

# A2 Bean and Ebbsfