculations and therefore there remains considerable uncertainty around the likely trip attraction and additional information is required to satisfy the Authorities that the assumptions are appropriate and robust.
- 6.17 Paragraph 13.3.4 of the Transport Assessment (APP-093 6.2.9.1 ES Ap 9.1) sets out the journey times which have been assessed in the VISSIM model but it is unclear why these routes have been selected and what the difference in journey time is along other key corridors (e.g. B259, A2260 and Thames Way).
- 6.18 The Authorities do not consider the trip attraction and mode share information contained within the Transport Assessment to be sufficient to support a robust assessment and further information is required.
- 6.19 No assessment has been undertaken for non-work related trips to/from the staff accommodation site for the 2000 staff living off London Road. This must be assessed.
- 6.20 The Transport Assessment: Appendix TA-H Stakeholder Advisory Technical Document (SATD) (APP-106) contains the staff and visitor profiles across the day. Paragraphs 3.2.3 to 3.2.5 describe the cross-visitation assumptions for 2025-2038 and state that in 2038 27% of RD&E trips will be sole purpose trips whilst 35% of waterpark trips are sole purpose trips. This shows that a proportion of trips will not be linked to the parts of the Resort behind the payline. It is expected that non-Resort sole purpose trips to the attractions to the front of the payline, such as the Restaurant Dining & Entertainment and waterpark, are more likely to attract visitors from the local area. Visitors originating from the local area will have a greater impact on local transport infrastructure (highway, public transport, walking and cycling networks) and it is important that it is demonstrated that the demand generated by the Applicant can be accommodated and, if not, appropriate mitigations should be put in place.
- 6.21 Car park accumulation has been provided but has not been broken down between the Kent Project Site and the Essex Project Sites. The Authorities are not convinced that the assumption that all vehicles coming from the north will park on the northern side of the River Thames at the Essex Project Site, is realistic when the majority of the parking is located on the Kent Project Site south of the Thames. Whilst it is understood parking spaces will be allocated (and this measure should be appropriately secured in the terms of the consent), if the demand for the car park north of the River exceeds supply, and when staff from the north are allocated a space in the staff car park, there is likely to be an impact on the Kent highway network, particularly at the significantly congested Dartford crossing (which in turn impacts the local road network and particularly the A282 Junction 1a). Due to the existing congestion at the A282 Junction 1a, a mitigation scheme is currently being devised in a joint working group with KCC, DBC and HE. Unless the Applicant can evidence that it's scheme will not exacerbate this harm, the Authorities will seek a contribution towards an improvement scheme at this junction to be secured through an appropriately worded development consent obligation.
- 6.22 Tables 14-19 of the Transport Assessment: Appendix TA-X (APP-122) show staff parking accumulation and assumes the staff car park is 100% occupied meaning that vehicles may end up circulating for space, which may ultimately discourage staff from using the staff car park and instead park elsewhere on local roads. As there are predicted to be shift changeovers, and the car park is shown to operate at full capacity, it is reasonable to assume a proportion of circulating vehicles, looking for a space. The argument for not assuming a 5% reduction in the capacity of the car park for circulation is therefore not considered to be robust.
- 6.23 The baseline mode shares for staff and visitor travel shown in Tables 8.1 and 8.2 of the Transport Assessment are too simplistic given that mode share estimates are predicted to change over time between 2025 and 2038 and also on different days such as the average day, 85th percentile day and peak day. An updated framework for baseline data should be provided in the Travel Demand Management Plan (APP-127). The draft DCO should include a requirement that ensures that Travel Demand Management Plan (once appropriately updated to reflect the Authorities concerns) is fully developed, approved by the relevant planning authorities in consultation with

the relevant highway authorities before the proposed development is opened and thereafter complied with by the Applicant.

- 6.24 The Authorities have concerns with the information set out in the Travel Demand Management Plan. For example, it does not consider how travel demand will be managed on peak days, and the measures are lacking in sufficient detail to give the Authorities confidence that they are deliverable. Further information is required to ensure that the Travel Demand Management Plan is effective.
- 6.25 The trip generation assessment undertaken as part of the Transport Assessment (APP-093) has been based on trips for the 85th percentile day and it was understood (through both conversations and reference in the Transport Assessment Appendix TA-E (APP-103), that an Events Management Plan would be provided to demonstrate how travel demand will be managed on peak days where an additional 11,000 trips will be made (2025). The management measures proposed should be included in the Travel Demand Management Plan (TDMP) or an Events Management Plan, and in either event, should to be secured by way of a requirement to be approved by the relevant planning authority in consultation with the relevant highway authority before the resort is open to the public, and regularly updated throughout the operational life time of the scheme. An Events Management Plan has not been submitted with the Application (it is hard to ascertain if the TDMP covers peak events and clarification is required) and this information is required to give confidence that the effects of such events to the local highway network can be appropriately managed and mitigated.
- 6.26 Changes to the layout of the crossing at the A226 London Road / High Street / Pilgrims Road junction have been proposed, yet no further information has been provided. It is unknown whether the design will accommodate the levels of pedestrians and cyclists anticipated or whether the capacity of the junction will be negatively affected. Expected all-mode flows, junction capacity modelling, swept paths and a Road Safety Audit are required. Works to KCC's local highway network must be completed to adoptable standards, to a design approved by KCC in consultation with the relevant planning authority and be subject to appropriate post-completion maintenance periods, to be contained with the DCO.
- 6.27 The Authorities are concerned with the level of the servicing and delivery vehicles trip generation forecasted, as set out in Table 3-1 of the Delivery and Service Management Plan (document reference APP-129) as it is very low, not least in view of the significant volume of small/medium parcel deliveries that are now typically received by businesses, which are difficult to consolidate. The trips are stated to be based on commercially sensitive data so it is not possible to validate. Some 'real-world' evidence could be provided to enable these figures to be validated. Once appropriately updated, the Authorities would expect compliance with the Delivery and Service Management Plan to be secured by way of an appropriately worded DCO requirement.
- 6.28 The Transport Assessment does not include an assessment of the proposed Visitor Centre and Staff Training Facility located to the east of the staff accommodation, with the London Resort Academy located immediately south (as per Figure 2.4 of the DAS). It is unclear how these will be accessed, what parking provision is proposed and what the associated trip attraction would be on the local highway network. The Authorities request the Applicant to correct this to ensure that the impacts of this part of the proposed development are properly assessed and, if required, appropriately mitigated.

Additional concerns with the Transport Assessment are as follows:

- 6.29 Despite the significant number of trips assumed in the TA and, therefore, relied upon to arrive at the results of that assessment to be made by rail, no firm rail proposals have been made. In addition, the peak days for the resort are likely to be on bank holidays or weekends, when the railway operators often undertake maintenance on the lines. No information has been provided to explain how visitors and staff will access / leave the resort during these times, nor how those resultant peaks in traffic would be managed.
- 6.30 A Walking and Cycling Strategy APP-239 and APP-241 has been provided yet it contains insufficient information e.g. the proposed points of access for pedestrians and cyclists, whether

they are for staff or visitors, the number of pedestrians and cyclists expected to use them and how they are proposed to be managed, is still unclear. Key locations on desire lines should be considered in more detail e.g. London Road and additional facilities provided. A number of cycle incidents has been noted on London Road (a key route bordering the site), yet no mitigation has been proposed despite the expected increase in cyclists. Compliance with the Walking and Cycling Strategy is currently not secured by way of DCO requirement, this should be in order for any reliance to be placed upon it.

- 6.31 The proposal includes ancillary on site amenities at the staff accommodation site, likely to consist of a shop and a gym. The Authorities are concerned that these facilities are trip generators in their own right and will affect the local highway network, these trips have not been included in the trip generation assessment, undermining the reliability of its conclusions.
- 6.32 Given the uniqueness of this project and the level of uncertainty that this brings with it, the Authorities are concerned that traffic flows on the local highway network may be negatively impacted by the proposed development. To ensure that such effects are appropriately mitigated, prior to commencement of development on site data collection apparatus should be set up at all vehicle site access and egress points to and from the resort, and at agreed key junctions and locations on the local highway network to allow for appropriate monitoring (feeding into the Monitor and Manage group) and potential live feeds back to the KCC control centre to enable KCC to manage traffic flows in real time. Given the well-known congestion issues on this part of the network (e.g. frequent incidents at the Dartford Crossing creating grid lock across Dartford), live traffic information should be displayed within the Resort site to help retain trips on site during times of congestion on the network.

Land Transport – Environmental Statement

- 6.33 Paragraph 9.99 of Chapter 9 of the ES (APP – 058) refers to previous consultation with Local Authorities, KCC would like to point out that discussions / information on the modelling methodology was repeatedly requested; however, this information was not provided to the Authorities prior to the application being submitted and the documents being accepted by PINS.
- 6.34 The Authorities have a number of concerns relating to Chapter 9 of the ES 6.1.9 (APP-058), these are as follows:
- (a) Table 9.3 in APP-058 6.1.9 (Environmental Statement Chapter 9 – Land transport states) "...The traffic is shown to predominantly use the Strategic Road Network ... The level of impact upon the SRN is minimal. Once off the SRN, the traffic is dispersed sufficiently not to require any further assessment...". The Authorities do not agree with this conclusion. Whilst the impact of the proposed development on the local network may be small in comparison to the overall number of trips anticipated to be generated, the total number of trips is so large that even a small percentage of the total could have a significant effect at local junctions. In the absence of more detailed assessment of local linkages, the Authorities are unable to confirm with any degree of certainty that the effects are not significant.
 - (b) The traffic flows in Appendix 9.3 of the Percentage Change document (APP-131) suggests that the percentage increase on each link is less than 10%. However, an appropriate assessment of the local road network has not been undertaken. For example, no interpeak assessment has been undertaken, which, as this is the resort's peak hour, is important and the failure of the Applicant to carry out the interpeak assessment results in the Authorities being unable to confirm that the impacts to KCC's local highway network as a result of the scheme are acceptable.
 - (c) The results of the junction capacity assessment undertaken as part of the Transport Assessment (APP-093) have not been included in the Chapter 9 of the ES (APP-058). The Authorities consider that the impact of congestion at local junctions is an important component of the ES as it enables the Authorities to consider whether the impacts are significant. The results of the existing junction capacity assessment, and

any further assessments undertaken, should be included within the ES Land Transport Chapter and the results updated accordingly.

- (d) Figure 3 does not include some of the relevant receptors such as existing schools in Dartford, International Way as a ped/cycle commuter route between Eastern Quarry and Ebbsfleet international, the National Cycle route which crosses the A2 Ebbsfleet junction, London Road with the provision of 2000 London Resort staff who will not have vehicles so will need to walk, cycle and catch public transport, nor does it include the receptors of the committed developments identified including the primary and secondary school on Eastern Quarry (as part of the future baseline reflecting its status as a consented development), the existing Stone Lodge secondary school and the proposed Medical Centre and sports facilities at Stone Pit 1. The Authorities are concerned that the impact of the London Resort on these receptors has not been assessed. The assessment should be updated to include these receptors and the Resort's impact upon them.
- (e) Paragraph 9.128 states: "It is generally accepted that a link/junction approaches its theoretical capacity between 90-100% (i.e. Level of Service E) and overcapacity with values over 100% (i.e. Level of Service F)". The Authorities consider this to be an appropriate assumption for signal-controlled junctions but priority controlled junctions should be assessed at 85% capacity, as per the accepted industry standard. Any junction assessments contained within this ES should reflect this and any junctions that breach these thresholds (85% RFC for priority junctions / 90% PRC for signal junctions) will require appropriate mitigation to bring them back to within capacity (if the future base scenario shows they are currently operating within capacity) or to the same RFC / PRC observed in the future base scenario (if currently operating above capacity) i.e. 'nil detriment'.
- (f) Paragraph 9.139 states "In the absence of specific thresholds provided by the guidelines, it is considered appropriate to base the assessment on changes in delay per vehicle (in seconds) from the baseline situation. As these delays are related to LoS at each link/junction, it is considered, based on the professional judgement, that only changes in the delay of 15% or more on a link with LoS E or F are significant in the EIA terms". The Authorities disagree with this assumption because a change of less 15% on a significantly congested link / junction could result in a severe impact and could therefore be considered significant. It is unclear why no standard junction capacity modelling has been undertaken to support this assessment, as is normally undertaken for planning applications under the Town and Country Planning Act 1990 and this is required in order for the Authorities to determine whether the impact is significant.

6.35 Paragraphs 9.29, 9.33 and 9.35 of the ES (APP-058) refer to the Bus Strategy (APP-120), Rail Strategy (APP-119) and Off site Car Parking Plan (APP-123) respectively. Tables 22.1 refs 9.470, 9.472 and 9.473 of Chapter 22 of the ES (document reference APP-071) show the mitigation of impacts to the local highway network, the bus strategy and the rail strategy (respectively) will be secured through the Transport Assessment. Given the significant volume of trips predicted to use public transport, and the likelihood of staff and visitors parking on street, the Authorities consider these strategies vital to achieving the traffic levels assessed in the Transport Assessment. It is therefore disappointing that there is no mechanism in the draft DCO to require compliance with the limited measures envisaged in these documents. The Authorities will work positively with the Applicant to develop these documents to a satisfactory standard and will seek to agree an appropriately worded draft DCO requirement to secure compliance with those measures. This will need to include measures to protect the rural and semi-urban communities to the south of the Resort as well as the local town centres, e.g. locations such as Bean, Darenth, Southfleet and Betsham where there is concern about unplanned parking.

Land Transport – Site Access Junction

- 6.36 The Authorities have previously raised concerns about the layout of the site access junction, which have not been fully addressed. These include difficulty in modelling such a complex layout, short stacking lanes leading to circulatory queuing, tailing back and disrupting flows to A2, last minute lane changes potentially leading to incidents, concern of priority being given to traffic exiting the A2, including the resort traffic at the expense of local traffic particularly at the PM weekday peak, tight geometry and a lack of swept paths to show HGVs can manoeuvre around the junction. A key concern is the lack of a Road Safety Audit, which would typically be produced even at this outline level of design detail. Consequently, the Authorities are currently unable to conclude that the design of junction is safe or appropriate.
- 6.37 Paragraph 3.14 of the Chapter 3 of the Environmental Statement Project Description (APP-052) refers to the main access road as being “a Resort access road of up to four lanes (i.e. up to two lanes in each direction)”. The Transport Assessment is based on the access road being a dual carriageway and has been designed to accommodate the level of traffic anticipated. Any reduction to this will reduce the capacity of the link and could cause blocking back onto the A2 and local highway network. An appropriate requirement to the DCO must require that Access Road is constructed as a dual carriageway in conformity with the applicable design standards and ensure that the Access Road is available for use before a significant quantum of trips are generated by the construction or operation of the proposed development, to avoid significant adverse impacts to the local highway network.

Design and Access Statement

- 6.38 The Authorities have concerns with the wording of Paragraph 6.8.2 of the DAS (APP-436) which states “the delivery of the car parks will be phased and based on a pre-fabricated system to help minimise disruption”. The Authorities are concerned that if the onsite parking provision is phased, there is the potential for on street parking issues to occur in the local area. The appropriate car park allocation should be provided for the requirements of its associated phase or gate upon opening of said phase/gate and appropriate controls of such phasing must be included in the requirements of the DCO.
- 6.39 Figure 10.10 shows a dotted line for staff vehicle access to Galley Hill Road at the existing junction with Lower Road. It is unclear what this access is for and what the number of anticipated vehicle movements will be on the local road network. Further information should be provided. In the absence of such further information the Authorities are concerned that this access will lead to significant adverse effects to the local highway network.
- 6.40 Figure 10.4 (APP-437) shows the perimeter road to accommodate a bus link. Further details of the perimeter road should be provided, and secured in the requirements of the draft DCO, to demonstrate how buses can be accommodated and how inappropriate parking will be discouraged by design. It is unclear how a link onto Craylands Lane would be managed. Further information is required.

Design Code (document references APP-438 and APP-439)

- 6.41 The Authorities have concerns with the wording of the Design Code, as follows:-
- (a) Paragraph 12.1.1.1 “A coach driver facility should also be considered”. Appropriately designed coach driver facilities must be provided and secured through the Design Code.
 - (b) Paragraph 12.1.3.2 states “The proposals should consider pedestrian connectivity from and to Pilgrims Way”. This should be strengthened to ensure that the proposals “must” consider, and make appropriate provision, for pedestrian connectivity to, and from, Pilgrims Way.
 - (c) Paragraph 12.3.4.2 states “Any proposal will look to connect to the Resort through a land train route on the south of the work”. This must be strengthened to ensure that any

proposal "must" connect to the Resort through a land train route on the south of the work.

- (d) Paragraph 12.3.4.3 states "Consideration must be given to prioritise pedestrian routes from west to east connecting the Swanscombe Marshes". This should be reworded to ensure pedestrian (and cycle) routes are prioritised. In line with Government legislation to create the England Coast Path, the Authorities would expect to see coastline access in front of any new development incorporating the best possible views of the coast. However, the section of this National Trail proposed by the applicant inland of the ferry/port terminal does not provide this.
- (e) Paragraphs 13.2.6.4 and 14.1.6.4 state "Provision for secure cycle parking bays should be made". The word 'should' should be replaced with 'must'.
- (f) Paragraphs 13.2.6.5 and 14.1.6.5 state "Provision should be made for electric car charging points". The word 'should' should be replaced by 'must'.
- (g) Paragraph 14.1.1.3 states: "The proposals should comprise up to 500 staff car parking space". The Transport Assessment and associated bus, rail and on street parking strategies have assumed that 500 spaces will be provided for staff. This must be a requirement to give the Authorities confidence that it will be delivered.
- (h) Paragraph 16.1.6.2 states "Pedestrian access within the site should be prioritised". The word 'should' should be replaced with 'must' and cyclists should be added.
- (i) The plan associated with Paragraph 17.1.13.1 of the Design Code shows the vehicular route through the staff accommodation to be a min 6.5m wide. Whilst this width may be acceptable for the bus only route, it should not be provided for general traffic as this is more reflective of a primary route rather than a lightly trafficked residential cul-de-sac or home zone. Considering there will be no onsite parking, KCC are concerned that this could attract ad hoc parking which will undermine the trip generation assessed. The Design Code should be amended to reflect the difference between the bus only link and the general vehicular route. The final width should be based on the design of the route, where space for parking should be designed out. Parking on the bus only route will not be permitted and details on how this will be prevented should be set out.
- (j) The Authorities welcome the target of achieving 80% of construction material by River; however this is not secured in the draft DCO and so, on the basis of the application as submitted, this aspiration cannot be relied upon. In line with paragraphs 3.10 and 3.18 of the Outline Construction Method Statement (Environmental Statement Volume 2: Appendix 3.1 (document reference APP-077)), phase one of the construction must not commence until Bell Wharf has been refurbished and facilities on Swanscombe Peninsula, the Port of Tilbury and Tower Wharf at Seacon are constructed / upgraded, to enable the River to be used as the primary point for materials delivery. Similarly, the measures in the Outline Construction Method Statement should be secured by an appropriately worded requirement to the DCO. As currently drafted, the Applicant does not appear to be obliged by the draft DCO to comply with the measures in the Outline Construction Method Statement in any way, and, until that is rectified, no reliance can be placed on those measures.
- (k) Paragraph 11.4.26 of the Transport Assessment (document reference APP-093) summarises the proposed amendments to existing bus services. Example Fastrack bus timetables should be provided showing the start and finish times across weekdays and weekends and the frequency and routing of services. An appropriate contribution, to be secured by way of a development consent obligation, should be provided for the upgrade of Fastrack bus services to electric buses to connect with the proposed electric charging at the Interchange Plaza.
- (l) Table 8 in the Transport Assessment: Appendix TA-U Rail Strategy Plan (document reference APP-119) shows that peak rail departures occur between 22:00 and 23:00.

The Transport Assessment (APP-093) nor its Appendix the Rail Strategy Plan assess whether there is there sufficient rail and station capacity to accommodate this demand when existing services are typically less frequent and the Authorities are therefore unable to determine whether the effects of the proposed development can be accommodated on the rail network or if their effects may impact on other networks such as the bus and the local highway network.

- (m) Paragraph 1.3.3 of the Transport Assessment: Appendix TA-U Rail Strategy Plan (document reference APP-119) states “An independent capacity study by an HS1-approved third-party supplier (on an existing framework) is being commissioned. This capacity study will look to assess the following five items: 1 Validate LRCH demand assumptions and identify where there are likely to be capacity issues; 2 Identify additional HS1 route capacity needed (paths) to meet the demand created by the Resort; 3 Identify additional rolling stock capacity needed, including staffing and berthing requirements; 4 Identify HS1 station capacity constraints (across all HS1 stations) including high level enhancements; and 5 Identify the cost arising from additional capacity requirements identified in 2, 3 and 4 above.” The Authorities require the output of this assessment to be submitted to the Examination to enable it to be appropriately considered by the Authorities and other interested parties.
- (n) The capacity study needs to be reviewed and the necessary mitigation measures in relation to the North Kent Line as well as additional station capacity needs to be secured through the draft DCO and/or development consent obligations to ensure that it is implemented prior to the resort becoming operational, and also prior to construction if the results show the additional capacity is needed to accommodate the workforce.
- (o) Paragraph 4.1.10 of the Transport Assessment: Appendix TA-V Bus Strategy Plan (APP-120) states “it is estimated that at the busiest hour the direct bus demand for visitors will be around 110 passengers per hour on a weekday. In peak days the total demand is expected to increase by 38%, increasing the maximum demand for bus services at the busiest hour (21:00 to 22:00) to 165 bus trips.” There is a significant increase in demand on peak days. Further assessment is required and appropriate mitigation measures secured by way of DCO requirements or development consent obligations to ensure that the effects of this increase in demand are appropriately mitigated.
- (p) Paragraph 9.1.2 of the Transport Assessment: Appendix TA-V Bus Strategy Plan states “Improvements are anticipated to be required at:-
 - (1) Ebbsfleet Station, to accommodate the People Mover and the internal flow of passengers within the Station;
 - (2) Bus stops arrangements in Greenhithe;
 - (3) Bus stops in Northfleet; and
 - (4) Bus stops and rail access improvements around Swanscombe and the station to maximise the last/first mile to the Resort.”
- (q) Further information and appropriate mitigation measures are required in respect of the above list. The assessment should consider the quality of the existing bus stop infrastructure and crossing facilities where the development proposals are likely to have a significant impact, to identify what specific improvements are required, and details required regarding the Interchange Plaza and appropriate provision must be made by way of DCO requirement or development consent obligation to ensure that any unacceptable impacts are appropriately mitigated.
- (r) Transport Assessment: Appendix TA-W Uber Boats by Thames Clipper Operation Proposal (APP-121) provides an indicative timetable for the proposed Uber Boats service. It is stated that seven new vessels would be required to operate the service.

The timetables for the buses which connect with the ferry services should facilitate a smooth interchange as well as linkage with other interchange facilities. Further information is required together with appropriate DCO requirements or obligations to ensure a smooth transition between transport modes is secured. In the absence of such measures there remains a very real risk that the Essex Project Site is in preference to access to the Kent Project Site, leading to potential adverse effects beyond the scope of the assumptions assessed in the TA.

Streetworks

- 6.42 The list of roads to be covered by the DCO is not in a format that is compatible with examining in detail the exact extent, and special designations of the roads that is present in the National Street Gazetteer. This information should be provided by the Applicant.
- 6.43 The Authorities note that The National Street Gazetteer (USRN 10500253) recognises the sensitivity of the network in this location and has designated Galley Hill Road as being 'traffic sensitive' 07:00 to 19:00. This designation makes the road subject to early notification of immediate activities.
- 6.44 Clarification is required on proposed extent of public highway adoption, both existing and new highways within the application boundary area. This should include details of any proposed structures and geotechnical measures that are within 3.66m of either the existing public highway boundary or the proposed public highway boundary. The Authorities note that the draft DCO does not include a provision that addresses the maintenance (adoption) of new or altered highways. Any structures or geotechnical measures proposed that fall within 3.66m of the existing or proposed highway boundary will need to be approved by the Highway Authority Structures Development Control team, with the applicant to confirm costs will be reimbursed as would be the case with any other works on the Kent local highway network. Any structures or geotechnical measures proposed to be adopted by KCC as highway authority will be subject to commuted sums payable before adoption is completed. The public v private realm and access and management and maintenance arrangements need to be agreed.

Bus Travel

- 6.45 Measures within the proposed Construction Traffic Management Plan (CTMP) (APP-128) to promote modes other than by private transit for workers are welcomed. The identified 79% mode share shift could potentially be improved by encouraging public transport usage by the construction workforce via measures including:
- (a) To have tools provided at the place of work or for secure storage facilities for their own tools and equipment on site.
 - (b) The requirement for any resident construction staff wishing to use private transport to access the site, vehicles entering the site to have a minimum of three people in the vehicle.
 - (c) The requirement for that construction staff that reside locally must use public transport to and from work, with no provision for parking spaces on site. This would be supported through financial support for these workers in the form of travel credits. Backed up by a strategy to limit on-street parking in the area adjacent to the application site.

Bus Travel during the Construction Phase(s)

- 6.46 The Transport Assessment Appendix TA-AD (APP-128) sets out a framework plan for managing traffic levels to the site during the construction periods. A satisfactory Construction Traffic Management Plan (CTMP) will need to be in place before work commences, together with a review mechanism that can ensure that the Plan is effective, with a requirement for additional measures by the principal contractor if the agreed targets are not being met.

- 6.47 The local bus network would need adjustments to meet this demand which could be managed in conjunction with the proposed Transport Co-ordination Centre or directly with the principal contractor. It is most likely that earlier and later buses will need to be added to current bus services or for some extensions of routes at shift times to and from the Resort site, as no people mover would be in operation. Funding will be required to provide for these facilities and this support needs to be formalised with a guaranteed funding pot.
- 6.48 A ready-made facility is planned to be in place for local travel options in 2022 in the form of a Mobility as a Service (MaaS) app, procured by KCC. An obligation contribution to the utilisation of this app for the Resort project would enable suitable ticketing options, including travel on Demand Responsive Transport (DRT) services, to be available and tailored for this workforce.
- 6.49 To assist further with the reduction of the private transport mode share, funding should also be provided for further travel credits for staff residing in locations with direct rail links to Greenhithe Station.

Bus Travel during the Operational phase(s)

- 6.50 The submitted Bus Strategy (APP-120) and the related Travel Demand Management Plan (APP-127) both contain positive proposals for achieving reasonable mode shares for sustainable modes of transport. However, mitigations will be required to ensure that targets are achieved, although with a predicted car share for visitors of between 63% and 67.5%, there should be scope to improve on these figures, as outlined in Section 3.1.3 of the Travel Demand Management Plan, where the forecast sustainable transport mode share is regarded as a minimum figure. A predicted staff bus mode share of 24-30% is a positive target. However, there will be a need to formalise mitigating actions to ensure this share is achieved, with the predicted share being a minimum requirement, and appropriate corrective measures to address any shortfall of the minimum.
- 6.51 The predicted car mode share for visitors in Section 8.1 of the Travel Demand Management Plan is shown at a baseline level of 63-66%. Despite being described as “an acceptable proportion of journeys”, this level of car use would not be sustainable. However, the Travel Demand Management Plan then sets out “an ambitious target” of 40% mode share for private transport from 2029 and then goes on to list a series of very positive measures that could achieve this. To have confidence in these measures the Authorities would expect compliance to be ensured by the inclusion of an appropriately worded requirement in the draft DCO.
- 6.52 Whilst there is a comprehensive bus network in North Kent with plans for expansion as housing developments are occupied, the network does not have the capacity on a number of routes for the staff and visitor demand predicted in the Transport Assessment. It is forecast that staff travel and transfers from rail will form most passenger journeys and it is concerning that staff travel times are proposed to coincide with existing peak usage on bus services, primarily at school bus times.
- 6.53 Further analysis is required regarding bus route design and impacts on residential amenity, together with consideration of the impacts of the bus only access from Ingress Park to the Hotel area of the Resort site, as proposed in the Bus Strategy (APP-120).
- 6.54 The People Mover infrastructure and operation is required to secure the necessary modal shift. It is important that funded measures are secured to cope with the peak additional passenger demand together with a plan for any disruption to the transport network, including roads, rail, buses or ferries.
- 6.55 Events at the Resort will create further peaks of demand and journey patterns that are outside of the forecast transport usage for core Resort activities in the Transport Assessment. If the on-site car parking is fully allocated to Resort visitors, without mitigations, public transport will be stretched and, in places, capacity is highly likely to be exceeded.
- 6.56 Firm plans and associated funding will be required for the following elements, much of which is referenced in the Transport Assessment:

- (a) The proposed transport infrastructure at Ebbsfleet International Station, the Interchange Plaza at the resort and the Ferry Terminal. These will all need to be constructed and vehicles, and telematics testing completed, in advance of the opening day of the resort.
 - (b) The Craylands A226 tunnel will need to be in place before staff occupy the residences at Craylands pit. This will then allow buses to link the staff accommodation and access to the Resort from the A226.
 - (c) Bus priority and traffic management measures on the highway, particularly on Galley Hill and London Road.
 - (d) Infrastructure at key bus stops that will be used by Resort visitors and staff.
 - (e) Improvements to the bus routes to accommodate the additional demand
- 6.57 Funding will be required for the delivery and operation of the high-quality People Mover between Ebbsfleet Station and the Resort operated with electric buses. An agreed specification needs to be able to meet the predicted demands with flexible additional resources at peak times and when any disruption occurs.
- 6.58 Additional bus services and enhancements of existing services will be required to meet the additional predicted demand from visitors, transfers from rail and resort staff. The Bus Strategy (APP-120) set out a series of proposals for enhancing the local bus network, including the Fastrack services. These proposals are welcomed. It is noted that it is suggested that, on the core services, the Resort could assist with funding if the additional patronage does not cover additional costs. However, for certainty of the procurement of expensive electric vehicle assets and to allow a progressive approach to planning the bus network, a Bus Service Fund would need to be agreed at least a year before park opening to support the costs of the additional facilities. Once in operation, generated revenue could be credited back against this support. Funding could also include extensions of the Ebbsfleet DRT scheme, additional evening buses and additional capacity from Greenhithe station for rail transfers.
- 6.59 There is a clear need to be flexible as demand patterns emerge. A Travel Management Steering Group is proposed in the Travel Demand Management Plan (section 7.2 of APP-127). This form of collaborative body would be welcomed to oversee the allocations of the Bus Service Fund. However, it would need to be chaired by KCC to ensure alignment with local transport partnerships, contractual arrangements with operators and the Fastrack Board.
- 6.60 The proposed Travel Management Plans for both visitors and staffs are set out in the Travel Demand Management Plan. These include a comprehensive suggested list of a wide range of measures aimed at encouraging use of sustainable modes of transport to and from the Resort. Most of these measures would clearly form part of any agreed package of measures with this aim. However, it will be important to build on these proposals and formalise them into an agreed Plan before the Resort opens, supported with funding to allow successful implementation. Measures should include travel credits and discounts for staff travel (on a wider basis than just a pilot scheme), a contribution to KCC MaaS platform, car clubs, integrated ticketing and the marketing and communication of green travel modes. The Plan should be monitored closely under the Travel Management Steering Group.
- 6.61 It is proposed in the Travel Demand Management Plan to set up a Transport Co-ordination Centre. It will be necessary to ensure it has the funding to apply effective solutions to peak day demands, event transport and for when disruptions to the transport network occur. This needs to be formalised with secured funding and requirements for trigger points when action needs to be taken.

Highway Drainage

- 6.62 Appendix 17.2 Surface Water Drainage Strategy (document reference APP-189) Figure 3.4 Page 36 does not appear to show the highway drainage system serving Tiltman Avenue and a part of

Manor Way. It is understood that this system links with Thames Water Surface Water Sewers which also serve drainage along London Road. This passes into the proposed development but is not shown on the existing utilities Kent Project Site. The Authorities believe this may connect into the existing watercourses within the sub catchment. It is important to retain the functioning of this drainage to avoid increased flood risk local to the development.

Public Rights of Way (PRoW)

- 6.63 Whilst recognising the employment, economic and tourism benefits of the LRCH application, this needs to be achieved without significant adverse impacts on the public rights of way (PRoW) network. Whilst, in general, increased use and provision for cyclists and walking with a direct link from public transport interchanges and accessible routes to the proposed ferry through and around the resort are welcomed, there are constraints which need to be understood and mitigation provided. The areas of significant concern where issues remain unresolved are outlined below.

Measures of baseline use of the PRoW network

- 6.64 The Authorities have requested the use of electronic counters on public rights of way routes around the River Thames and on north-south and east-west strategic routes to produce credible survey data on use both before and after construction. Occasional site visits to assess footfall through evidence of erosion, dog faeces and litter (per paragraph 2.8 of the Public Rights of Way Assessment and Strategy APP-144) are not considered to produce sufficiently robust data.

Length of PRoW network available

- 6.65 It is proposed to extinguish Public Footpaths DS2 and DS30, both north-south routes, which is disappointing. Whilst there is an intention to create a route from Ebbsfleet International Station to the ferry/port, this appears to be a shared use route beside the dual carriageway/access road. There is no indication it will become dedicated as a PRoW or Cycletrack which would give it permanent legal status, rather than a permissive status. It should be an easily identifiable and signed continuous route. The Applicant must confirm its proposals in a suitably binding manner.
- 6.66 There are offers of permissive routes on the peninsula, but this could lead to greater footfall in delicately balanced bio-diverse areas. A continuous north-south route incorporating DS31 and DS12, even if along a slightly different line, must be retained for pedestrian use to maintain the present network connectivity to allow for shorter circular walks and to avoid harm to the network arising from the loss of existing routes.
- 6.67 The creation of a new route to the west of the port/ferry out to the River shore seems unnecessary as byelaws will prohibit swimming, sailing in this area and with rising sea levels this may become unmaintainable. It would be better to divert DS1 onto the top of the flood banks as shown on the England Coast Path route, to allow River views.

Status of new PRoW routes

- 6.68 There are presently no PRoW of a higher status than footpath within the Order limits, apart from Restricted Byway DR129 where it meets the A2. Cycling is a popular pastime, with benefits to fitness and mental health, and a form of sustainable local travel between the Riverside communities. DS17/NU2 have recently been upgraded to provide a cycle route east-west connecting Swanscombe with Northfleet stations. The Authorities wish to make use of the England Coast Path part of the Thames Path, and a shared use route will result in greater use. The Authorities are of the view that DS1/NS1 ought to be diverted onto the England Coast Path route that was approved by the Secretary of State for Environment, Food and Rural Affairs on 23 April 2020 to save proliferation of routes and maintenance responsibilities. There also needs to be suitably binding measures relating to the delivery and maintenance of these routes, which is currently absent from the Applicant's draft DCO.
- 6.69 In line with national expectations of the England Coast Path, the Authorities wish to see the coastline in front of the development proposed designed in such a way that it maximises views

and appreciation of the Estuary and coast. The relationship with the proposed ferry/port terminal needs to be reviewed and considered in the important objective.

Connectivity of the network and interruption during construction

- 6.70 The important east-west and north-south links as well as the Riverside route and links to public transport interchanges, including the ferry, need to be maintained as part of an important network both for leisure and sustainable travel. It is disappointing to see that the Applicant intends to close DS1, DS2, DS12, DS30 and DS31 during construction. It is also likely that a temporary closure of DS17/NU2 may be required whilst a bridge to carry the route over the new access road is installed. This should be scheduled to ensure the temporary closure is for as short a time period (48-72 hours) as possible, preferably at a weekend.
- 6.71 These temporary closures will lead to a major reduction in recreational access and safe off-road travel links for the residents of Ingress Park, Swanscombe and Northfleet who use these routes and the River paths for dog walking, leisure walking and have little other green space available to them. The Applicant must ensure that these routes will be available both during construction and operation of the proposed development even if the routes are temporarily diverted to different places at different times. This will take careful scheduling and appropriate measures must be included in the Outline Construction and Environmental Management Plan (CEMP), to be approved by the relevant planning authority, to ensure appropriate regard is had to user health and safety. It should be given greater weight, as the only alternative route would push pedestrians and cyclists onto the London Road/Galley Hill Road with its accompanying traffic dangers and air pollution.

Visual, olfactory and auditory impact on users

- 6.72 Whilst the Swanscombe Peninsula has a history of industrial uses it has been reclaimed over the last 20 years by fauna and flora. There are significant views out to and across the River Thames, and long-distance views south to the Downs. Public footpath DS2 runs beside the Ebbsfleet River and a large pond with glimpses of wildlife and occasional interruptions from the high-speed trains as they come out of the tunnel. The proposal seeks to place paths beside access roads, giving a much more urbanised appearance. This may result in a loss of recreational appeal to leisure walkers. The corridor to take the Riverside route past the ferry/port needs to be of a much more generous width, in line with the status of a National Trail, the ECP. The present intention of 10 metres within fences to include a footpath, cycle path, road and ditches is far from adequate; 20 metres wide would give adequate segregated room for a shared use route for cycles and pedestrians with a minimum width of five metres, and with a separation distance of at least half a metre from the carriageway, a carriageway width of a minimum of four metres if traffic speed will be kept to a maximum of 30 mph, with another half metre minimum separation distance to a ditch and two metres beyond to allow for planting to the fence.
- 6.73 The use of solid hoardings rather than permeable Heras fencing should be considered adjacent to PRow to minimise proximity to dust. (APP- 078 Tables 5-1 page 45) PRow users should be included as noise and dust sensitive receptors, alongside residential receptors.
- 6.74 Further consideration should also be given to noise during construction and operation, particularly of the ferry/port development and its impact on leisure and amenity use of the PRow network in the Outline Construction Environmental Management Plan (APP-078). Reduced vehicle speeds and lower noise surfaces should be utilised, particularly along the Access Road, to preserve the amenity and attractiveness of these routes. PRow users are not considered in APP-338 illustrating the location of noise sensitive receptors.

Legal process and consultation

- 6.75 It would appear that the DCO, if made, will replace the right of the public to be consulted on any proposals to divert PRow routes as provided under the processes of the Town and Country Planning Act and the Highways Act. The details of suggested alternative routes were not available during the public consultation period so could not be commented on at that time. There is still a lack of detail and consistency between the various plans and this should be addressed

by the Applicant. The Applicant should be required to consult with the public on any proposals to divert or restrict the public use of Public Rights of Way. The Authorities will work positively with the Applicant to ensure that appropriate provision is secured by way of the draft DCO or development consent obligations.

- 6.76 The Outline Construction Environmental Management Plan (APP-178) should include measures to ensure that appropriate diversions are available for public use should the Applicant seek to restrict public use during construction of the proposed development.
- 6.77 There are also recorded minimum widths for some paths given in the Definitive Map and Statement for Kent which should be retained. Any change in gradients should also be subject to consultation with KCC PRoW so that obligations under the Equality Act 2010 can be considered. Where the Applicant's proposals result in any permanent changes to the existing public rights of way network the Applicant should meet the Authorities' costs of making legal orders to amend the Definitive Map; this should be secured by way of an appropriate development consent obligation.

PRoW design specification and maintenance

- 6.78 The use suggestion of Hoggin and compacted gravel APP-144 page 25, is not suitable for cycle use. The Authorities will work positively with the Applicant to ensure that appropriate specifications are secured by way of the draft DCO or development consent obligations.
- 6.79 2-way cycle tracks require a minimum width of 3m. All cycle and pedestrian route dimensions should be appropriate to the level of use, setting, and these measures ought to be clearly specified in the Design Code. (APP- 438, 439).
- 6.80 The Authorities would welcome additional surfacing on routes, such as NU14 and others along the periphery of the A2 as well as the routes with the peninsula. The design specification should also improve accessibility for all users, including those in wheelchairs, buggies and prams which the applicant is keen to provide and the detailed design must be subject to the highway Authorities' approval, in consultation with the relevant planning Authorities. Physical measures to prevent motorised vehicles accessing the PRoW network must be provided (such provision to be subject to a suitably worded requirement to the DCO or development consent obligation). Signage alone will not be effective based on present experience in the area.

Maintenance

- 6.81 Most Public Rights of Way are maintainable at public expense. This would include signage, vegetation clearance and surfacing. It is vital therefore that specifications are agreed with LRCH that of a high quality and will be easily maintainable and future proof and that there is an appropriate maintenance period following the completion by the Applicant of any works to the adopted PRoW network. If the applicant wishes to be responsible for maintenance of PRoW within the Order limits, then appropriate provisions would need to be agreed and made in the draft DCO or development consent obligation to ensure specifications appropriate for public use are secured. This is particularly relevant to the proposed installation of a board walk on DS12 and the Authorities would expect to receive a commuted sum for the future increased maintenance costs of such a structure should the Applicant require KCC to adopt it. If the Applicant's intention is to retain the maintenance liability then this must be stated clearly in the draft DCO; Part 3 of which contains no measures relating to maintenance of new, diverted or altered highways.
- 6.82 There are no stiles on paths within the Order limits of the Kent Project Site. Any limitations imposed by furniture should be as accessible as possible. Gates are the responsibility of landowners to maintain and must be authorised by KCC PRoW, for the purpose of containing animals. The Authorities require the Applicant to give appropriate enforceable commitments (whether by way of the draft DCO or development consent obligations) to ensure that this is the case.

7. RIVER TRANSPORT

Construction Phase(s)

- 7.1 **Gravesend to Tilbury Ferry Patronage** – the identified possibility for the construction phase to attract a proportion of its labour force from the Thurrock side of the River has the potential to generate additional use of the ferry. Understanding of volumes and shift patterns will be needed for this to be accommodated and in turn secure the potential benefits.
- 7.2 **Maintenance of Passenger and Ferry Access** – the works to develop the infrastructure at the Tilbury Landing Stage have the potential to cause disruption to the current Gravesend to Tilbury Ferry(GtTFS) operation and in respect of passenger access. It is unclear how this will be avoided. Detail on the planned infrastructure and how the construction phase for this element will be handled to ensure no implications for the GtTFS service is needed.
- 7.3 **Increase in Vessel Traffic** – the stated increase in vessel traffic linked to the movement and delivery of goods and materials has been identified as carrying some level of risk. As the most intensive user of this part of the River, there is concern about the increased risk of collision with or disruption to the Gravesend to Tilbury Ferry service operation. A detailed passage and other management plans will need to be formed in conjunction with the service operator and the Port of London Authority.

Operational Phase(s)

- 7.4 **Improvement for Passenger Facilities at Tilbury Landing Stage** – although the detail of such infrastructure is unclear, there is a stated intention to improve the passenger and other facilities at Port of Tilbury bringing potential shared benefit for the Gravesend to Tilbury Ferry service and its passengers.
- 7.5 **Integration with the Gravesend to Tilbury Ferry Service (GtTFS)** – the River services proposed as part of the development are positioned as being entirely separate and without any consideration of integration with the current Gravesend to Tilbury Ferry Service or the provision to use the resource to provide other desired transport links. Accepting that the GtTFS would not need the intensity of the Park and Glide service and that not all services or passengers would want or need to divert via Gravesend, there should be consideration of an integrated solution that, for example, diverted some Park and Glide services via Town Pier, Gravesend to absorb the current GtTFS. This could bring mutual benefits in terms of sustainability and a River link from Gravesend to LR that would not be provided as part of the currently proposed service pattern but this approach does not seem to have been considered.
- 7.6 **No generated benefit for Kent residents in terms of River Transport offering** – under the current service proposals, no benefit in respect of the River Transport offering would be generated for Kent or Kent residents. The extension of some of the proposed City River Links to serve the Town Pier Pontoon at Gravesend would provide long desired River Transport link from Gravesend to the City bringing benefit for Kent and Kent residents not otherwise derived from the proposed services. The development of the River services offering would provide associated benefit for Kent, Kent residents and the GtTFS and in addition would expand the River transport offering for the Resort. Development of the proposed River services network in the way described would improve these neutral impacts into Positive or Very Positive ones, which will weigh in the planning balance. However, the current strategy excludes Kent from any associated benefit and needs development. It is also not clear how any of the new services are to be secured.
- 7.7 **Mechanism to Secure Services** - in the absence of any commitment to fund services then it would appear that the assumption is that the perceived levels of patronage and revenue generated will be sufficient to sustain service at the outset and throughout. However, no detailed analysis of this is evident leaving an absence of assurance about how and if these necessary services, in whatever form they are to be provided, are to be secured on a viable basis. The operator for the new service offerings has been seemingly pre-determined, which potentially acts as a barrier to some of the more integrated solutions otherwise possible and causes concern as to the viability and certainty of delivery.

- 7.8 **Operational Implications for the Gravesend to Tilbury Ferry Service at Tilbury Landing Stage** – unless part of an integrated solution then the proposed Park and Glide service will represent another, intensive operation that would need to be accommodated on the current Port of Tilbury Landing stage. It is noted that the strategy undertakes to manage this and refers to positive discussions with Port of Tilbury and with the current GtTF operator. However, it is also noted that even without the additional service demands, capacity at this facility is already pressurised, notably when a proposed cruise ship is resident at Tilbury and how this will be designed and managed in a way that would ensure unhindered access for the GtTF and its passengers as well as the new service is unclear. A mechanism to ensure that the presence of an additional service / vessels at the Tilbury Landing stage does not adversely impact on the operation of the Gravesend to Tilbury Ferry service is needed.
- 7.9 **Mitigation for Service disruption** – inclement weather in the form of fog and wind will unavoidably cause disruption to River services and there is no evidence of this being considered. In the absence of a mitigation plan, then this could act as a disincentive to using the Park and Glide service in particular. There could be significant and unexpected demands placed on alternative modes such as road, bus and rail creating a negative impact, if not for the River services then for these alternative modes. A River Services Adverse Weather Plan is needed and which will need to consider how a combination of advance information for visitors and the provision of alternative transport solutions avoid an adverse and unexpected impact through demand on other public transport services and the highway network.
- 7.10 **Additional vessel movements** - the Gravesend to Tilbury Ferry service is the most intensive operation on this part of the Thames, crossing the River four times in any hour six days per week from 0540 to 1910. The increase in river traffic in the form of the proposed Park and Glide service has identified an increased risk of collision and is therefore of particular concern for the GtTF service. A detailed passage plan formed in conjunction with all stakeholders to ensure that none of the operations are compromised is necessary.

8. LANDSCAPE AND VISUAL

- 8.1 The relevant designations that need to be considered as part of the site assessment is summarised below and illustrated in Figure 11.2 (Document App 247 (6.3.11.2)) Swanscombe Marsh SSSI should be added to this list.
- 8.2 Paragraph 11.154 of Chapter 11 of the ES (APP-060) states that of the 74 photoviewpoints in total, 25 are considered to experience significant effects (see table 11-9 for more detail). The proposed mass of buildings is shown on the photomontages, Figure 11.14, (APP-259). The harm caused to the built and natural landscape is obvious in some of the views, the scale of the development should be reconsidered in line with comments in this document and the photomontage images redrawn.
- 8.3 Paragraph 11.156 of Chapter 11 of the ES (APP-060) states there would be significant effects from areas of Swanscombe along Galley Hill Road and Leonard Avenue, dwellings along the waterfront and western edge of Kent Project Site at Ingress Park, Riverside properties Greenhithe and waterfront dwellings at Grays on the northern bank of the Thames opposite the Kent Project Site (see photoviewpoints for more detail – Figure 11.10 (APP-255)).
- 8.4 Paragraph 11.159 - 11.161 state that footpaths, Swanscombe Heritage Park (see photoviewpoint 9) and National Cycle Routes would experience potential significant effects during the construction period. Clarification is required on how this would be mitigated over the extended construction period.
- 8.5 It is not clear from the assessment how the generous parameters set out in article 5 of the draft DCO have been assessed. In particular, it is not clear how the deviations (both horizontal, vertical and laterally with neighbouring works) for the Access Road have been assessed.

Construction phase(s)

- 8.6 **Tree and scrub removal along the proposed Access Road;** sheets 5 and 8 of the Tree Retention and Removal Plan (document reference 6.3.12.57) indicate several areas of tree groups and scrub that will require removal to facilitate the proposed access road. The majority of these appear to be unavoidable losses, and can be mitigated in landscape terms through appropriate mitigation planting, in the form of new woodland and scrub planting. However, the Illustrative Landscape Plans (document reference 2.20) only indicate 'wildflower meadow verge with trees' along the access road, which is insufficient to mitigate for the proposed losses.
- 8.7 **Ebbsfleet Gateway planting;** Sheet 8 of the Tree Retention and Removal Plan (APP-320), shows the Ebbsfleet Gateway planting (G100, G104 & G105) as being removed. The planned A2 upgrades to the Ebbsfleet junction currently being implemented will reconfigure the current road layout and replacement planting is planned to the two roundabouts in keeping with the current planting style, with the landscaping to the central area (G100) being retained. The London Resort highways plans and associated drainage (APP-018, APP-019, APP-020) comprise minor works to this junction and do not appear to affect the central area (G100) and its identified need for removal is therefore questioned (it should be noted the Project Description in ES Chapter 3, refers to a new gyratory junction at paragraph 3.25, which is understood to now be a superseded design). Furthermore no mitigation planting is shown within the Landscape Strategy or Illustrative Landscape Plans to mitigate for the loss of G100 and it must do so and compliance with the Landscape and Ecology Management Plan (APP-143) secured through a DCO requirement.
- 8.8 Furthermore a large, permanently wet drainage basin is proposed to the eastern roundabout which will result in very limited space for replacement tree and hedgerow planting, eradicating the current design and style of this gateway landscaping into Ebbsfleet Garden City – thus resulting in harm, which does not appear to be addressed by the Applicant. We would request that the drainage basin be relocated away from the roundabouts themselves, to preserve the character of the Garden City gateway landscaping.

Operational Phase(s)

- 8.9 Height Parameters – Hotel 4:-
- (a) Hotel 4 is set at a parameter height of 128m, almost twice the height of the other 3 hotels proposed (Work No. 5a on the Parameter Plans, document reference APP-024). This was raised with the Applicant as a concern at the PEIR stage and subsequent workshops and is considered excessively tall compared to the remainder of the resort proposals and the surrounding context. There does not appear to be any rationale for this height parameter within the submission documents. Figure 8.12 on page 77 of the Design Code (document references APP-438 and APP-439), shows an illustrative view of Hotel 4 which is shown substantially lower than the parameter height of 128m. Photomontages 2, 9a, 26, 27, 66 and 71 (ES Figure 11.14, document reference App-259 (6.3.11.14)) clearly illustrate that this parameter height (shown in yellow) will sit substantially above the skyline of the majority of the resort and its surroundings, yet the illustrative model for this hotel sits well below the parameter, therefore illustrating a much smaller building. A solid mass of built form within Work No.5a at a parameter height of 128m, will increase the already substantial visual envelope of the proposals, accentuated by lighting within the building.
- (b) There is also an inconsistency within the ES Chapter 3, which refers to Hotel 3 as being up to 128m height parameter (paragraph 3.28, APP-052), rather than Hotel 4 as stated in the Design Code.

Height parameters - Foadarche

- 8.10 The height of the 'Foadarche' in the arrivals plaza is a 130m tall structure (Work No. 12 on the Parameter Plan, (APP-024). This element of the scheme has been added after the PEIR stage, when the Authorities raised concerns over the heights of other elements of the scheme in excess of 100m tall. The 130m height proposed is excessively tall within an open landscape and increases the already substantial visual envelope of the proposal, which would be further exacerbated by illumination of the structure. The structure also negatively impacts on the setting

of Grade II* All Saints Church as viewed from High Street Swanscombe looking north, as illustrated on Visual Representation 57 of the Photomontages (ES Figure 11.14, document App-259). This structure (including its illumination) and its impact on the Grade II* Listed church's setting, does not appear to have been assessed within the Cultural Heritage ES Chapter 14 (paragraphs 14.207 – 14.209 of document APP-063).

- 8.11 The Foadarche would also be prominent on the skyline of views from Swanscombe Heritage Park sitting substantially above the tree line and the majority of the rest of the resort proposals, as illustrated on Visual Representation 9b of the Photomontages (ES Figure 11.14, document APP-259).
- 8.12 Furthermore as the model of the Foadarche is shown indicatively within the Design Code and Photomontages, there is a concern that a larger mass of built form could end up being built, within the current height parameters of Work No. 12. The Authorities wish to work positively with the Applicant to secure appropriate measures to guide the design of the Foadarche to mitigate these issues within the Design Code.

Height parameters – Resort Area Gate 1

- 8.13 The parameter heights for Gate 1 comprise areas of 40m, 60m, 70m, 80m and 100m height (Work No. 1 shown on the Parameter Plan, APP-024). By contrast, the parameter heights for Gate 2 vary between 35m and 65m. As previously raised by the Authorities during the Applicant's pre-application statutory consultation and at subsequent workshops, there doesn't appear to be justification for parameter heights of up to 100m high, particularly considering the tallest rollercoaster in the UK is currently around 65m high, at Blackpool's Pleasure Beach. Whilst it is understood that the Applicant wishes to maintain flexibility for future rides with the Gate areas, the parameters for Gate 1 are considered too high within the open surrounding landscape, particularly in views across the Thames from Essex and will substantially increase the visual envelope of the proposals, accentuated by the likely illumination of rides. There is also a concern that other elements within Gate 1, in particular buildings, could extend up to these heights should the current parameters be permitted, particularly given the Design & Access Statement states that 'at least 70% of the attractions in the Gates will be located inside buildings' (paragraph 6.3.3, APP-436).

Impact on public footpath DS1

- 8.14 The route of public footpath DS1 (also part of the proposed England Coast Path) passes through a narrow 'pinch point' between Gate 1 and the ferry terminal (Work No. 19b on the Works Plans, APP-010). This is illustrated at Figure 26, on page 49 of the Landscape Strategy (ES Appendix 11.7, APP-142). The footpath route is shown running between a service road and the wharf area boundary, with very little space for mitigation planting. This is further accentuated by the limit of deviation for work No.15 as shown on Works Plans, which extend fully across Work No. 19b, as well as the potential deviation of 20m laterally for all Work boundaries as stated within article 5 of the draft DCO. The character and experience of this footpath route for the public accessing the marshes, rather than the resort, should be a key consideration.

Operation phase(s)

- 8.15 **Broadness Marsh and Black Duck Marsh interfaces with the proposed resort;** Paragraph 5.16 of the Landscape and Ecology Management Plan 'LEMP' (APP-143) describes the boundary treatment between the north eastern edge of resort area Gate 1 and Broadness Marsh, as comprising a 10m wide tree planting zone and swale on the inside of resort gates. Paragraph 5.17 of the same sets out key management objectives of the Broadness Marsh area, but omits a fundamental objective which should be to establish a visual barrier between the resort area and the open marsh. There does not appear to be any screening planting proposed outside of the boundary of the resort. Furthermore the 10m wide tree planting and swale zone is not included within the Design Code for Gate 1 (section 4.1, APP-438). The Design Code for Fences and Edges Types A and B (which includes the Gate 1 and Broadness Marsh interface), shows a 7m wide service road and 2-3m wide landscape strip inside the Gates and a 6-10m wide swale

outside of the Gates (section 17.2.4, APP-439). As a consequence there is very little space left to accommodate a meaningful tree / woodland belt for screening.

- 8.16 The boundary treatment between the resort area and Black Duck Marsh is stated as comprising newly planted wet woodland on the marsh side of the boundary, to establish and form a visual break (paragraph 5.8 of the LEMP). This is further illustrated at Figure 24 on page 47 of the Landscape Strategy (APP-142), which indicates newly planted tree planting and wet woodland extending 10m into the marsh outside of the Resort boundary, and a further 10m wide tree planting zone and swale inside the Leisure Core. However this does not align with the Design Code for Gate 2 (APP-438 and APP-439). Furthermore the Design Code for Fences and Edges Type A shows a 7m wide service road and 2-3m wide landscaping strip inside the Gate, and a 6-10m wide swale outside of the Gate, with no mention of the 10m wide strip of wet woodland. A consistent approach throughout the documents to this key interface is required to ensure a reasonable level of screening is achieved and appropriately secured through the Design Code and the Landscape and Ecological Management Plan compliance with which in ought to be secured through their corresponding requirements in Schedule 2 of the draft DCO.
- 8.17 **Gate 1 Back of House** The Landscape Strategy (APP-142) and Illustrative Landscape Plan sheet 2 (APP-025) both indicate new woodland planting to the southern boundary of Gate 1 Back of House, which is stated as forming an ecological connection for dormice. However this woodland is not shown on the Gate 1 Back of House Design Code, nor the Design Code for Fences and Edges Type K. Given the likely restriction for planting close to the base of the chalk cliff, sufficient space should be made to allow this woodland planting to be implemented. A consistent approach throughout the submission documents is required, to ensure this woodland is delivered to mitigate identified harm and appropriately secured through the Design Code, Landscape Strategy and the Landscape and Ecological Management Plan and their corresponding requirements in Schedule 2 of the draft DCO.
- 8.18 **Design Code – Routes and Roads:** the Routes and Roads section of the Design Code (APP-438 and APP-439) sets out the minimum widths for new roads, people mover routes, cycleways and pedestrian routes. However, it does not include any minimum widths for soft verges, in particular to vehicular roads, to allow for tree lined streets, a fundamental principle of the Ebbsfleet Garden City Public Realm Strategy Types F, I & J should all include soft verges of 2.4m-4m in width to allow for tree lines streets. It also recommended that the retained London Road be added to this section of the Design Code. Given the vegetation loss proposed along this key retained route through the resort, new street tree planting should be required. The Authorities will work positively with the Applicant with a view to agreeing appropriate amendments to the Design Code to take account of this so the Authorities can have confidence that the matter will be appropriately addressed by the Applicant.
- 8.19 **Design Code – Staff Accommodation:** there is a relatively low quantum of open space serving these high density dwellings located within a chalk pit, parts of which will be heavily shaded, particularly outdoor free-space for children to kick a ball and doorstep play facilities. Residential development within the Ebbsfleet Garden City area is guided by the Design for Ebbsfleet and Ebbsfleet Public Realm Strategy documents and these should be a key consideration in the design of the staff accommodation. We would recommend alterations to the Design Code to provide a commitment to a greater variety of open space than currently shown, which should include outdoor children's play facilities, outdoor gym equipment and potential for a community growing area and orchard.
- 8.20 The built form should be subject to more detailed scrutiny than can be afforded in the Design Code Process alone, which by its very nature cannot define the final appearance. The relevant LPA in which the element of the development is located should approve the built and landscape detail of the development to ensure appropriate design, townscape and landscape quality is delivered and the necessary management and maintenance arrangements agreed. The Authorities will work positively with the Applicant with a view to agreeing appropriate amendments to the requirements of the draft DCO.
- 8.21 **Impact on Marshland LLCA:** the Schedule of Operational Effects within ES Appendix 11.3 (document reference App-138 (6.2.11.3)) states that the effect on the Marshland Local

Landscape Character Area will be moderate adverse at year 1, and moderate beneficial at year 15 (page 8). The effect at year 15 is considered to be substantially downplayed and would likely remain as moderate adverse (as per the assessment of the Western Thames Marshes Kent level Landscape Character Area, page 13). The assessment needs to be updated and an appropriate design response and/or mitigation identified.

- 8.22 **Visual impact on Footpath NS177, Cobham, Kent Downs AONB:** the Schedule of Operational Effects within ES Appendix 11.3 (APP-138) states that the magnitude of change on VP41 at year 1 will be very low, which the methodology defines as being 'the proposed development will form a barely noticeable component of the view' (Table A1-5, Annex 1, document (APP-136). However, Photomontage 41 (ES Figure 11.14, document APP-259) shows the taller elements of the scheme being visible above the vegetation line, which would be further visible in winter views when foreground vegetation is without leaf cover. It is considered that the magnitude of change is slightly downplayed and should be low (rather than very low), resulting in a moderate adverse and significant effect from this viewpoint within the Kent Downs AONB.
- 8.23 **Visual impact on the Galley Hill Road:** the Schedule of Operational Effects within ES Appendix 11.3 (APP-138) states that the visual effect at year 1 on PVP5: Galley Hill Road will be major beneficial for high sensitivity residential and pedestrian receptors, yet moderate adverse for low sensitivity road users. Whilst there may be some upgrades to the viewpoint, there will be a fundamental change to the view, in that existing panoramic views looking towards the River Thames (ES Figure 11.12, Photoviewpoint 5, document reference APP-257), will become blocked by the introduction of built form. This is indicated on the photomontage (ES Figure 11.14, Photoviewpoint 5, document reference App 259 (6.3.11.14), although would be clearer had the photomontage been based on the winter view. The effect on pedestrians, road users and residential receptors at operation year 1, is considered by the Authorities to be moderate – major adverse.
- 8.24 **Height Parameters:** to address the concerns raised in relation to the maximum height parameters sought by the Applicant, the Authorities wish to work positively with the Applicant through the Design Code to reduce the parameter heights for Hotel 4, the plaza Foadarche and Gate 1 (within Work Nos. 5a, 12 and 1), from 128m, 130m and 80-100m respectively to around 60m - 70m, in line with the tallest elements proposed within the remainder of the resort, to reduce the overall visual envelope of the proposals and the severity of visual effects, particularly in open views from Essex looking across the River. The Authorities also seek a requirement that only 'themed rides' within Gate 1, and a 'loose structure' within the plaza, extend up to the maximum parameter heights, with any solid mass buildings within the same Work area, being of a lower parameter height.
- 8.25 **Impacts on habitats and planting:** the Schedule of Operational Effects within ES Appendix 11.3 (document reference App-138 (6.2.11.3) states that the pre-mitigation operational effect (year 1) on Habitats and Planting within the Kent Project Site would be major/moderate adverse, resulting from the loss of scrub, woodland, grazing marsh, grassland and salt marsh and reedbed. The post-mitigation effect (year 15) then changes to a major/moderate beneficial effect, stated as resulting from the planting of approximately 6,000 trees, as well as the creation of new grassland, ponds, swales and green roofs, including off site land which will be used to create habitats.
- 8.26 Whilst it is agreed in principle that there would be some reduction in the severity of effect after new planting has matured during the 15 year period, the post mitigation major/moderate beneficial effect is considered to be over-stated. The level of detail provided within the Landscape Strategy (APP-142) and Landscape and Ecology Management Plan (APP-143) does not detail the type or quantum of mitigation planting proposed and does not accurately demonstrate such a shift in effect from major/moderate adverse to major/moderate beneficial. A separation of these habitat/planting types within the assessment tables, and a breakdown of the likely effect on each (i.e. woodland, scrub, trees, grassland) would enable a more accurate assessment to be made. Further detail is also required in terms of the proposed mitigation, including quantifiable assumptions for new planting. Furthermore, the Design Code does not include sufficient detail on the proposed landscaping, or sufficient space to ensure mitigation planting can be delivered where required.

8.27 Details of off-site mitigation are assumed within Chapter 4 of the Biodiversity Net Gain Assessment (APP-148) and are reliant on between 160 and 210 hectares of off-site land, in order to achieve a net gain. The effect on habitats and planting at the Kent Project Site are likely therefore to remain adverse at year 15, with any beneficial effect largely resulting from a theoretical off-site scenario on yet to be secured land. The Applicant's draft DCO does not contain any measures to secure the provision of the off-site mitigation and so any mitigation attributable to this cannot be relied upon in the assessment. The identified harm is therefore not mitigated and ought to weigh against approval of the proposal unless effective and timely mitigation is appropriately secured through the terms of the consent.

9. TERRESTRIAL AND FRESHWATER ECOLOGY

Adequacy of Baseline Surveys

9.1 The ecological surveys are intended to provide a good baseline of the habitats and species within the Order limits. However, the survey effort to date is not considered sufficient to enable a thorough assessment of the likely significant effects of the development proposals to terrestrial and freshwater ecology. The Authorities concerns in this regard include:

- (a) Hazel Dormice: Within the Broadness saltmarsh area, the dormouse surveys only commenced in September and, therefore, it cannot be concluded that dormice are not breeding within this area. It is possible that dormice are breeding throughout the site and the population may be larger than identified during the surveys undertaken to date.
- (b) Breeding Birds: Nocturnal breeding bird surveys were not carried out and as male nightingales sing at night to establish territories and attract a mate there will not be a full understanding of the nightingale population or distribution. The Authorities would expect surveys to have been carried out over at least two consecutive years. Other species, such as Long-eared owl, may have also been missed.
- (c) Wintering Bird Surveys: the surveys were only carried out over one survey season and the Authorities expect the surveys to be carried out over at least two consecutive years.
- (d) Invertebrates: no moth trapping was carried out during the survey which means that approximately 25% of the UK's insect population were omitted from survey effort. Other groups of invertebrates, such as molluscs, were only incidentally recorded and, therefore, likely underrepresented.
- (e) Otters: no details are provided for the survey method or experience of surveyors. Otter surveys in areas with low density are significantly more labour intensive and signs can easily be missed, particularly when undertaken during the summer months with dense vegetation.

9.2 Survey data provides the ecological baseline an audit of the habitats and species (including population sizes and distribution) within the site. It is therefore fundamental to assessing impacts and developing appropriate mitigation strategies. Inadequate survey data means the assessment is unlikely to fully identify the impacts of the proposal and therefore identify the necessary types and scale of mitigation and compensation required to be effective.

'Importance' assigned to ecological receptors

9.3 The Authorities are also concerned with how importance of ecological receptors has been assessed within Chapter 12 of the ES (APP-061). These concerns include:

- (a) By notification dated 11 March 2021, Natural England has designated much of the Kent Project Site a SSSI under section 28C of the Wildlife and Countryside Act 1981. The notification is for, amongst other matters, its nationally important invertebrate, botanical and breeding bird interest but, with the exception of invertebrates, they have not been

considered of national importance within the submitted ES. Understandably the Applicant's Environmental Statement does not assess the impacts to the newly designated SSSI but it ought to do so to ensure that appropriate mitigation can be secured.

- (b) The reports regularly detail that the site meets the criteria to be Local Wildlife Site for its species composition and habitats but often those species/habitats are not considered to be of county importance within the Environmental Statement. Examples include grazing marsh, reptiles and water voles. The Authorities highlight that Local Wildlife Sites are areas which have been identified for their county importance.
- (c) An otter was recorded within the site. Otters are uncommon in Kent and therefore we would expect this species to be assessed as of greater than 'Local' importance.

9.4 The importance of the site to the functionally linked wintering bird species and assemblages associated with the Thames Estuary and Marshes SPA and Ramsar may have been underestimated. The methodology compared peak counts of these bird species within the Order limits to the peak counts for the same species cited at the time of the original designation of the protected site. However, these populations fluctuate from year to year and over several years. Therefore the peak counts for the Order limits in the survey year need to also be assessed as a percentage of the peak counts of those same species across the whole Thames Estuary and Marshes in that same year so that there is a more realistic up to date assessment of the importance of the application site and its functionality in supporting bird populations from the European protected sites.

9.5 The likely significant effects of the proposed works to improve sea defences along the River Thames have not been fully assessed on the functionally linked winter bird assemblages. These works (DCO Works Nos. 19a,19b and 19c) will be extensive and intrusive in that they will be undertaken in the very areas where surveys have shown the functionally linked bird assemblages are using for roosting. No assessment is provided as to how long these works will take to complete and therefore how many successive winters of disturbance to the wintering bird assemblages there is likely to be and no specific avoidance or mitigation measures are proposed to seek to address this significant disturbance.

Clarity of ecological impacts

9.6 The proposal will result in the loss of 180 hectares of existing habitat (47% of the site) but clear plans and tables have not been provided to enable those impacts to be fully understood and considered.

9.7 There is a need for the Environmental Statement to clarify details of:

- (a) the total areas of existing baseline habitats;
- (b) the total areas of habitat that will be lost to the proposed development;
- (c) the total areas of habitat creation and enhancement intended for mitigation;
- (d) the total areas of habitat creation and enhancement intended for compensation; and
- (e) the total areas of habitat creation and enhancement that are intended to deliver biodiversity net gain.

9.8 This has been provided in some of the species mitigation strategies (e.g. water voles), but not all of them and there is a lack of holistic whole site information.

9.9 The Biodiversity Net Gain maps submitted do not assist in this assessment as they do not provide details of the size of areas or use identical colour coding within the map keys to carry out direct comparisons.

- 9.10 It is acknowledged both in Chapter 18 – Soils, hydrogeology and ground conditions and Chapter 17 – Water resources and flood risk, of the ES, that the geology, and hydrology of the site and the extent of contamination of soils and water are not fully understood. Investigations are currently underway to address these uncertainties. The important wetland habitats within the site and their associated species populations, are dependent upon water levels and water quality as identified in the ES. However, as the geology and hydrology of the site are not yet ascertained, it is not therefore possible with any degree of certainty to assess the likely significant effects of the proposed development on these wetland habitats. The extensive areas of land that will be affected by cut and fill operations other groundworks, piling operations and changes to current drainage patterns are likely to have a significant effect on the hydrogeology of the site and therefore on the wetland habitats and species dependent upon it. There is therefore a significant risk that for example water levels could drop significantly if impermeable strata are breached during these works. For example, investigations to date have identified a layer of peat at -4.0 to -8.0m AOD across the site that is likely to be saturated and to play an important role in maintaining the wetland habitats. Excavations through that peat layer could result in it drying out and shrinking with consequential effects on the wetland habitats especially as de-watering works will be required to accompany groundworks.
- 9.11 These same wetland habitats are proposed to form an important component of the future surface water drainage strategy. Surface water runoff will be routed through the wetland complex before draining into the River Thames. The effects of significant additional volumes of runoff from the proposed development on site ecology especially the wetland complex do not appear to have been fully assessed. For example there is no assessment of how current water level patterns will change as a result of the additional runoff. Nor is it clear how the potential for pollution of the wetland complex identified within the ES from contaminated runoff has been assessed and addressed.
- 9.12 The likely significant effects to terrestrial and freshwater ecology of the proposed construction of an on-site wastewater treatment works do not appear to have been specifically considered. The plant which is proposed in the north east corner of the site (DCO Works No. 14c) will need to be served by a pipeline(s) conveying wastewater to be treated from the core leisure and staff accommodation areas where it will be generated. This will require the provision of over 1km of pipeline(s) across habitats that are proposed to be retained and that support a range of protected species such as in Botany Marshes. The excavation of a trench(es) and laying of such a pipeline(s) may give rise to significant impacts to these habitats and species for which no mitigation measures have been considered.
- 9.13 There are likely to be similar effects from the proposed construction of other utility pipelines and the proposed removal of some existing pipeline infrastructure to enable the proposed development to proceed. Again, the likely significant effects of these pipeline works on the ecology of the site do not appear to have been expressly considered and no mitigation measures therefore proposed.
- 9.14 Noise and vibration effects on important and protected species populations and assemblages do not appear to have been adequately assessed. In particular the effect of piling operations for the tall buildings and structures proposed within the site. To avoid disturbance to the functionally linked wintering bird assemblage, it is proposed to undertake piling operations for the proposed new pier outside of the winter period. However, the effects of piling for the other buildings and structures proposed has not been assessed or mitigated for. So for example the effects on the nationally important breeding bird assemblages (one of the principal reasons for the notification of the Swanscombe SSSI) of construction and piling noise could potentially result in male birdsong being drowned out so that the birds cannot establish territory or attract a mate. Cetti's Warbler for example, for which the site supports a large breeding population are known to avoid areas of noise. The loss of breeding habitats to construction combined with noise impacts could significantly reduce the breeding bird assemblages on the site.

Secondary Effects

- 9.15 The proposed mitigation/compensation/enhancement measures require the following:

- (a) Changes to the habitats to be retained on site – for example clearing scrub habitat to allow grassland habitat to re-establish or excavating areas of wetland within existing grassland habitats; and
- (b) Changes to off-site habitats - to create the target habitat types required for compensation and net gain.

9.16 These intended changes will have secondary effects on the ecology of the site itself and to the off-site locations. We can find no assessment of these secondary or 'knock-on' effects. For example removing scrub habitat to create grassland habitat will result in the loss of further habitat for the breeding bird assemblage and the dormouse population. How is this further loss of habitat to be compensated for? Furthermore, works to change habitats in off-site locations may not only have secondary effects on the existing ecology of those sites but could also result in secondary effects on nearby protected sites such as SSSI's. These off site works may require separate planning consents e.g. for the excavation of new wetland areas and be subject to separate environmental assessments.

SSSI assessment of effects

9.17 Understandably given that its enlargement was notified after the submission of the Applicant's application, no information has been submitted to assess the impact the proposal will have on the newly designated Swanscombe Peninsula SSSI. We would expect the impacts to be fully assessed within the ES.

9.18 There is a risk that any mitigation/compensation required for the SSSI may mean that the current mitigation proposals for the species/habitats on site are no longer sound or achievable. The review of the SSSI impacts and proposed mitigation will have to include a review of the habitats and species not included within the SSSI notification to ensure any identified impacts/proposed mitigation are still correct.

9.19 The submitted information would clearly need to demonstrate that appropriate mitigation and compensation is achievable.

Lighting effects

9.20 The lighting plan does not clearly demonstrate what the anticipated lighting levels will be within the site and appears to be unrealistic. A dark sky plan has been submitted but it suggest that the area around the Thames will be a Natural (Dark) area but as that area includes the proposed pier (which must be lit for reasons of navigation safety) the Authorities are of the opinion that this is unachievable.

9.21 The majority of the retained habitats has been assessed as Rural (Low district Brightness) but it is unclear what the intended light levels will be and how this compares to the current light levels.

9.22 The site will result in a significant increase in lighting and therefore to fully assess the impact on ecology there is a need for plans clearly showing the current and anticipated levels of lighting.

Recreational Disturbance Effects

9.23 The proposal will result in an increase in formal footpaths within the site even though there will be a reduction in total area of habitat.

9.24 No formal survey has been carried out to understand how much the site is used currently to help assess/demonstrate how much it is likely to be used once further routes have been created – particularly taking in to account the proposal to create bird hides within the Broadness Saltmarsh area.

9.25 The creation of formal footpaths are likely to increase use of the retained habitat areas for recreational purposes from existing dwellings within the surrounding area, site visitors and staff working on the site. It's not clear from the submitted information what the current levels of

recreational usage are and what the anticipated usage will be. As there will be a reduction in approximately 50% of the habitats on site, the increase in recreational usage is likely to have a significant impact.

Lack of clarity in relation to ecological mitigation and compensation (effectiveness and deliverability)

9.26 As currently presented the Terrestrial and Freshwater Ecology Chapter of the ES (APP-061) and supporting documents presents a very unclear and confusing picture as to how the likely significant effects identified are going to be either avoided, mitigated or compensated for. The ES confuses these terms and further confusion is presented when reference is made to enhancement measures and measures to deliver biodiversity net gain within the sections outlining mitigation measures.

9.27 Policy and guidance requires that the 'mitigation hierarchy' approach is taken to addressing likely significant effects on biodiversity. For example Guidelines For Ecological Impact Assessment In the UK and Ireland Terrestrial, Freshwater, Coastal and Marine, Chartered Institute of Ecology and Environmental Management (CIEEM), September 2018 summarises the process as:

"6.1 A sequential process should be adopted to avoid, mitigate and compensate negative ecological impacts and effects. This is often referred to as the 'mitigation hierarchy' (see 1.19 and 5.1). For most projects, avoidance, mitigation, compensation and enhancement measures should be identified as part of the EclA process."

9.28 The guidance goes on to distinguish the purpose of each stage in the process as follows:

"6.10 The distinction between mitigation and compensation can be difficult to determine. Where ecological equivalence can be delivered within the project site this is sometimes incorrectly considered mitigation rather than compensation. However, the correct distinction between mitigation and compensation is that mitigation avoids or reduces the occurrence of negative impacts and effects and compensation addresses effects which are residual, after avoidance and mitigation have been considered. Measures to address impacts and effects that will occur should therefore be referred to as compensation whether the compensation is located within or outside of the project site."

"6.12 Enhancement is improved management of ecological features or provision of new ecological features, resulting in a net benefit to biodiversity, which is unrelated to a negative impact or is 'over and above' that required to mitigate/compensate for an impact."

9.29 In this context, the Ecology Chapter of the ES consistently confuses the terms mitigation, compensation and enhancement and biodiversity net gain. On site habitat creation measures are often described as mitigation when in fact these are compensation measures. Likewise some enhancement measures such as improvements to existing habitats are counted as part of the mitigation proposals. The creation of 'new habitats' within the application site sounds like net gain when in fact they are compensation measures for the loss of important habitats and indeed are not 'new' but actually 'changed' habitats because they are to be provided in place of existing baseline habitats.

9.30 As a consequence, it is unclear as to what the avoidance, mitigation, compensation and enhancement measures are and it is not therefore possible to get a clear picture of the net effects of the proposed development and to determine to what extent the likely significant effects identified have been satisfactorily avoided, mitigated or compensated and what the residual effects are. This is fundamentally important as the same CIEEM guidance states that:

"6.22 The description of mitigation, compensation and enhancement measures within the EclA must be sufficient to allow the competent authority and relevant stakeholders to see clearly how effects will be addressed. The level of detail

needed will vary between schemes, between different measures within a scheme and should include quantity, location, timing, techniques and resources.”

Limited information in relation to off-site mitigation and compensation

- 9.31 No information has been provided to demonstrate that there is any certainty that adequate off-site mitigation or compensation can be achieved. The Applicant's draft DCO includes no measures to secure the provision off-site mitigation or compensation.
- 9.32 Furthermore, given the proposed phasing timetable for the construction of the London Resort, it is not clear that the necessary compensatory off-site habitat can be created and established within the time available so that it achieves the necessary condition to deliver effective replacement for the lost habitats at the time those habitats are lost to construction. In other words, there is likely to be a significant time lag between habitat loss on site and habitat compensation off site.
- 9.33 It is concluded in the ES (see (APP-149) 6.2.12.3 Environmental Statement Appendix 12.3 - Ecological Mitigation and Management Framework paragraph 4.33 Annex EDP 8) that there may be a need for some proportion of the reptiles within the site to be translocated to the off-site mitigation area. Given the 'exceptional' populations of some reptile species within the site, and the significant reduction in habitat area, based on the information available, in our view it would not be possible to adequately mitigate for impacts to reptiles within the site. Much greater certainty regarding the off-site mitigation is required.

Deliverability of on-site mitigation

- 9.34 The stated aims for most of the species/species groups are to retain populations on-site with the retention and enhancement of habitats. However, and particularly given the significant reduction in habitat areas, there is no clear consideration as to whether sufficient carrying capacity will be available to retain the species populations. Broad aims of maintaining connectivity are also not sufficiently evidenced by detailed considerations of the construction or operational impacts. The alignment of the proposed development (from the proposed ferry terminal to the site entrance) effectively severs the site and splits it into two separate sites from the perspective of some species populations.
- 9.35 The individual species / species group requirements for mitigation during site clearance are clearly laid out in the species specific mitigation strategies. However, the differing periods of sensitivity for each species / species group presents conflicts in the approaches to mitigation. An holistic approach to the mitigation is required in the submission to demonstrate how the mitigation requirements for each species will be addressed simultaneously and compliance with such measures secured by the development consent.

Biodiversity Net Gain calculations

- 9.36 The Biodiversity Net Gain Assessment (APP-148) includes a section titled Theoretical Scenarios Leading To Net Gain. As is acknowledged in that report no baseline information on the off-site mitigation land to be acquired offsite is available. It is therefore very difficult to consider if this is achievable and the Applicant's own conclusions suggest that between 160 and 210 hectares of off-site mitigation land will be required (paragraph 4.5).
- 9.37 It is not clear if the calculations have taken mitigation/compensation areas in to account when calculating the net gain figure – net gain must be over and above any mitigation and/or compensation proposed.
- 9.38 The Authorities would expect the Applicant to revisit its Biodiversity Net Gain calculation to ensure it accurately reflects the change in circumstances arising from the enlargement of the Swanscombe Peninsula SSSI. The Authorities would expect the applicant to comply with the Biodiversity Net Gain Principles including principles 1 and 4 : (The Biodiversity Metric 2.0 auditing and accounting for biodiversity User Guide Natural England Joint Publication JP029 (July 2019)) and update to Biodiversity Metric 3.0 expected to be published shortly:

- **Principle 1:** The metric does not change the protection afforded to biodiversity. Existing levels of protection afforded to protected species and to habitats are not changed by use of this or any other metric. Statutory obligations will still need to be satisfied.
- **Principle 4:** The metric focuses on widespread species and typical habitats. Area based habitats are considered a suitable proxy for widespread species found in typical examples of different habitat types.

Protected and locally important species needs are not considered through the metric, Impacts on protected (e.g. SSSIs) and irreplaceable habitats are not adequately measured by this metric, and will require separate consideration.

- 9.39 The Authorities wish to work positively with the Applicant to understand the basis for its Biodiversity Net Gain calculations and to work with the Applicant to ensure that appropriate provision is made within the terms of the development consent.

Management

- 9.40 The results of the ecological surveys highlight the high ecological value of the site. With the aim to accommodate most species / species groups on the site, within a significantly smaller area, there is a need to clearly demonstrate how the varying habitat requirements will be achieved simultaneously. Management for one species /species group may not be optimal for another and this must be acknowledged when assessing the operational impacts and in establishing habitats maintenance regimes.

10. CULTURAL HERITAGE AND ARCHAEOLOGY

Cultural heritage generally

- 10.1 The application site lies in an area which contains nationally important historic environment remains from almost all periods of human history. These range from internationally important Palaeolithic remains, waterlogged Neolithic remains, the Romano-British town and religious focus at Springhead, the Ebbsfleet Anglo-Saxon watermill and remains from the early cement industry. The Authorities are concerned that insufficient historic environment assessment and archaeological field evaluation has been undertaken to be clear about the significance of heritage assets within the Kent Project Site and the impact of the proposals upon them. Further evaluation should be undertaken before the end of the Examination period. It is not possible on the basis of the information provided to be confident that there are no adverse impacts on significant heritage assets.
- 10.2 The proposals as currently set out will have an impact on internationally important Palaeolithic archaeological remains and Pleistocene geological remains at Swanscombe Peninsula SSSI and Scheduled Monument and adjacent non-designated archaeological remains as a result of the planned main access road and light transit route ('people mover'). These are reported as giving rise to major adverse and moderate adverse direct effects resulting from the construction of the scheme, before taking into account mitigation (see paragraphs 14.117 to 14.123 of Chapter 14 of the ES (APP-063)). Whilst the Authorities would expect Historic England to lead on advice in relation to designated heritage assets; archaeological remains do not fall into neat packages and to some extent the deposits need to be considered together. Field evaluation is needed to aid assessment of significance and should be undertaken before the end of the Examination period (c.f. NPPF para 189).
- 10.3 The Historic Environment Framework (APP-175) includes a Written Scheme of Investigation for the sites and details of the proposed embedded mitigation. Requirement 15 of the Applicant's draft DCO (APP-027) would secure, post consent evaluation and archaeological recording. The Authorities are concerned that evaluation after the event is not appropriate in the circumstances of the scheme. Further information is required to demonstrate that an appropriate state will be achieved post-mitigation.

- 10.4 There is some proposed negative impact on designated Neolithic remains adjacent to the River Ebbsfleet. Historic England will lead on advice in this respect. However non-designated remains in adjacent areas may be as significant as the designated assets: field evaluation should be undertaken and provision made for preservation in situ if required (cf. NPPF para 189).
- 10.5 Industrial heritage assets in general have not been sufficiently well assessed or evaluated; evaluation is needed before the end of the Examination period. The JB White Portland cement works in particular will require further assessment and field evaluation; it is not possible to determine significance and impact until this has been undertaken. The works are very important in the development of the cement industry and the significance of any surviving heritage assets may well be higher than ES suggests. Additional sources such as Christopher Downs' History of Swanscombe Cement Works and the BGS photographic archive should be consulted. The Applicant should provide further information on what industrial heritage assets survive, how significant they are and consider how they can be preserved in situ or what other mitigation is appropriate. The impact of the proposals on this important industrial heritage could be strongly negative.
- 10.6 In relation to buried archaeological remains within alluvial deposits on Swanscombe peninsula; archaeological evaluation has not yet been undertaken and significance cannot yet be determined. Based on adjacent areas, nationally important archaeological remains could be present and the impact from the proposed development is likely to be very high. Archaeological field evaluation should be undertaken before the masterplan and foundation design for the proposals are finalised so that preservation in situ can be arranged for any significant archaeological remains and a programme of archaeological fieldwork arranged for archaeological remains which it is not appropriate to preserve in situ. The Authorities will seek to work positively with the Applicant to ensure that the Historic Environment Framework includes appropriate provision.
- 10.7 Historic England will lead on the advice in relation to marine heritage assets. However, it should be noted that the assessment provided by the applicant is based only on desk-based assessment and field evaluation will be required to determine the significance of the archaeological assets in the marine and intertidal environment which are affected by the proposed works.
- 10.8 Further assessment is required for the built historic environment. For example the historic dwelling along London Road which will be affected by the proposals requires further assessment and survey and should be retained if possible. Buildings associated with the cement works also require further assessment and survey before significance can be determined.
- 10.9 Further assessment is required of the impact of the proposals on Roman remains adjacent to designated site of Springhead. Preservation in situ should be ensured for nationally important archaeological assets and for those of lesser significance where appropriate. For example the Romano-British temple discovered during the HS1 works and preserved beneath the current A2 slip road should continue to be preserved in situ. Where preservation in situ is agreed as not being appropriate provision should be made for archaeological excavation and recording according to an agreed Written Scheme of Investigation. The level of detail provided in the Archaeological Strategy is not sufficiently detailed.

Historic Landscape Character

- 10.10 The ES is supported by a standalone report (APP-169) by Wessex Archaeology on Historic Landscape Characterisation (HLC). The HLC study for the project area is detailed and clearly presented. The Authorities currently find it difficult to agree with the concluding statements of significance in the HLC report and as summarised in the ES chapter (see below). This dichotomy between the HLC evidence and the conclusions drawn from the evidence is illustrated by the following quotation from the HLC report:

The importance of the historic industries on a local level to the surrounding communities of Swanscombe, Northfleet and Gravesham and on a regional level, to the development of the important cement industry, is undoubted. However, the significance of the existing industrial historic landscape (remembering that the historic landscape is characterised as

it survives and can be recognised in the present day landscape) is considered to be low owing to the largescale and widespread changes which occurred in the later 20th century and the limited historic legibility which can be seen.

- 10.11 The HLC report acknowledges the regional and national significance of the historic industries but then concludes that they are not legible or visible and are therefore of Low or Negligible significance. There are two key concerns here. Firstly, the HLC report clearly records that the area is in fact dominated by a number of elements which are 'legible' and can be seen and have dictated to a large extent the present-day character. These include, for example, the shape of the Swanscombe Peninsula with elements of surviving salt marsh, the quarries with their striking chalk cliff faces and the historic communications networks. These, along with the underlying geology, geomorphology and the presence of the Thames, are all 'legible' in the landscape and are fundamental to the unique and special character of the area.
- 10.12 Secondly, the definition of a "landscape" should be considered (and this pertains to Historic Landscape Characterisation which starts with the present-day landscape) and means 'an area, **as perceived by people**, whose character is the result of the action and interaction of natural and/or human factors' (Article 1 of the European Landscape Convention, Florence 2000). The significance of the historic landscape, therefore, is not solely concerned with what one can physically see (a lot can be seen in the Kent Project Site) but also about what we know about the place. We know that the landscape of the Kent Project Site has significant time depth and this can be traced through the data in the HLC report as well as in the Archaeological Desk-Based Assessment.
- 10.13 For example, take the HLC Land Parcel (LPHLC483). This is a polygon of post-1801 settlement whose 'historic legibility' is defined as 'Invisible', and yet it has been defined as a polygon because the area of housing was constructed within a former enclosed field. The former historic agricultural character, land use and time depth can therefore be 'read' and indeed has been to create the HLC polygon. This time depth should be assessed and its significance considered in relation to the impact of the proposals and to inform the character of the design. The Authorities consider that the 'legibility' of historic landscape character components should be reconsidered as the evidence presented in the HLC report indicates that many could be defined as having 'Partial' or 'Significant' legibility rather than 'Fragmentary' or 'Invisible'. The reconsideration of historic legibility should take more account of 'understanding' (which is recorded in the HLC report) as well as whether elements are physically visible 'on the ground' today.
- 10.14 Much of the historic landscape character of the project area could be assessed as Moderate if not High (taking into account for example the presence of the scheduled Aspdin's cement kiln), or the survival of salt marsh in the north of the peninsula, and that more work should be done to define this significance and understanding of time depth so the potential impacts of the proposed development can be fully understood and appropriate mitigation proposed, including through more explicit heritage-informed design.
- 10.15 A reconsideration of historic legibility (using the data within the HLC report) will allow a reconsideration of significance; much of the historic landscape character of the project area could be assessed as having Moderate significance and some areas, such as the surviving salt marsh and specific areas of industrial activity related to access to the Thames and former quarries, could be defined as having High significance. Further consideration should be given to the presence of scheduled monuments, listed buildings and the SSSI in defining the significance of HLC components. Greater recognition of historic legibility and significance will allow a more nuanced approach to considering impacts on the historic landscape character of the proposed development.
- 10.16 The Kent Historic Seascape Character assessment (Croft et al 2001) is a high level study and a more detailed study and assessment is required for a site level of analysis. There seems to be a lack of consideration of the significance of, and impacts to, the surviving areas of open salt marsh, creeks and foreshore from the increased proximity of proposed development on the majority of the peninsula to the south.

- 10.17 The Applicant should explicitly identify the impact its proposals would have on historic woodland and hedgerows. At present the only mention of hedges or hedgerows within the ES is with regards to the Hedgerow Regulations. There is no mention of hedges or hedgerows within the HLC report. The landscape plans show areas where trees/vegetation will be removed but no information is provided to confirm whether or not such hedgerows are historic. Historic elements of woodland and hedgerows that would be impacted by the proposals ought to be clearly identified.
- 10.18 Further clarification is required in relation to the ES sections on Historic Landscape and Seascape Character to reflect a revised understanding of historic legibility and significance and set out with reference to plans, how the project design will positively conserve and enhance the most significant aspects of the area's HLC and reflect them in a more explicit heritage-informed design.

Design Code - Heritage context as a basis for design

- 10.19 Appropriate provision to respect the cultural heritage of the site should be a pervasive consideration to the design of the proposed development. The industrial period is considered further below as an example but earlier periods, for example the organisation of the landscape provided in the Roman period, should also be considered in terms of the contribution they make to the character of the area.
- 10.20 Historic maps show an acceleration in industrial expansion between Gravesend and Dartford during the second half of the 19th century. This is directly connected to the expansion of the cement manufacturing industry which became the main employer in the area by the 1870s.
- 10.21 These industries and technologies incorporated highly recognisable features in the design of their buildings and equipment. Robust, heavy construction materials were used. These included:
- (a) Tall brick chimneys – associated with the application of steam power – indicate tall structures are appropriate in the landscape of this area.
 - (b) Large plan, comparatively long and narrow, factory buildings - associated with manufacturing industries.
 - (c) Pitched roofs and semi-circular roofs – associated with cement industry buildings.
 - (d) Cast iron gear wheels and shafts of large proportions – associated with manufacturing industries and rail transport.
 - (e) Railway tracks – associated with steam transport.
 - (f) Chalk cliffs – associated with extractive industries - provide sheer vertical faces and abrupt changes in height.
 - (g) Company branding from industries found in the area could be used to inspire artworks and signage throughout the site.
 - (h) Use of materials including cement, flint etc.; colour palette etc.
- 10.22 Aspects of the site's heritage should inform the Design Code, providing a design language with a clear connection to the industrial and earlier heritage of the area, which should provide the stimulus and inspiration for the themes of art, education and exploration of the wider site. The Authorities wish to work positively with the Applicant with a view to agreeing appropriate amendments to the Design Code that would embed appropriate reference to the site's extensive cultural heritage.

11. NOISE

Construction Phase(s) – Road Traffic Noise

- 11.1 Tables 15.15 and 15.16 of Chapter 15 of the Environmental Statement (APP-046) list the unmitigated (unscreened) construction noise impacts of construction activities. These are stated to be “short-term” (paragraph 15.85); however the term ‘short-term’ is not defined within the Environmental Statement. The Authorities seek clarification as to this statement. Duration of potential exposure should be considered in the determination of impacts, which may result in some impacts currently assessed as ‘Negligible’ to be increased in significance.
- 11.2 Paragraph 15.105 of Chapter 15 of the Environmental Statement concludes that construction traffic is “not considered a significant noise issue”. However, this conclusion is based on data presented in ES Appendix 15.3 (APP-180) Table 15.3.28, which appears erroneous. On most road links, the data indicates that the number of HGV movements is lower in 2023 (during worst-case construction of Gate 1) than the baseline 2018. The Applicant should justify why it expects HGV movements to be lower in this scenario than in the 2018 baseline or otherwise clarify this element of the assessment.

Operation Phase(s) - Road Traffic Noise

- 11.3 A 1 – 3 dB increase in road traffic noise is predicted at existing residential properties in Swanscombe with a direct line of sight to the proposed access road (ES Chapter 15, Diagram 15.3). By relying solely on an assessment methodology that uses dB change only, the context of absolute traffic noise levels are not considered. This would be useful for evaluating the efficacy of different mitigation options.
- 11.4 Access Road – Operational mitigation options stated in ES Ch15 (para. 15.173):-
- (a) Earth bunds
 - (b) Low height roadside noise barriers
 - (c) Reduced vehicle speeds; or
 - (d) Lower noise road surfaces.
- 11.5 However, there is no mechanism for securing mitigation for operational road traffic noise on the new access road. These measures are highlighted in ES Ch22 ‘Conclusion and mitigation commitments’ Table 22.1, however this table erroneously stipulates that the securing mechanism would be via the CEMP, which only applies to the construction phase.
- 11.6 A DCO requirement is needed prior to opening of the new access road, appropriate noise mitigation to be incorporated to minimise traffic noise. The Authorities will work positively with the Applicant with a view to agreeing an appropriate mechanism that ensures that such measures are appropriately secured.

Operation Phase(s) - Entertainment Noise

- 11.7 The assessment in Environmental Statement Chapter 15 considers noise from rides and attractions, fixed plant and external events. It concludes that the impacts would be negligible, based on assumed mitigation measures being incorporated, including:
- (a) Strict noise performance criteria for ride designs (Paragraph 15.174);
 - (b) Careful positioning and orientation of ‘scream zones’ to minimise noise propagation off site (Paragraph 15.174)

- (c) Design of fixed plant to not exceed 10dB below background at existing receptor locations (Paragraph 15.132); and
- (d) Restriction of noise break-out from external events (Paragraph 15.135) to 80 dBA at the border of the event space (Paragraph 15.136) using a line array system (Paragraph 15.140).

11.8 However, no operational noise mitigation measures are included in Environmental Statement Chapter 22. There is no evident securing mechanism for these or other appropriate and responsible management measures to ensure the long-term protection of local residential amenity. Until the mitigation relied upon in the assessment is appropriately secured through the terms of the development consent, the conclusions of the assessment cannot be relied upon.

11.9 It is recommended that a DCO requirement is included that requires a draft Operational Noise Management Plan to be submitted to and approved by the relevant planning Authorities. The draft Operational Noise Management Plan should cover, at a minimum, the following items:

- (a) Requirement to ensure that the combined rating noise from fixed plant items is 10 dB below the typical representative background level at the nearest NSRs. This should include detail of the routine maintenance programme.
- (b) Specifications for the sensitive design of thrill rides, including further definition of 'strict noise performance criteria' as stated in ES Ch15 (para 15.174). This should include detail of the routine maintenance programme.
- (c) Specification and maintenance programme of access road traffic noise mitigation.
- (d) Specification and maintenance programme of ferry noise mitigation.
- (e) Formal complaints procedure.
- (f) Programme for independent annual noise compliance monitoring.

11.10 It is also appropriate to establish a development consent obligation for an annual independent audit of the Operational Noise Management of the site, to be submitted to the Local Planning Authorities as part of a monitor, manage and mitigation of adverse effects process.

12. AIR QUALITY

12.1 The main potential effects on air quality arising from the construction phase of the Proposed Development are dust deposition and elevated particulate matter concentrations. The dust impact is considered high for all the activities taking place on site. Appropriate mitigation has been outlined within the ES following best practice to ensure that the construction impact is minimised. The provision of a detailed Dust Management Plan should be secured through a DCO requirement to ensure that one is submitted to and approved in writing by the relevant planning authority for each construction phase of the development.

12.2 The Applicant's environmental statement assesses the impact from construction traffic generated during the peak construction year (2023). The modelled results predict the impact from traffic emissions to be negligible at all modelled receptor locations for both NO₂ and particulate matter (PM₁₀ and PM_{2.5}). Uncertainty associated with the verification process undertaken as part of the dispersion modelling may have led to the traffic impacts being understated. Therefore, additional clarification is sought with regards to the following:

- (a) The number of monitoring locations used to calculate the verification factors appears to be low compared to the number of monitoring locations available in the modelled domain. A more detailed explanation with regards to the scoping methodology used to remove the monitoring locations would be beneficial to understand how the verification factors have been decided. Without this information, it is not possible to determine the effect at receptors.

- (b) There are a number of PM continuous monitoring stations within Dartford and Gravesham. Have these been reviewed in order to generate a PM specific verification factor?
- (c) The vessel emissions assessment is limited to a screening of moving vessel emissions and there is no consideration of emissions from moored vessels. It is not possible to conclude that there would be no effect from these based on the evidence provided.
- 12.3 In the operational phase, no significant impacts have been identified on existing or proposed human receptors as a result of traffic and energy centre emissions during the operation of the Proposed Development. However, this is based on the TRAsnport Assessment as submitted, as noted above further assessment of the transport impacts is considered necessary. Poor air quality in the local area arises due to congestion on the road network and idling of vehicles in queues.
- 12.4 Further clarification is required to determine whether the proposed boilers are only to be used for back-up purposes. In addition, similar to the construction traffic impacts, there is some uncertainty associated with the accuracy of the modelled results due to the outstanding clarifications sought with regards to the model verification process. In addition to the points raised above in the construction phase section, understanding the RMSE value of the verification process would help to strengthen the confidence in the model. At this stage, it is possible the operational impacts have been understated due to uncertainty surrounding the model performance and assessment of traffic impacts to the local road network.
- 12.5 No significant impacts have been identified in terms of vessel emissions. The vessel emissions assessment is limited to a screening of moving vessel emissions and there is no consideration of emissions from moored vessels. It is therefore not possible to conclude that there would be no effect from these based on the evidence provided.
- 12.6 Further clarity is sought over the extent of which the vessel movements will change between the construction and operational periods when compared to the baseline. The vessel emissions assessment is based on the findings of a study completed by the Port of London Authority which determined that there would be an effect of $0.8\mu\text{g}/\text{m}^3$ at the nearest receptor from vessels moving down the centre of the Thames. As the development is expected to result in a 10% increase in vessels an indicative increase of $0.08\mu\text{g}/\text{m}^3$ in NO_2 receptors is given. This assumes that all vessels would be in the centre of the River and does not account for vessel emissions from auxiliary engines during periods when the vessels are docked. Further information is sought on the effect of these activities on residential and ecological receptors. Specifically, the Authorities would request further information on emissions from the cruise liner which is proposed as static accommodation for the construction workers on the scheme. If this is to be powered remotely by an auxiliary engine the associated emissions may need to be considered in the air quality assessment.
- 12.7 The assessment did not reference vessel emission estimates provided for the development area in the LAEI and further information is required to understand how the numbers within the assessment were derived. As a result, it is possible the operational impacts associated to vessel emissions have been understated due to more information being required to fully assess the impact.
- The operational phase impacts in relation to ecological receptors show the contribution from the Proposed Development is predicted to exceed 1% of the minimum critical load for nitrogen deposition at the following ecological sites: Coombegreen Wood, Darenth Wood, Parkhill Wood, Ebbsfleet Marsh, and The Thrift. This exceedance of 1% has the potential to adversely affect sensitive species at these sites and additional clarity is required from the Applicant's project consultant.
- 12.8 For the ambient NO_x critical level, the contribution from the Proposed Development is predicted to exceed 1% of the critical level at the following ecological sites: Ebbsfleet Marsh, Darenth

Wood, The Thrift, Coombegreen Wood, Parkhill Wood, Rams Wood, Disused Hospital, Cobham Hall Wood, Hobbs Hole and Jackson Wood.

- 12.9 In addition to the conclusions of this assessment, additional commentary by the Applicant on the different potential effects on more sensitive SSSI's compared with less sensitive Local Wildlife and Ancient Woodland sites is sought.
- 12.10 Clarity is also required regarding the units used in the assessment. In Table 1 of Appendix 16.5, the 'Maximum Road Contribution NO_x' is given in 'µg/m³' but then expressed as a % of 'kg n/ha/yr'. Clarity is sought as to whether this is mislabelled or the wrong unit has been used for the purpose of calculation of the effect on ecological receptors.
- 12.11 Finally, it appears that the Applicant has completed a 'nutrient nitrogen' deposition assessment from roads but not an 'acid deposition' assessment. Further commentary on why this has been screened out or the results of acid deposition from roads at ecological receptor sites is required.
- 12.12 Whilst the assessment states that there is no significant effect on human receptors, the evidence provided in the Environmental Statement requires several points of clarification as outlined above in relation to the verification process before this conclusion can be accepted.
- 12.13 With regards to ecological receptors, it has been stated within the ES that the results have been passed across to the contracted ecologist to evaluate the impact on the designated sites where a significant impact could not be ruled out. It is not immediately apparent where this ecological assessment has been assessed in the ES.

13. **WATER RESOURCES AND FLOODING**

- 13.1 The risks associated with surface water flooding from the proposed development are considered within the Surface Water Drainage Strategy (APP-189). The design approach as presented in Chapter 4.7 of the Surface Water Drainage Strategy has been agreed with the Applicant including unattenuated discharge rate and consideration of surcharged outfall. The level of detail provided for the scheme however is insufficient to assess the basis for discharge rates calculations, impacts in relation to level information or attenuation volumes which may be required to be included within the development. The information presented is not sufficient to give a clear plan of drainage elements which will be constructed.
- 13.2 Areas of the marshes are proposed to be infilled. Catchment information is provided but only broad calculations have been presented to demonstrate that the loss of marsh can accommodate the increased water volumes required from the increased impermeable surfaces from the proposed development, with estimation of water level increase; this has implications for habitat and ecology. It is clearly stated within paragraph 4.18 that the "marshes will be used to act as temporary storage areas during tide-locked conditions". Surface water depths are estimated to increase for Botany and Black Duck Marshes from 5 cm to 10 cm respectively for the 1 in 2 year event, increasing to 10 cm and 20 cm respectively for the 1 in 30 year event. The strategic nature of this assessment raises the concern that insufficient volume may be provided within the marshes or that depths may be excessive and result in ecological impacts.
- 13.3 Though unattenuated discharge rates have been agreed given the discharge to a tidal system, the rates expected to discharge from Botany and Black Duck Marsh are stated to significantly increase (Table 4.2). There are significant concerns as to the feasibility of the marsh operation with a single discharge point accepting flows which have increased by a factor of 4. It is proposed to provide scour protection but consideration will also need to be given to direction of water movement and short-cutting with possible ecological impacts.
- 13.4 Though drainage surveys have been undertaken, it is clearly stated there is lack of knowledge of the outfalls from both Black Duck and Botany Marsh (page 128 of the Surface Water Drainage Strategy). This information would better inform how surface water will be managed in discharging from the marsh.

- 13.5 It is stated that during extreme tidal events the extents and depths of flooding to Botany Marsh will increase but that the design will ensure there is enough capacity to accommodate additional water volumes from flooding contributions and the new development (paragraph 4.31). No detail is provided to demonstrate how this will be accommodated with a significant reduction in marsh area with infilling. The calculations of water depth increases relate only to the contribution from the increased development area and do not appear to include any flood contribution.
- 13.6 Each catchment with land use is assessed in relation to pollution hazard. In this instance reference is made to “low traffic road” but not to the relevant Average Daily Traffic volume to substantiate the selection. In this instance the wetlands, both Black Duck and Botany are included within the treatment train whereas for sensitive receiving environments, the number of sustainable drainage treatment elements would be considered upstream to protect the ecological environment and ensure no impact particularly by hydrocarbons and heavy metals. The Simple Index Approach as presented in the CIRIA SuDS Manual should be undertaken for each receiving environment.
- 13.7 The site area is traversed by a number of ordinary watercourses. The drainage strategy does not include any reference to modifications required in these local drainage systems.

Construction Phase(s)

- 13.8 The Surface Water Drainage Strategy does not include any information pertaining to development phasing and associated temporary drainage provision or infrastructure phasing. There is no certainty that surface water or pollution will be managed appropriately, and flood risk will not be exacerbated within the local area during the project’s length construction programme.

Operation Phase(s)

- 13.9 Information must be provided as to the ongoing maintenance and management responsibilities. This will be important in relation to the management of water levels and drainage systems in the marsh area and specifications for vegetation control. Maintenance requirements for all proposed elements of the drainage system including green roofs, soakaways etc. must also be outlined.

14. GREENHOUSE GAS, CLIMATE CHANGE AND CARBON MODELLING

- 14.1 The Authorities have concerns with the overall approach taken to assess and evaluate the significance of the Proposed Development’s GHG emissions. The current approach results in both a substantial underestimation of the scale of the project’s lifecycle GHG emission, the magnitude of impact and its overall significance and a lack of clear carbon minimisation strategy and monitor and review.
- 14.2 The project’s lifecycle GHG emissions are underestimated due to key contributing GHG sources and project activities being excluded from the carbon footprint assessment. The reasons for such exclusions are not explicitly explained.
- 14.3 The Authorities are concerned that the recommended cut-off rules of IEMA’s guidance (2017, Par. 5.5.2) have not been followed. In line with IEMA’s guidance, ‘activities that do not significantly change the result of the quantification can be excluded, however the total excluded input or output flows per module would generally be expected to be a maximum of 5% of energy usage and mass’.
- 14.4 Below is a breakdown of the identified GHG sources that have been either entirely excluded from the assessment or are only partially represented (the below may not be the exhaustive list but captures most elements):

During construction:

- 14.4.1 Embodied carbon emissions (A1-A3) for:
- (a) Highways works & other transport infrastructure;

- (b) Civils works (new & upgrades to existing, e.g. flood defences);
- (c) Concrete batch plant;
- (d) Utilities infrastructure (energy & power networks, water supply distribution and wastewater pipework);
- (e) Decentralised and centralised (in energy centre) MEP equipment (for HVAC, lighting, (de)humidification etc.) both integrated in buildings as well as external (e.g. external lighting);
- (f) Other energy infrastructure: energy storage and renewables (PV);
- (g) Rides, water park / dome, swimming pools (all of Gate 1 and 2 development)
Embodied carbon emissions (A4-A5):
 - (i) Associated with the materials imported for the construction works referenced above;
 - (ii) Imported soil and planting for landscaping;
 - (iii) Water use during construction which has been identified as significant (see Par. 17.284 - for concrete batching plant, soil washing, dust suppression);
 - (iv) Terrain remodelling; and
 - (v) Contaminated land management (on-site remediation, transport off-site).

During operation: Emissions associated with:

14.4.2 In-use embodied emissions for all infrastructure, buildings and equipment not included in the construction embodied emissions (see 'During construction' list above for A1-A5):

- (a) Operational logistics via train or River (module A4 for materials and products' supplies required for the operation of the project);
- (b) Operational waste management;
- (c) Embodied carbon (module A1-A3) of materials and products' supplies required for the operation of the project, excluding those assessed for buildings' maintenance/refurbishment, e.g. food supplies;
- (d) Staff commute (small impact, high influence), visitors' air travel emissions (high impact, small influence);
- (e) Distribution losses from the power grid (Scope 3 for electricity transmission); and
- (f) Refrigerants leakage.

14.5 Furthermore, clarification is required on the following GHG emission sources which are considered partially assessed without sufficient justification or whose scope cannot be confirmed from the available information and would need to be clarified:

14.6 During construction:

- 14.6.1 Embodied carbon emissions (A1-A5) for buildings within Gate 1 & 2. This exclusion is confirmed in Par. 20.28 and justified in Par. 20.17 as resulting from lack of information. Clarification is needed as to why simplified benchmarks or high-level assumptions were not used in this case as with all other buildings in the development. Given that "at least 60% of the attractions in the Gates will be located inside buildings with the aim of providing a compelling entertainment experience regardless of the weather" (see Par. 3.19 of ES Chapter 3), it is considered that the Applicant could have included assumptions of building areas.
- 14.6.2 The Authorities note that based on Table 2 'Calculation area schedule and phase timing' of Appendix 20.2 'GHG Calculation Inputs' the building area that has been used to estimate the construction embodied carbon is 781,868 m² (the Table does not specify whether this is GEA or GIA). The project's area schedule excluding Gate 1 & Gate 2 is 1,034,719m² GEA. The difference between the two figures represents 24.4% or close to 1/4 of the development's total building floorspace which is unaccounted for in the carbon assessment. Clarification by the Applicant is needed.

14.7 **During operation:**

- 14.7.1 Operational water emissions are estimated based on an average total water daily demand of 6,581 m³/day (Par.20.78). It is, however, unclear whether this includes unregulated water use for the water park/swimming pools etc. Clarification by the Applicant is needed.
- 14.7.2 Operational energy emissions are based on a 'Principal Development power demand' (Par. 20.75). Clarification is needed on the scope of the estimated power demand and whether this covers all expected operational energy uses within the site's boundaries.
- 14.7.3 Regarding direct Scope 1 emissions for gas consumption it is not clear how this has been estimated and whether it is taken into account in the operational energy emissions. Clarification by the Applicant is needed.
- 14.7.4 Operational transport emissions associated with delivery vehicles has been quantified at 10,504 tCO₂e over the 60-year lifecycle (Par. 20.96). This takes into account the UK Government's target for net zero emissions by 2050. The electrification of the van fleet is considered from 2050 onwards. Clarification is needed on whether the electricity demand for electric vehicle charging of the van fleet has counted towards the development's power demand, increasing power demand of the development at 2050 onwards.
- 14.7.5 It also needs to be highlighted that the Proposed Development could result in GHG release from organic carbon stored in soil during excavation and land use change. Particularly for construction works within Zones 3A (Swanscombe Marshes) and Zone 4A and Zone 4D where the underlying alluvium and marshland have been identified as a potential source of ground gas (ES Chapter 18, Par. 18.82).
- 14.7.6 Whilst these potential emissions require effort to predict and estimate, they need to be considered and accounted for as far as reasonably as possible in the assessment as they may prove to be significant. Consultation with experts and researchers on this field should be sought to establish the potential scale of emissions and develop a robust strategy to minimise the risks of disturbance of natural carbon stores and ground gas reservoirs.

- 14.8 The exclusion or potential incomplete inclusion of these emissions questions the estimated lifecycle GHG emissions in the Authorities view these are substantially underestimated and misrepresented.

Assessment Methodology

14.9 The Authorities also have concerns in relation to the Applicant's GHG assessment methodology, in particular the criteria for determining the magnitude of impact. The approach that seems to have been adopted by the Applicant in assessing the magnitude of impact and subsequently the significance of emissions of those sources that have been included in the scope of the assessment also needs to be considered. The key concerns with the adopted methodology are as follows:

- (a) In ES Chapter 20 (APP-069), Tables 20.6, 20.7, 20.8, 20.9, 20.10, the criteria for evaluating the magnitude of impact of the various sources of GHG emissions included in the assessment are stated. The Authorities are concerned that the GHG emissions are not contextualised, and their magnitude (in mass) is not considered anywhere in determining their 'magnitude of impact'. Contextualising GHG emissions against pre-determined carbon budgets that can be sector-based, national; or local as determined by local authorities. This approach is prescribed and recommended as good practice within IEMA's Environmental Impact Assessment Guide to: Assessing GHG emissions and evaluating their significance (2017, see IEMA - Par. 6.1 & 6.2, Box 4 and Figure 4), one of the guidance documents consulted by the Applicant (see Table 20.5).
- (b) To meet the UK's legally binding GHG emissions target, the UK is working against a carbon budget and the magnitude of impact of the project's emissions thus need to be determined based on the scale (in mass) of emissions to the atmosphere. By failing to do so, the evaluation of the magnitude of impact becomes arbitrary and obscure, rather than data based. As a consequence, the proposed criteria for mitigating the magnitude of impact of the emissions are not based on absolute targets for residual emissions' intensity and therefore do not guarantee a low carbon development, nor a performance that aspires to high standards of sustainability.
- (c) For the GHG sources of operational water (Table 20.9) and construction stage embodied carbon (Table 20.6), lowering the 'magnitude of impact' is targeted through a % reduction against a 'business as usual' baseline, i.e. the project performance without any mitigation commitments in place.
- (d) The baseline performance is assigned a rating for magnitude of impact of 'Major' and reduced impact ratings ('Moderate', 'Minor', 'Negligible') are prescribed for some % improvement over this baseline. This approach obscures the magnitude of residual emissions and carries the risk of 'mitigation of impact' considered to be achieved even for a moderate/standard approach or low level of ambition and still significant residual emissions.
- (e) In the Authorities' view targets used as criteria for evaluating the 'magnitude of impact' should be expressed on an absolute basis, in line with best practice industry guidance available at the time of the application, and revised as appropriate throughout design development.
- (f) For the GHG sources of lifecycle embodied carbon (Table 20.7) and operational transport (Table 20.10), lowering the 'magnitude of impact' is not based on specific targets, relative or absolute, but rather on what can be perceived as statements of good intentions such as the preparation of 'Circular Economy Statement' in the case of lifecycle embodied carbon, or 'strong measures' to encourage the use of public transport and decarbonise the on-site fleet in the case of operational transport emissions. As it stands, the proposed mitigation measures do not constitute any guarantee on delivered performance or meaningful mitigation of impacts.
- (g) Based on the above, we would expect that the criteria for evaluating and mitigating the 'magnitude of impact' are revisited to include absolute performance targets (KPIs) based on best practice industry guidance. In addition, the KPIs need to reflect and guarantee the implementation of the appropriate for each GHG source and activity carbon management hierarchy.

- (h) The Authorities are of a clear view that comprehensive monitoring and reporting of GHG emissions for agreed scopes and associated activities will need to be in place throughout the construction and operational lifetime of the project.

Other areas of concern with regards to the methodology adopted by the Applicant are:

- 14.10 In Para. 20.38 the judgement is made to assign a 'High' sensitivity to the receptor (in this case the atmosphere), this should be 'Very High' instead of 'High', given the UK's legally binding net zero target and associated carbon budgets.
- 14.11 There is inconsistency between the 'significance of effect' matrix as this is presented in Table 6.4 of the Methodology Chapter 6 of the ES and the one used in Chapter 20 for the GHG emissions, as presented in Table 20.11. This needs to be explained. The confusion using different terminologies, results in all assessed GHG emissions presented as having a lesser significance effect. Clarification is needed by the Applicant as to why this discrepancy between Chapter 6 and Chapter 20 matrices exists.
- 14.12 Benchmarks for embodied carbon cannot reflect the complexity of the buildings or the more frequent replacement and refurbishment cycles associated with this type of development. Given the operational requirements of the Resort it is likely that works concerning refurbishment/rebranding/replacement will be needed in order to maintain market share and status in the market. This has implications for both construction as well as in-use embodied emissions.

Operational Water

- 14.13 In terms of operational water emissions, the Applicant renders the residual significance effect as 'Minor Adverse' based on a commitment to non-residential buildings achieving as per minimum the BREEAM Excellent standard for and 'best practice measures for all other uses' (Table 20.17). There is an inconsistency between Tables 20.17 & Table 20.9 that needs clarifying. Table 20.9 set as the criterion for a 'Minor Adverse' magnitude of impact a performance equivalent to BREEAM Outstanding standard (2 credits and >25% reduction to baseline), whilst the commitment made in Table 20.17 is for BREEAM Excellent (1 credit and up to 25% reduction to baseline). The Authorities consider this level of ambition disappointing given the potential for sustained water and the increasing water stress of the sub-region, which will be further exacerbated by climate change.

Construction and lifecycle embodied carbon

- 14.14 Based on Table 20.18 and the 'Moderate' residual magnitude of impact assigned to the construction and lifecycle embodied carbon, The Applicant proposes to achieve a 10% reduction of construction stage embodied carbon compared to the BAU baseline (Table 20.6) and to prepare a Draft Circular Economy Statement in Line with GLA guidance (Table 20.7). It is noted that even with the current assessment that is incomplete in the scope of sources it has accounted for, construction embodied carbon emissions (excl. Gate 1 & 2) are between 525,873tCO₂e and 784,904 tCO₂e (Par. 20.58). This is equivalent to or 1.5 times more than the development's 60-year operational energy emissions (estimated at 522,270 tCO₂e, see Par. 20.75).
- 14.15 We can therefore expect that these emissions, when all currently excluded sources are accounted for, will contribute a quite high part of the Proposed Development's whole lifecycle emissions, 90% of construction emissions will remain unabated and unaccounted. This would appear to be contrary to the Applicant's stated ambitions in relation to sustainability.

Operational transport

- 14.16 In terms of operational transport emissions, these represent 2,605,170 tCO₂e over the lifecycle, i.e. comprise the vast majority of operational emissions in excess of 70% (see Table 20.15, considering the total emissions excl. land use change emissions). Of these, 68% are attributed to private car travel (Table 20.15) with the Proposed Development proposing a correspondingly high car parking floorspace. For this, the highest contributing GHG emission source of the

Proposed Development as currently identified, the Applicant has put forward no binding targets of performance that would guarantee meaningful mitigation.

- 14.17 Mitigation opportunities are identified in Table 20.17 but these comprise the average expectations and lack detail and ambition and are not perceived to correspond to the opportunities presented by the development's location and good connectivity to low carbon modes of transport. Based on these - characterised by the Applicant- as 'strong measures', the residual magnitude of transport emissions is evaluated as 'Minor' (see Table 20.10 in relation to Table 20.19).

Operational energy

- 14.18 The commitment to net zero carbon does not guarantee a good level of operational energy efficiency performance. Specific absolute targets would need to be included to ensure the Energy Hierarchy is implemented and the development adheres to high energy efficiency standards.

Other points that require clarification and/or correction

- 14.19 Estimates of transport emissions during construction are based on Buro Happold's past project experience (see Table 5 of ES Appendix 20.2) with the emissions expressed in kgCO₂e/£M Project value. Further information is needed on the type of projects these estimates are based on.
- 14.20 It is also noted that the resulting A4 emissions are between 19- 23% of A5 emissions (see Table 5 of ES Appendix 20.2), in the absence of any estimates by the Applicant or any further details to back up the benchmarks used, this remains a concern. Clarification by the Applicant is needed.
- 14.21 In Table 20.15, operational water emissions over the 60-year lifecycle are stated as 826 tonnes, however this figure only corresponds to one year of emissions as per Par. 20.81 (water emissions established at ~2.26tonnes/day and 825 tCO₂e per year). Over the 60 year study period operational water emissions are more likely to be 49,500 tonnesCO₂e. This needs to be corrected in Table 20.15.
- 14.22 The scale of the emissions associated with delivery and service vehicles for the Proposed Development (see Par. 20.95 & Par. 20.96) seems low compared to the Future Baseline emissions. As per the current analysis this is 10,504 tCO₂e over the 60-year lifecycle for the Proposed Development and 570,044 tCO₂e for the lifecycle of the Future Baseline. Clarification by the Applicant is needed.
- 14.23 In Para. 20.47, the assumption for the future baseline energy profile is that the existing building stock remains as is and consumes the same amount of gas and electricity as in the baseline year. Whilst emissions of the future baseline will reduce due to decarbonisation of the grid electricity, gas usage is assumed to remain the same throughout the study period. The Authorities would suggest that within the study period, gas would be phased-out of the existing building stock, with buildings retrofitted with all-electric energy systems as part of a retrofit. It would be more accurate, therefore, to select a year for retrofit of those buildings and their like-for-like replacement (see Para 20.49 where this assumption is made), with lower energy demand profiles and all energy use to be electricity from the grid from that point on.
- 14.24 Based on the current approach, the operational energy emissions of the baseline result higher than what could be expected, whilst the like-for-like replacement assumed in Par. 20.49 incurs an increase to the embodied carbon emissions of the baseline. Clarification by the Applicant is needed.
- 14.25 It is noted that the UK has committed to no new fossil fuel cars beyond 2030. Clarification is needed on how this target has been considered in both the baseline and project operational transport emissions.
- 14.26 It is not clear from the information provided how the carbon factors from the Habitat40 guidance (published by Natural England) are assigned to habitats identified by the ecologist (see Greenhouse Gas Calculations Inputs (APP-218) Tables 6,7,8). It is not clear why there is a

discrepancy between the total scenario baseline area (ha) and the total combined area of enhanced and created land (ha) (see Greenhouse Gas Calculations (APP-218) Tables 6,7,8). Clarification by the Applicant is needed.

Net Zero Carbon

14.27 The appended Energy Strategy (APP-219) paragraph 7.10 suggests that the proposal targets a 35% reduction of regulated emissions over Part L 2013. No further on-site carbon reduction targets are presented for the remaining 65% of the regulated emissions and for 100% of the unregulated emissions. As it stands this on-site carbon reduction target is not in line with industry best practice and is not considered sufficient for the high-level ambitions of the project Sustainability Strategy. Further clarification and firm commitments by the Applicant is needed.

14.28 ES Chapter 20 para (APP-069) presents the UK Green Building Council Net Zero Carbon definition:

“When the amount of carbon emissions associated with the building’s operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset.”

14.29 However ES Chapter 20 (APP-069) and the Energy Strategy do not clearly confirm if all regulated and unregulated energy uses across all building and attractions of the site, such as Gate 1 & Gate 2, the water park, energy for ancillary infrastructure like the water treatment and wastewater treatment plant.

14.30 ES Chapter 20 (APP-069) para 20.66 notes that the net zero carbon target of the proposed development does not include embodied carbon. Embodied carbon emissions reduction targets and offsetting using certified carbon offset schemes should form part of the Net Zero carbon target in line with best sustainability practice, as follows:

Energy hierarchy

14.31 ES Chapter 6 (APP-055) paragraphs 6.26-6.27 Table 20.14/20.17 & Table 20.19 note the commitment of the Applicant to net zero operational emissions, and the residual effect significance is rated as 'Negligible'. However, as the criteria are formulated now, they do not guarantee an energy efficient or low carbon development, and the assessment is not considered in line with best practice guidance and the UKGBC Net Zero operational carbon definition referenced in Chapter 20 (APP-069) paragraph 20.67. According to best practice, a net zero carbon in operation development is achieved only if all following conditions are met, in line with the Energy Hierarchy:

- (a) the proposal prioritises energy demand reduction through a passive design and fabric first approach;
- (b) the project is highly energy efficient and meets best practice targets on Energy Use Intensity (kWh/m²) as well as targets on space heating/space cooling demand (kWh/m².yr);
- (c) the project does not use fossil fuels, i.e. the energy strategy is all-electric;
- (d) the project maximises on-site renewable energy generation and is designed with adequate on-site thermal and power storage as part of a demand response strategy for the management of peak loads;
- (e) after maximising on-site renewables, the project prioritises off-site renewables with private wire connection to the site;

- (f) the project incorporates a robust operational energy use monitoring strategy that captures all energy uses and reports energy usage and associated operational energy emissions (transparency or 'Be Seen' step of the Energy Hierarchy); and
- (g) carbon offset mechanisms are used as the last resort for unavoidable emissions.

Passive Design and Fabric First

- 14.32 The Energy Strategy (APP-219) paragraph 4.8 & ES Chapter 20 (APP-069) paragraph 20.101 notes 20% improvement factor over Part L 2013, comprising 10% from fabric improvement, and 10% from other energy efficiency measures. This contradicts the 10% (residential) and 15% (non-residential) improvement factor over Part L 2013 in ES Chapter 20 paragraph 20.101 Table 20.17: Operation phase mitigation opportunities.
- 14.33 The carbon review provides a commentary on the passive design approach within the Design Codes. A passive design approach at masterplan and building levels has a direct negative impact on energy demand and consumption calculations of Appendix 20.3 Energy Strategy. Further clarification by the Applicant is needed as to how passive design has been assessed in the context.
- 14.34 Appendix 20.3 Energy Strategy (APP-219) paragraph 5.2 does not clearly state whether cooling demand calculations have taken into account future weather scenarios and impact of temperature rise from climate change on cooling demand.

Energy efficiency, and energy intensity reporting and targets

- 14.35 ES Chapter 6 (APP_055) paragraph 20.70 does not clarify whether the energy demand calculation comprises of all regulated and unregulated uses, such as energy use of rides, energy for the water park and water treatment, etc. The Energy Strategy (APP-219) 4.7 does not present a detailed breakdown of the energy demand benchmarks used to estimate the Project Site heat demands, neither a detailed table of heat demand (kWh) per building and/or attraction, including all uses. These are required to consider the energy demand and consumption estimates and compare performance against best practice.
- 14.36 The Energy Strategy (APP-2219) section 'Heat demand heat generating technologies' does not consider reuse of waste heat to reduce heating demand and consumption.

14.37 Low carbon heat

- (a) ES Chapter 20 (APP-069) presents the two preferable energy strategy solutions. The feasibility of a centralised air source heat pump (ASHP) district heating and water-cooled network without back-up/top-up gas boilers, in line with the all-electric best practice aspirations, is not presented for the Kent Project Site.
- (b) The On-site renewables and demand response measures Appendix 20.3 Energy Strategy (APP-219) paragraph 6.4 notes that annual PV generation is estimated at 13.92GWh (Table 6.1). The executive summary table of the same document notes that annual electricity use for heating, cooling and Principal Development power is 346.3GWh. This represents a 4% GHG energy reduction from on-site renewables. However, Energy Strategy (APP-219) paragraph 7.2 notes that PVs reduce GHG emissions by 44,800tCO₂e, resulting in overall lifetime carbon impact of 522,270tCO₂e for heating, cooling, and Principal Development power demands; thus representing a 8% GHG emission reduction from on-site renewables, that is not in line with the 4% reduction of paragraph 6.4. Further Clarification or correction is required by the applicant.
- (c) This level of carbon reduction from renewables (in both scenarios of 4% and 8%) is considered very low for the development. Additional on-site renewable energy generation opportunities should be sought. The proposal should commit to a carbon reduction target from on-site renewable generation.

- (d) The Energy Strategy (APP-219), Chapter 6 'On site renewables' does not present detailed feasibility studies for technologies other than PVs on-site renewables, such as tidal, wind turbines etc. The on-site wind energy capacity and land requirement to offset all GHG emissions associated with operational energy is presented in Appendix 20.3 Energy Strategy (APP-219), Chapter 7 'Carbon Assessment – Carbon offsetting', is limited and not accompanied by a relevant proposal or a commitment for wind energy on site.
- (e) No demand response measures such as thermal and/or power storage have been presented in The Energy Strategy (APP-219). Demand response measures are necessary to reduce the impact of the proposed development on the national electricity grid infrastructure.

Off-site renewables

- 14.38 The Energy Strategy (APP-219) does not present feasibility study for off-site renewable energy generation with private wire connection to the site, including off-shore wind, off-site PV arrays and others. The Energy Strategy does not commit to a target for carbon offset by means of off-site renewables.

Carbon offset

- 14.39 The Energy Strategy (APP-219) paragraph 7.8 notes that the purchase of carbon offsetting certificates can either partially or fully mitigate direct investment in an offsite renewable scheme. The proposal does not commit to a maximum percentage of carbon offset by means of carbon offsetting certificates. A sustainability strategy that relies on carbon offsetting of a large proportion of the associated emissions by means of offsetting certificates instead of prioritising carbon reductions from the aforementioned steps of the energy hierarchy is not considered robust or in line with the high-level ambition of the project Sustainability Strategy.
- 14.40 A claim to net zero carbon for operational energy without commitment to adhere to all the above is void of substance, as a project that is poorly designed and not energy efficient by design, can use green power purchases and/or carbon offsets (the last steps in the Energy Hierarchy) as the primary strategy to net zero carbon. Mechanisms should be put in place to guarantee the delivered performance of the development in response to the above points.

Other areas of concern with regards to the GHG calculations associated with operational energy

- 14.41 ES Chapter 20 (APP-069) paragraphs 20.26, 20.44, 20.47 etc. state that the calculation of baseline conditions uses the BEIS Greenhouse Gas Reporting: Conversion Factors 2020 for gas and grid electricity. This is not aligned with ES Chapter 20 (APP-219) Table 20.5 reference to the RICS Whole Life Carbon Assessment for the Built Environment that suggests use of the Future Energy Scenarios published by the National Grid. In ES Chapter 20 (APP-069) paragraph 20.47 it is unclear whether the Future Baseline operational energy GHG calculations takes into account the energy use and carbon emissions reduction stemming from building replacement throughout the 60 year period. Clarification by the Applicant is needed.
- 14.42 ES Chapter 20 (APP-069) paragraph 20.100 requires a breakdown of the energy demand, energy use, carbon emissions for year 1 and carbon emissions during the 60 year lifetime for each of the energy uses and fuels, for each of the proposed buildings and installations, as with the detailed Embodied carbon (construction GHG emission) inputs of ES Volume 2: Appendices 20.2 – Greenhouse Gas Calculations Inputs (APP-218).
- 14.43 ES Chapter 20 (APP-069) paragraph 20.100 does not clarify whether refrigerant leakage has been taken into account in the operational GHG calculations. ES Chapter 20 (APP-069) paragraph 20.101 does not present the GHG emissions associated with operational energy of the 'Construction phase mitigation' scenario, before carbon offsets are implemented. These are necessary to assess the magnitude of impact of the proposed development, in line with Section 3.4. Greenhouse gas and climate change of this report.

Climate resilience

- 14.44 The adopted approach in assessing and evaluating climate change risks is simplistic for a project of this scale, complexity, and timescale. Consequences expected for the different risks should be assessed for the following receptors (see IEMA Guide, 2020, Chapter 7, Step 3).
- (a) Buildings and infrastructure receptors (including equipment and building operations)
 - (b) Human health receptors (e.g. construction workers, occupants and site users)
 - (c) Environmental receptors (e.g. habitats and species within the site's boundaries)
- 14.45 Table 20.21 presents the criteria for determining consequence, which are a mixture of impacts to site users and the capacity of the development; impacts to the environmental receptors within the site is absent. A structure where consequences are distinctly evaluated for the above three categories of receptors is proposed instead.
- 14.46 Mitigation measures are presented in Table 20.26. A more elaborate and robust proposal on mitigation on how a comprehensive adaptation strategy will be developed at subsequent design stages is expected.
- 14.47 The Authorities would expect to see a commitment for developing a comprehensive Climate Change Resilience and Adaptation Plan post-approval in line with Step 6 of the IEMA Guidance (Chapters 10 & 11) and would also expect a commitment for Monitoring and Adaptive Management in line with Step 7 of the IEMA Guidance (Chapter 12). Climate resilience and mitigation will need to be integral and a key driver to the design proposals as these develop.
- 14.48 For the hazard of drought, the proposed mitigation measures are not considered comprehensive or ambitious enough; the project as it currently stands will add substantial water demand to strategic/regional water supplies (in line with current estimates more than 2.4 million m³/annum) in a region that will increasingly become water stressed.
- 14.49 The project's water strategy would need to be revisited and include specific and ambitious absolute targets for water efficiency that encompass all operational water emissions. A comprehensive water strategy is key to the climate resilience of the project itself and the mitigation of in-combination effects.
- 14.50 For the hazard of extreme hot days and heatwaves, mitigation measures should be revisited to incorporate targets on delivered building performance for example upper thresholds for space cooling demand (kWh/m²) and in-use cooling energy use intensity (kWh/m²) for the different building typologies, commitment to employ innovative approaches, external shading and hybrid ventilation systems to maximise passive cooling.
- 14.51 Residual risks for the Proposed Development are presented in Table 20.27. We would expect the probability ratings for the hazards of drought, heatwaves, extreme hot days, cold waves and extreme winter conditions to remain unaltered between pre- and post-mitigation risk assessment. Mitigation measures could only lower the 'consequence rating' of these hazards as they would improve the project's resilience but not the probability of occurrence of the hazard.
- 14.52 The probability of occurrence for these hazards is not influenced by the project specifics but rather weather and climate. As currently proposed, we consider the risk ratings for these hazards to be underestimated. Clarification by the Applicant is needed. As it stands the Authorities do not agree with the Applicant's assessment of the in combination effect of the development on drought as 'not likely to be significant' (Par. 20.124).
- 14.53 In line with the above, residual risks should be revisited and a correction is required in Table 20.25 for the risk rating heat waves, as it should be stated as 20 instead of 16. The Authorities would welcome an opportunity to work with the Applicant on this.

Decommissioning

- 14.54 ES Chapter 6 (APP-055) paragraph 6.23 states “The EIA has not assessed decommissioning because the London Resort is intended to be a permanent development and consideration for decommissioning at this stage would be too hypothetical to be meaningful.”
- 14.55 Whilst it is recognised that there is difficulty in defining end of life for long term assets such as infrastructure and buildings, however end-of-life consideration are fundamental to achieving a Circular Economy. The Authorities consider the Applicant based on their experience and knowledge assess;
- (a) how buildings and structures may be deconstructed to maximum reuse of components
 - (b) how foundations and other below ground infrastructure are affected
 - (c) how construction and procurement processes positively avoid the use of building materials and products that are difficult to recycle
 - (d) put in place arrangements that consider how to avoid building products and materials that contain chemicals which may be subject to future restrictions, thereby limiting future recyclability.

Construction phase – material demands

- 14.56 As it stands the evaluation of construction material demands is insufficient to support the creation of a robust carbon baseline and validate low carbon material opportunities. In addition, the quantity of construction materials required will directly impact on the A4 stage carbon footprint: Delivery of construction product to site. These uncertainties and omissions currently result in an incomplete carbon baseline for the project.
- 14.57 Paragraph 19.18 of APP-069 states “anticipated volumes of key material requirements during the construction phase have been based on architectural land use plans”, however material estimates in Table 19.34 only considers five materials; steel, concrete, asphalt, aggregates, with concrete and timber and indicates that the tonnage of materials within each of these categories is 560,000 tonnes. These bulk materials will contribute significantly to the embodied carbon of construction and it is therefore important to improve the robustness of estimates. However, there are concerns raised over the accuracy of the material import analysis as presented in Table 19.34.
- (a) Drawing on comparator data and professional judgement the concrete and aggregate volumes look too low and the steel import appears too high.
 - (b) Table 2.5 in the OCWMP (APP-215) indicates significant quantities of gypsum and insulation waste, yet these materials do not appear in Table 19.34. This exclusion indicates that the quantity of materials required for construction may be grossly underestimated.
 - (c) Table 19.31: identified material receptors sensitivity is not considered sufficiently robust for a number of reasons:
 - (a) Aggregates have been considered on a UK wide basis, yet aggregates are not generally transported large distances and therefore the sensitivity should be considered on a regional basis. Kent has limited remaining sand and gravel resources and reserves, and marine sources should be prioritised, particularly given the proximity of the adjacent aggregates’ wharves.
 - (b) Asphalt is shown as negative sensitivity due to the fact that asphalt is 100% recyclable, however there is no commitment made to use 100%

recycled asphalt plantings for pavement construction. In addition, RAP cannot be used for surface courses, and indeed for road junction high PSV stone may be required which is a diminishing resource.

- (c) Concrete references cement supply but does not reference aggregates for concrete (concrete is approximately 90% aggregates by mass). As aggregates for concrete face more restrictions than aggregates for engineered fill, these should be evaluated separately. In addition, there are aspirations to deliver a world class resort and therefore the sensitivity of commonly used cement replacement products (PFA and GGBS) which are used to reduce the embodied carbon of concrete should be assessed.
- (d) Should extensive timber be promoted within the Resort, it is likely that engineered timbers such as glulam and CLT will be required rather than sawn soft and hardwoods, therefore the sensitivity analysis should consider the availability of these engineered timbers.

Construction phase – waste volumes and management

- 14.58 ES Chapter 19 (APP-068) paragraph 19.123 indicates that Construction, Demolition and Excavation (CDE) waste is likely to be mostly inert – soils, stone, concrete, brick, tile, while this may be valid for the demolition and excavation waste volumes, this statement should be reviewed in light of the construction activities proposed for the development.
- 14.59 The development is predominantly non-residential, therefore it is unlikely that significant quantities of brick and tile waste will be produced. Wood, metals, plastics including insulation, plasterboard and cardboards are likely to contribute a much higher proportion of the waste streams in construction.
- 14.60 Therefore it is important to differentiate between enabling works waste and construction waste as demands for site waste management infrastructure and opportunities for avoidance and segregation will change. Pro-active waste planning and management is required to achieve high levels of good quality recycling and minimise waste to landfill.
- 14.61 ES Chapter 19 (APP-068) para 19.125 states that construction waste estimates exclude waste from Gates 1 and 2 due to lack of detail in the DCO application and it is suggested that a focus on off-site prefabrication means minimal waste will be generated. The lack of detail at this time shouldn't be a valid reason for excluding construction waste estimates from the Environmental Statement and given the scale of construction required within Gates 1 and 2 the construction waste generated is likely to significantly contribute to the total volumes of construction waste, regardless of the extent of off-site fabrication.
- 14.62 Analysis from similar scale resort/entertainment-type destinations should be used to provide an estimate of construction waste volumes.
- 14.63 ES Chapter 19 (APP-068) para 19.127 states “approximately 40% of excavation waste is expected to be suitable for on-site reuse, 25% may be hazardous and the remaining 35% is expected to be inert or non-hazardous waste that is to be treated elsewhere.”
- 14.64 The removal of large quantities of spoil from site, even if undertaken by barge, is likely to be a significant contributor to the construction transport carbon impacts. In addition, paragraph 19.133 and Table 19.34 indicates 560,000 tonnes of loose aggregates will be imported for fill, potentially depleting valuable local mineral resources if not supplied from marine or recycled sources and increasing the carbon footprint of construction.
- 14.65 The lack of cut/fill balanced is reinforced through reference to ES Chapter 18 (APP-067), paragraphs 18.115 and 18.133 which indicates that 1.05 million m³ of material will be cut, and only 610,000 m³ placed.

- 14.66 Table 19.32 combines excavation waste with demolition and construction waste volumes and indicates that construction and demolition waste account for 4% of the total waste volumes respectively. In combining C&D waste with excavation waste in this manner, the importance of good waste management practices in construction and demolition is rather diminished. Construction waste management is fundamental to delivering low carbon construction as the carbon footprint accounts for the embodied carbon of the materials that end up in skips, as well as onward processing.
- 14.67 Table 19.32 indicates 74,300 tonnes of construction waste is expected to be generated, this indicates a construction site wastage rates of 2.5% (using the 2.8million tonnes of material imported identified in Table 19.34). This is exceptionally low compared to industry average data with construction site wastage rates often more than 10%.
- 14.68 The Outline Waste Construction Management Plan (OCWMP) (APP-215) is not sufficiently robust to justify this low level of wastage. As a result this introducing additional uncertainty to the validity of the impact assessment undertaken.
- 14.69 The Outline Waste Construction Management Plan (OCWMP) (APP-215) does not adequately address how demolition will be undertaken to maximise the opportunities for on-site reuse and recycling of waste.
- 14.70 The careful salvage and reuse of demolition materials on site is critical to create a real connection to the site's industrial history while careful segregation and on-site recycling can reduce the demand for imported materials such as engineered fill thereby reducing vehicle movements and having a positive impact on the construction transport carbon footprint and use of primary resources.
- 14.71 ES Chapter 19 (APP-068), paragraph 19.170 indicates that non-recyclable CDE waste will likely be sent outside of Kent and Essex or for incineration, yet the impact analysis has not considered the impact of the Resort construction on landfill capacity beyond the Kent and Essex nor on capacity of recovery facilities.

Operational phase – material demand

- 14.72 The evaluation of operational material demands is insufficient to currently support a robust carbon footprint for the operational phase of the project, the quantity of materials required will directly impact on the A4 stage carbon footprint, these uncertainties and omissions currently result in an incomplete carbon baseline for the project:
- 14.73 ES Chapter 19 (APP-068) paragraph 19.13 states “Operational material demands, including natural resources such as compost for landscaping purposes, will be assessed at a later stage in design when data is available from the associated landscape architect.”
- 14.74 However due to the extent of landscaping proposed, compost could represent a significant quantity of materials, and while generally of low carbon intensity, these high bulk materials may result in a large number of vehicle movement.

Operational phase – waste volumes

- 14.75 The operational waste estimates do not consider green waste from landscape management, nor do they include quantities of sewage sludge from the on-site wastewater treatment plant although referenced but not quantified.
- 14.76 Even with these omissions, almost 50% of operational waste produced is estimated to be organic and given the operational need for compost (not yet quantified) it is not clear why in-vessel composting has not been considered as part of the local waste management provision on site.
- 14.77 This would significantly reduce the carbon of operational waste transport and processing whilst also reducing the carbon associated with the import of operational materials such as compost.

- 14.78 ES Chapter 19 (APP-068), paragraph 19.171 indicates that non-recyclable operational waste will likely be sent outside of Kent and Essex or for incinerated, yet the impact analysis has not considered the impact of the Resort construction on landfill capacity beyond the Kent and Essex boundary.
- 14.79 The Outline Operational Waste Management Plan (APP-214) does not provide any analysis or subsequent targets for waste diversion from landfill yet Tables 19.50 and 19.51, ES Chapter 19 (APP-068) indicate that the magnitude of impact on landfill void capacity is reduced from major to minor in both Kent and Essex.
- 14.80 These matters need further explanation and clarification from the Applicant.

Water resources

- 14.81 As it stands targets are too generic and not in line with current industry practice. "A minimum target reduction of 25% from business as usual (BAU) standard demands has been targeted" ES Chapter 17 (APP-066) – 17.325. This target is too generic and not typology specific to be assessed and validated.
- 14.82 The BAU targets taken from the Utilities Statement (APP-443 AND APP-444) are high and not based on current practices. The residential benchmark of 150 l/resident/day is for instance is above current building regulations Part G of 125 l/person/day. The benchmark for hotels is above established CIRIA for typical hotels and swimming pools.
- 14.83 Figure 1: BAU Demand Benchmarks taken from Document 7.6 Utilities Statement (APP-443 and APP-444) as referred to in ES Chapter 17 (APP-066), Targets and water demand reduction during construction and enabling works to have not been specified. Lacking specific targets and solutions for dust suppression, wheel washing, concrete batching and welfare units.

Alternative sources of water

- 14.84 An on-site wastewater treatment will be required at the Kent Project Site and is proposed at the north-east of the Project Site adjacent to the existing leachate treatment plant. The possibility of reusing treated effluent for non-potable uses across the site is discussed.
- 14.85 A clear approach and further detail regarding non-potable demand and treated effluent supply is missing this is inconsistent with the building-by-building approach to grey-water reuse as described in the Design Codes (APP-438 and APP-439).
- 14.86 Per building re-use of grey water is complex with additional infrastructure, maintenance, and operational issues. Sitewide re-use via the WWTW has the potential to be a more efficient approach for non-potable water reuse within the uses proposed on the London Resort development could result in large water savings. "Rainwater harvesting for landscape irrigation and other non-potable uses (cleaning etc.)" is proposed ES Chapter 17 (APP-066)– 17.442. However, no information provided on the balance between irrigation demand and rainwater harvesting availability to assess the viability of this approach.
- 14.87 The post establishment irrigation demand of 55% of the establishment demand is also high. A more clear and ambitious approach to drought tolerant soft landscaping can significantly reduce the post establishment irrigation demand.
- 14.88 The proposal as it stands lacks a comprehensive approach towards metering and monitoring of water use, and leak detection.

15. WASTE AND MATERIALS

Outline Construction Waste Management Plan (APP-215)

- 15.1 The Authorities welcome the provision of an Outline Construction Waste Management Plan (APP-215) ("OCWMP") compliance with which is secured through requirement 11 of the draft

DCO. However, the Authorities have some concerns with the contents of the plan and wish to work positively with the Applicant to resolve the concerns outlined below.

- 15.2 Given the large amounts of excavation waste that will be generated, and the high sensitivity of inert landfill in Kent (due to depletion of voidspace over the next 15 years), the assumption that 40% of excavation waste will be re-used on site (Table 2-3 of the Outline Construction Waste Management Plan (APP-215)) needs to be properly evidenced. The assumption that the remaining excavation waste, and also residual construction and demolition waste will be exported for disposal (landfill) should be re-visited to commit to the management of as much as possible further up the waste hierarchy, and to assess the capacity of such high level treatments to accommodate the volumes of construction waste. For excavation waste and inert construction and demolition waste, this may be through beneficial use, for example in landscaping and restoration of minerals sites, rather than disposal to landfill. Other materials may also be recoverable.
- 15.3 In order to maximise re-use and recovery of waste, the delivery of the on-site soil treatment facility – the ‘soil hospital’ (referred to in the Outline CEMP (APP-078)) must be in place and ready to operate at an early stage and before significant levels of excavation are commenced and be designed to maximise recovery of excavation waste.

Outline Operational Waste Management Strategy (APP-214)

- 15.4 Again the Authorities welcome the submission of an Outline Operational Waste Management Strategy (APP-214) (“**OOWMS**”), compliance with which is secured through requirement 11 of the draft DCO. However, the Authorities have some concerns with the contents of the plan and wish to work positively with the Applicant to resolve the concerns outlined in this section.
- 15.5 The on-site ‘dedicated materials recovery facility and anaerobic digestion plant’ that is referred to in paragraph 3.57 of Chapter 3 of the ES (APP-052) and the DAS (APP-436/7 Fig 6.74) will be essential in providing on-site processing capacity to help achieve the recycling (and composting) and the forecast high recovery rates of operational waste. Depending on the design of the Materials Recovery Facility (“**MRF**”) and the 1ha site, it could also be used to sort and prepare for recycling construction and demolition waste.
- 15.6 However, there is only limited mention of this in the OOWMS (para 4.4) in terms of considering ‘options for feasibility and potential collaborations’. Paragraph 2.2 and figures 2-1 and 2-2 only refer to a ‘Central Waste Storage Area’ and ‘Central Waste Transfer Station’ indicating waste will be taken off-site for management. These references appear more as an afterthought than a critical component to the management of operational (and potentially construction & demolition) waste. Recyclables and residual waste sorted in the MRF, and much of the digestate from the Anaerobic Digestion (“**AD**”) plant, would need to be exported, but the initial treatment should be on-site. The on-site MRF and AD plant must be constructed and be operational before the development becomes operational in order to maximise on-site management of materials to facilitate minimisation of the amount exported for treatment and disposal, and reduce reliance on off-site facilities.
- 15.7 ES Chapter 19 estimates that without mitigation, operational (commercial & industrial) waste arisings would be 22,800t (197,000m³) per annum, comprising 11,500tpa recyclables, 8,800tpa organics, and 2,500tpa ‘residual’ (for disposal).
- 15.8 The potential impact on and demand for other types of management capacity e.g. energy from waste for residual waste, recycling facilities for recyclable material, is not considered in any detail in the application documents. Such facilities are likely to be in Kent, London or Essex. Ch19 para 19.7 refers to consultations with waste operators with facilities proximate to the Thames; OOWMS Fig 2.1 refers to export to MRF, AD and waste to Energy facilities.
- 15.9 The OOWMS estimates that the amount of waste to be generated by applying benchmarks (kg/m²/annum for retail, offices & entertainment; kg/room/month for hotels; kg/visitor/annum for leisure; kg/resident/day for housing).

- 15.10 It is difficult to verify the calculations as these are not transparent it would be helpful for this to be presented more clearly. Those that are transparent e.g. per capita generation in housing, appear reasonable and reflect UK averages.
- 15.11 The OOWMS sets out mitigation measures to encourage segregation of recyclables and provision of adequate storage space for recyclable materials. Figure 2.1 sets out the waste collection and transport strategy and includes a Central Waste Storage Area including for compaction of residual waste, paper and cardboard, and mixed recycling. However the OOWMS does not refer to the 'dedicated MRF and AD Plant' proposed on a 1ha plot in the northern part of the development referred to in the ES Ch3 (para 3.57) and the DAS (doc ref App 436/7 (7.1, Figure 6.74), and it should.

Potential for direct adverse effects to minerals and waste management

- 15.12 An additional potentially negative effect during the construction phase, and ongoing if not replaced/compensated for, would be the effect on (loss of) a number of existing waste management sites and facilities as part of the re-development of the Manor Way Business Park on the south west of the peninsula and the DCO boundary.
- 15.13 This includes Construction, Demolition and Excavation ("CDE") waste recycling (c.225,000t/annum), at least one Materials Recycling Facility (75,000t/a), and a metal recycling/End of Life vehicle recycling facility. The Waste Needs Assessments that underpin the adopted Kent Minerals & Waste Local Plan takes account of this existing capacity, and so its loss could affect the conclusions over the adequacy of existing capacity and the need for additional provision.
- 15.14 The Kent Project Site is also within a Mineral Safeguarding Area for sand and gravel; the development should seek to ensure that in areas of the development that would be subject to permanent development, sand and gravel material is extracted prior to development and preferably for use on site so this finite resource is not wasted.
- 15.15 There are two safeguarded minerals wharves in proximity to the Order limits (Robin's Wharf and Northfleet Wharf to the immediate east of the Order limits). The supporting documentation does not appear to address safeguarding of mineral resources, waste facilities or mineral transportation and processing facilities. The application could result in adverse impacts on these safeguarded sites through direct encroachment or sensitive development being proximate to these facilities with associated potential long-term effects on their operation, for example noise complaints resulting in constraints on operations being sought or imposed. There is no assessment of whether the effect may be negative or neutral and does not demonstrate compliance with Kent Minerals and Waste Local Plan policy and the safeguarding SPD and national planning policy and guidance. The sterilisation of finite minerals is a negative in relation to the project.

Materials

- 15.16 Demand for materials is considered, (Tables 19.36 & 19.37) with the magnitude of impact identified as 'Negligible' for aggregates and concrete, and 'Minor' for asphalt. This is based on overall demand for each of these materials being estimated as 560,000 tonnes, the basis for these is not clear and compared as a % of 'total UK demand'. It would be more informative to consider the potential sources of materials, particularly the raw aggregate (which would also be used in concrete and asphalt manufacture).
- 15.17 The location of the Kent Project Site adjacent to the River Thames, and proximate to existing safeguarded minerals wharves, would facilitate use of marine dredged sand and gravel which should be promoted and be the preferred option to reduce increased demand on Kent sand and gravel reserves, to reduce transport impacts and avoid the environmental effects of redeposition in the marine environment. This should be expressly stated in the Outline Construction Waste Management Plan.

15.18 Minerals and Waste safeguarding assessments need to be undertaken to assess the effects of the development on safeguarded minerals resources (MSA), facilities (wharves and processing facilities), and effects on existing waste sites (particularly those in Manor Way Business Park).

16. LIGHTING ASSESSMENT

16.1 Lighting during the construction phase has the potential to be uncontrolled as it typically employs movable generator lighting to light working areas which can result in offsite light spill if not carefully controlled. Lighting of cranes is necessary for safety and aviation but does result in high lux levels in the surrounding area.

16.2 Table A11.2.2 of Technical Appendix 11.2 – Schedule of Effects: Construction identifies the visual effects of construction during night time due to lighting and identifies an ‘Adverse’ impact at the following receptors:

- (a) PVP8 Rear of Leonard Avenue, Swanscombe;
- (b) PVP12 Greenhithe Riverfront, Sara Crescent;
- (c) PVP21: Stonebridge Road B2175;
- (d) PVP22: Footpath NU1 Botany Marshes near Britannia Refined Metals Ltd;
- (e) PVP29: The Promenade, Grays;
- (f) PVP33: B149, Chadwell Bypass;
- (g) PVP41: Footpath NS177, Cobham, Kent Downs AONB;
- (h) PVP45: Restricted Byway DR129;
- (i) PVP46: Candy Dene, Castle Hill, Ebbsfleet;
- (j) PVP49: Windmill Hill Park, Gravesend;
- (k) PVP73: Pedham Place Golf Centre; and
- (l) PVP74: Layby on Camer Road, Kent Downs AONB.

16.3 These effects are as a result of additional lighting and range from ‘Minor’ to ‘Major’ adverse, all the effects of lighting during the construction phase would be temporary.

16.4 Mitigation required during Construction Phase to mitigate impact are measures for construction lighting include directional fittings and restricted hours of operation as referred to in the Lighting Statement (LR-DC-BUR-REP- 818.0). The Applicant’s draft DCO does not currently secure compliance with the measures in the Lighting Statement, and it should do so.

16.5 The Lighting Statement itself states:

"During construction, mobile task lighting will be used to illuminate areas under construction during the hours of darkness. Directional luminaires will be used to limit unwanted light spill. These will be directed away from sensitive residential and ecological receptors. Construction site lighting outside normal working hours will be restricted to the minimum required for safety and security"

16.6 Where work is required outside of daylight hours, temporary lighting would be directed away from retained watercourses, woodlands, mature trees and hedgerows. Appropriate shield on light source shall be applied to limit potential light spill or obtrusive light onto surrounding areas.

- 16.7 Following discussion with the Applicant's consultant team in a conference call dated 11/2/21, it is understood that construction lighting would be controlled through limiting brightness of any lights used in accordance with ILP guidance. It is not clear how the Applicant proposes to secure these measures through its draft DCO.
- 16.8 Agreement should also be reached as to what times construction lighting will be switched off. A period of extended darkness during the night will reduce the effect on sensitive surrounding ecological receptors. While mitigation measures will help to reduce light spill beyond the boundaries of the site, it is still considered that the effect of lighting cannot be fully mitigated and there would still be a negative effect. Therefore, a DCO Requirement is required to specify working hours and for lights to be turned off during non-working hours.
- 16.9 In the operational phase, the 'mitigation' for lighting forms part of the design stage of the development, therefore the effect of all operational lighting is considered 'post-mitigation'. Good design can be secured through DCO requirement for a detailed lighting design to be submitted for each phase of the development detailing lux limits at sensitive ecological and other relevant receptors.
- 16.10 The proposed lighting strategy involves the use of lighting towards the 'red' end of the colour spectrum. This has been shown to have less impact on sensitive species than 'blue' lights. However, as compliance with the Lighting Strategy is not secured through the DCO, no reliance can currently be placed on these measures, which can be rectified via an appropriate DCO requirement.
- 16.11 The proposed lighting strategy shows that the highest lux level at any sensitive ecological receptor location is 1.31 Lux at Black Duck Marsh as shown in Figure 7-21 of Appendix 11.2 of the ES. This is above the 1 Lux threshold for this site and additional screening and mitigation would be required at the detailed design stage to reduce this impact to below this 1 lux criteria.
- 16.12 The 'mitigation' for lighting forms part of the design stage of the development, therefore the effect of all operational lighting is considered 'post-mitigation'. Appendix 12.11 shows the existing baseline night-time views with lux levels included. The Authorities note there may well be other adverse impacts for example at Ingress Park which are currently not identified. Table A11.3.2 of Technical Appendix A11.3 Schedule of effects during operation states that there would be a negative effect on night-time views at the following locations:
- (a) PVP8 Rear of Leonard Avenue, Swanscombe;
 - (b) PVP12 Greenhithe Riverfront, Sara Crescent;
 - (c) PVP21: Stonebridge Road B2175;
 - (d) PVP22: Footpath NU1 Botany Marshes near Britannia Refined Metals Ltd;
 - (e) PVP29: The Promenade, Grays;
 - (f) PVP33: B149, Chadwell Bypass;
 - (g) PVP41: Footpath NS177, Cobham, Kent Downs AONB;
 - (h) PVP46: Candy Dene, Castle Hill, Ebbsfleet;
 - (i) PVP49: Windmill Hill Park, Gravesend;
 - (j) PVP73: Pedham Place Golf Centre; and
 - (k) PVP74: Layby on Camer Road, Kent Downs AONB.

- 16.13 Commentary is provided within the ES around the effect of vegetation by Year 15 of the development which would help to screen lighting from the development.
- 16.14 Operational Phase Effect on Surrounding Residential Receptors-the 'mitigation' for lighting forms part of the design stage of the development; therefore, the effect of all operational lighting is considered 'post-mitigation'. Good lighting design should be secured through DCO requirement for a detailed lighting design to be submitted for each phase of the development detailing lux limits at sensitive residential receptors.
- 16.15 The assessment demonstrates that the effect of the development will result in a maximum increase of 0.24 Lux levels at the closest assessed residential receptors with the indicative lighting strategy which has been used to assess the scheme.
- 16.16 Operational Phase Effect on the Night Sky-upward lighting from the development is likely to affect the quality of the night sky for the purpose of stargazing.
- 16.17 The development intends to use luminaires with zero upward light spill wherever possible. However, it is likely that lighting within the park will involve uplighting in places so there will be a negative effect on the night sky.
- 16.18 It is recommended that a DCO requirement is included that requires a detailed scheme of lighting to be submitted and agreed with the relevant planning authority for each phase of the development. The lighting scheme should be designed to ensure the impacts of artificial light are minimised and that light spill onto retained and created habitats, particularly around the site periphery and green corridors through the site are avoided. Any security lighting / floodlighting to be installed must be designed, located and installed so as not to cause a nuisance to users of the highway or the River Thames navigation. The details of any such lighting must be submitted to and approved by the Local Planning Authorities (together with a lux plot of the estimated luminance). The development must proceed within each phase or sub phase in accordance with the agreed external lighting scheme.

Summary Resilience and Emergency Planning Impacts

- 16.19 An emergency is defined in Part 1 of the Civil Contingencies Act (CCA) as: "An event or situation which threatens serious damage to human welfare in a place in the UK, the environment of a place in the UK, or war or terrorism which threatens serious damage to the security of the UK."
- 16.20 KCC is a 'Category 1 Responder' within meaning of the Act. KCC's Duties under the Act comprise: Risk Assessment, Emergency Planning, Business Continuity Management, Warning Informing and Alerting the Public. Information Sharing, Co-operation and Business Continuity Management Promotion. KCC maintains and operates the Kent and Medway Shoreline Pollution Emergency Plan and has agreements to:-
- (a) maintain the Kent and Medway Shoreline Pollution Plan and facilitating the training and exercising programme necessary to ensure its effectiveness;
 - (b) support coastal District Councils and Port Authorities with KCC resources for Tier Two response;
 - (c) support the Maritime and Coastguard Agency with KCC resources for Tier Three response;
 - (d) notify Medway Council of any risk of pollution impacting the shoreline in Medway; and
 - (e) co-ordinate shoreline response in the event or threat of pollution from small vessel(s) stranded close inshore.
- 16.21 KCC also co-ordinates action whenever it is agreed that the task of dealing with pollution on the foreshore is beyond the resources of the affected district council(s) or port authority.

16.22 The London Resort proposal is in very close proximity to a top tier COMAH site which requires on and off-site emergency plans under the Regulations. The ES does not separately assess major accident hazards, which needs to be undertaken. The only treatment of the topic appears to be in paragraphs 6.13 to 6.21 of Chapter 6 and the documents referred to in paragraph 6.20, many of which are not secured by requirement for example the Security Planning Report (document reference 7.8).

17. SOILS HYDROLOGY AND GROUND CONDITIONS

17.1 The Applicant acknowledges that limited ground investigations have been undertaken across the Project Site to date and previous (now outdated) ground condition investigations were undertaken when the details of the development proposal were unknown. It is important for the Application to engage with the Environment Agency, Natural England, EDC and the local authorities now so as to agree the approach to the design and implementation of the Phase 2 intrusive works and the timings of the same.

17.2 It is recognised and understood why the Applicant has not yet been able to consider the impacts of the recent designation of much of the Kent Project Site as a SSSI under s28 (c) of the Wildlife and Countryside Act 1981. The impact of this Designation upon the feasibility and suitability of the proposed phase 2 investigation works for the Project Site and the further development of the Contaminated Land Management Strategy (“**CLMS**”) (in particular, the interaction with the ecology and surface water/ground water effects) will need to be fully considered and relevant amendments should be made to the proposed methodologies, impacts, assessment of likely significant effects, mitigations and opportunities currently outlined in the ES (including the CLMS at Appendix 18.9).

17.3 Early engagement with Natural England and the Environment Agency on the approach to the phase 2 intrusive works is key (e.g., in terms to obtaining agreement of the location of boreholes within the SSSI) and to make sure the intrusive investigations provide adequate coverage of the Project Site and the proposed location of the piling/foundation/excavation construction works.

17.4 Only limited and very generic mitigation has been provided for potential contaminated land hazards (e.g. through a standard form CEMP). Further consideration and information is required on specific mitigation and how this will be addressed in the remediation strategy and contaminated land management strategy, for example, further details are required on how leachate will be prevented to surface water/groundwater and the River Thames.

17.5 Further consideration is also required as to the interaction of the soil conditions and contamination hazards with the terrestrial ecology (including biodiversity net gain) and surface water/flooding impacts of the Proposed Development. For example, the Authorities understand the capacity of the existing surface water collection and treatment plant located at Broadness Marsh (Zone 1) is currently not functioning well and the ditches overflow during high rainfall events. Mitigation is put forward to increase the capacity of the treatment plant, however, the details are not provided e.g. by how much? Again, further engagement is required with the EA and Natural England with regards to the treatment of leachate and the protection of the salt marshes, the River Thames and the principal chalk aquifer – in particular, in light of the new Designation.

Marine and Terrestrial Ecology

17.6 It is recognised and understood why the Applicant has not yet been able to consider the impacts of the recent designation of much of the Kent Project Site as a SSSI under s28 (c) of the Wildlife and Countryside Act 1981. The impact of this Designation and effects of the proposed development upon it, will need to be fully considered and relevant amendments should be made to the methodologies, impacts, mitigations and opportunities currently outlined in the Environmental Statement. This should take into account the new requirement to seek consent from Natural England for any investigative works to be undertaken at the Designated Site.

17.7 As it is possible that the Designation of the Kent Project Site may lead to a requirement to alter the proposed methodologies or affect the design of the Scheme, it is suggested that early review

of this issue would be prudent so any necessary changes requiring re-consultation can be addressed.

Water Resources and Flooding

- 17.8 It is recognised and understood that the Applicant has not yet been able to consider the impacts of the recent designation of much of the Kent Project Site as a SSSI under s28 (c) of the Wildlife and Countryside Act 1981. The impact of this Designation upon the feasibility and suitability of the proposed flood risk mitigation strategies (particularly in relation to the salt marsh area) will need to be fully considered and any relevant amendments should be made to the methodologies, impacts, mitigations and opportunities currently outlined in the Environmental Statement.
- 17.9 As it is possible that the Designation of the Kent Project Site may lead to a requirement to alter the proposed methodologies for flood risk reduction, it is suggested that early engagement with Natural England and the Environment Agency in this respect is key. Additionally, it is suggested that early review of this issue would be prudent so any necessary changes requiring re-consultation can be addressed.

18. DEVELOPMENT CONSENT ORDER AND DEVELOPMENT CONSENT OBLIGATIONS

18.1 The Authorities have carefully considered the Applicant's draft DCO (APP-027) which has evolved and improved since first published alongside the Applicant's pre-application statutory consultation. The Authorities have raised a number of concerns with the Applicant's draft DCO which are being constructively discussed with the Applicant which include:

- (a) The definition of "commence" in article 2(1) and appropriate drafting that would enable certain limited and necessary early works to take place subject to appropriate regulation, prior to the discharge of pre-commencement requirements;
- (b) The scope of the power to "maintain" in article 4 to ensure that any adverse effects from significant maintenance activities are subject to appropriate mitigation;
- (c) The approach in article 5 to the parameters of the authorised development;
- (d) The interface between the development consent that would be granted by the Order and the Town and Country Planning Act 1990 regime in relation to article 9;
- (e) The appropriateness of the powers sought in Part 3 (Streets), particularly in relation to the breadth of the general powers;
- (f) The proposed disapplication of legislative provisions set out in article 48, including the proposed disapplication of the Licensing Act 2003, the Safety of Sports Grounds Act 1975 and the Children and Young Persons Act 1963;
- (g) Ensuring that the requirements properly secure the mitigation measures recommended in the Environmental Statement;
- (h) Ensuring that appropriate requirements are in place to:
 - (i) appropriately regulate the final phasing of the development;
 - (ii) ensure that the Applicant has the financial means to complete the construction of a phase and provide the appropriate mitigation necessary for each phase to help deal with the risk of start-stop and certainty of mitigation delivery, a particular concern in relation to a scheme so dependent on visitor numbers for commercial success;
 - (iii) monitor the efficacy of mitigation measures, and, where necessary, adapt the mitigation;

- (iv) avoid where possible, and mitigate where it occurs, the adverse effects of stop/start or abandoned development;
- (v) secure good design subject to appropriate approval under requirements; and
- (vi) secure offsite biodiversity net gain/mitigation and off-site landscape mitigation.

18.2 In view of its size scale and operational lifetime the proposed development will have profound effects on the Authorities' areas, both positive and negative. Consequently the Authorities consider that many of the negative effects can only be appropriately addressed through suitably worded development consent obligations, which are being discussed with the Applicant, covering matters that include:

- 18.2.1 Improvements to public transport;
- 18.2.2 Improvements to local bus routes and facilities, including Fastrack;
- 18.2.3 Improvements to specified PRoW and pedestrian and cycle networks, including wayfinding measures;
- 18.2.4 Monitor and manage mechanism to secure appropriate highway mitigation;
- 18.2.5 Specified strategic and local junction improvements;
- 18.2.6 Management and maintenance of public realm and private realm and access strategy;
- 18.2.7 Employment and skills programmes for both the construction and operational stages of development;
- 18.2.8 Supply chain measures to improve sustainability and local procurement;
- 18.2.9 Business and residential relocation and impact strategies and funding to deal with the direct and indirect effect on businesses and residents impacted by the scheme;
- 18.2.10 Town centre and socio-economic/services impact mitigation measures, to alleviate and offset the adverse local and regional socio economic consequences of the proposed development;
- 18.2.11 Heritage mitigation including potential proposals for a heritage centre and other measures to improve heritage literacy and interpretation;
- 18.2.12 Sustainability measures including a carbon reduction tracker and carbon offset contribution;
- 18.2.13 Emergency planning measures including a stakeholder group focused on future proofing and improving the resilience of the proposed development;
- 18.2.14 Community Impact Mitigation funding and mechanism;
- 18.2.15 Ticketing and local access strategy to offset local impacts and improve accessibility for local people;
- 18.2.16 Financial contributions towards the Authorities' additional resourcing requirements in connection with the proposed development and monitoring compliance with the development consent obligations.

18.3 The lists above are not comprehensive but are intended to give an indication of some of the key matters under discussion. The Authority and the Applicant are actively engaged in resolving points of difference arising from the draft DCO and are negotiating Heads of Terms for development consent obligations. It is hoped that many of the points of difference can be resolved, or at least narrowed, before the examination begins. Outstanding points of difference would be set out in detail in the Authorities' Written Representation.

19. FUNDING STATEMENT

19.1 Limited information is provided in the Applicant's Funding Statement (APP-031) as to the estimated costs to deliver the proposal and the part of that cost that is attributable to the acquisition of land and rights over land pursuant to the compulsory acquisition powers sought.

19.2 The Funding Statement outlines that the total cost of the project is estimated by the Applicant to be approximately £1.8 billion to bring Gate One into operation, with an additional £0.7 billion to fund the construction of Gate 2 and the "additional hotels". The Applicant states that these figures incorporate the £200 million estimated cost of land acquisition under the compensation code. The Applicant outlines that the costs would be met in part by visitor income, but prior to that, will rely on equity and debt financing. The Applicant states that a financial model, originally prepared by PwC, supports the Applicant's business plan and:

- (a) *"demonstrates that the Proposed Development can deliver sufficient operating revenues to allow the required debt/equity to be secured"* and
- (b) *"it has been demonstrated that the Proposed Development would meet the investment return hurdle rate required by investor and lenders."*

19.3 However, the Funding Statement provides little further information. It is not clear at this stage, for example, how the costs of development, including the costs of mitigation, have been apportioned across the phases nor how the debt/equity and visitor income would be phased.

19.4 The Funding Statement does not provide any further detail as to how any of the above cost estimates have been arrived at, nor the source of funds that will meet the compulsory acquisition costs or the build costs, including mitigation costs, nor does it provide sufficient information to evidence with confidence that those funds will actually be available. It is difficult therefore, for the Authorities to be re-assured that the Applicant has sufficient funds available to it to meet any claims for compulsory acquisition, the build out of the scheme and the provision of the mitigation measures required for each phase. The Authorities are working with the Applicant to suggest potential solutions to these issues in terms of appropriate "pre-commencement of each phase requirements" that the funding is in place to deliver each phase and/or appropriate security arrangements for delivery of mitigation, including that which relates to mitigation measures which require third party involvement in delivery, e.g. public transport, off-site ecological mitigation etc.

19.5 In relation to compulsory acquisition, it is not clear, for example, whether in arriving at the £200 million figure, the Applicant has included provision for:

- (a) the costs of claims relating to the compulsory acquisition of rights/imposition of restrictive covenants;
- (b) extinguishment of private rights,
- (c) claims relating to the temporary possession of land; or
- (d) claims under section 158 Planning Act 2008 (compensation in cases where no right to claim in nuisance).

19.6 The Funding Statement refers to article 54 of the Applicant's draft DCO which would constrain the exercise of certain compulsory acquisition powers until the Secretary of State is satisfied that appropriate financial provision is in place. In principle this would give a degree of re-assurance in relation to the exercise of compulsory powers; it does not however, give reassurance that the

costs of developing the project would be met, nor address the potential effects of start/stop or abandoned development if the above cost estimates, the sources of funds or the predictions of their availability turn out to be inaccurate. As such the Authorities consider that appropriate provision ought to be made in the draft DCO and/or development consent obligations to mitigate these potential effects and further, full information needs to be supplied by the Applicant to justify its cost estimates and detailed funding model.

19.7 The Applicant and the Authorities are actively discussing these matters and the Authorities are hopeful that an appropriate approach can be agreed.

20. CUMULATIVE IMPACTS

20.1 The Authorities consider the cumulative impacts of the existing and potential future projects in the north Kent area have not been adequately assessed within the application. In addition, whilst a number of schemes have been included in some detail, further information on these and other schemes coming forward will become available during the course of the next few months and will need to be taken into account by the Examination. These include residential schemes in the north Kent area and along the rail line into Kent.

20.2 The impacts of the various topic areas have been reviewed in the summaries above. There are a number of fundamental concerns in relation to the proposed scheme design and layout, parameters, car parking provision, transport infrastructure, employment and social impacts as well as the wider impacts of the scheme. The cumulative impacts of some elements of the scheme also present challenges in relation to a number of considerations both on and off the application site that need to be given more detailed consideration.

20.3 **Transport:** Delivery of mitigation schemes will need careful consideration of delivery to avoid disrupting traffic from other projects already using that route. In general, the cumulative assessment indicates a worsening of junction performance across the network; most notably an exacerbation of previously identified issues on the A2. With regards to the environmental transport impacts associated with both projects, the cumulative assessment indicates an exacerbation of previously identified issues as set out below:

- (a) Rail infrastructure capacity and access issues arising from combined growth along these corridors;
- (b) Highways impacts, particularly in relation to A2 capacity and knock on impacts on adjoining planned housing schemes; and
- (c) River transport capacity and movement along the Thames Estuary.

20.4 Relevant controls need to be put in place to ensure that the impacts of the development do not exceed those assessed; this is pertinent in the case of cumulative impacts where combined impacts are not proposed to be mitigated by the Applicant due to the length of time they are occurring for and their deemed likelihood of the impacts occurring. Therefore, it is reasonable to consider that additional funding and appropriate monitoring, as set out above, needs to be put in place to ensure those cumulative impacts can be identified and then mitigated should they occur.

20.5 **Environment:** Whilst the Environmental Statement takes into account the cumulative landscape impacts in terms of the Landscape and Visual Impact Assessment of specific schemes, there is a wider impact that is not covered by this process. There will be a perception for residents and visitors of a sequence of construction and associated activity as major projects take place on several sites in the wider area.

20.6 In respect of the cumulative ecological impact, it is not clear what, if any, construction impacts on adjoining sites such as Ebbsfleet Garden City and Thames Estuary projects have been taken into account.

- 20.7 **Economic development and skills:** The Authorities expects there to be full consideration of the potential in-combination effects on labour market of The London Resort with other major construction projects such as:
- Ebbsfleet Garden City;
 - Sizeable engineering projects such as the potential Crossrail 2, Lower Thames Crossing etc.; and
 - Thames Estuary residential and commercial schemes.
- 20.8 **Housing:** During the construction phase of The London Resort there will be pressure on existing housing stock in the North Kent area. Non-London Resort projects may have similar or alternative means to address impacts on housing stock. However, the Authorities consider that the cumulative pressure on the local housing stock may increase impacts in North Kent and may push workers to look further afield creating pressures on adjacent authorities such as Essex, Sussex and indeed Greater London. Appropriate monitoring and mitigation measures need to be put in place for all affected areas, to ensure housing impacts are managed and mitigated.
- 20.9 **Ebbsfleet Garden City:** Delivery and infrastructure interface with The London Resort and how this will impact on the phasing and delivery of areas such as the Ebbsfleet Central delivery strategy need to be reviewed and where impacts are identified these will need to be addressed.
- 20.10 **Commercial and Town Centre Impacts:** The way in which the London resort will impact on the viability of adjoining retail and commercial centres has not been assessed in the application. The Authorities expect there to be a full consideration of these impacts and appropriate mitigation put in place.

21. CONCLUSION

- 21.1 As set out above, there are significant benefits the proposals bring which are to be strongly welcomed.
- 21.2 However, there are a number of areas where further environmental information and assessment is required and are highlighted in this Relevant Representation. The Authorities are compiling a composite list of those areas to discuss with the Applicant and will make further representations in that respect as soon as possible following those discussions and review of other Relevant Representations.
- 21.3 There are also a significant number of mitigation measures required to be secured via DCO Requirements and Obligations and ongoing dialogue is being had with the Applicant in that respect, though needs accelerating. The Authorities wish to work constructively with the Applicant to resolve all outstanding issues as far as possible.
- 21.4 Further and updated assessment will be provided in the Authorities' Local Impact Report.

31 March 2021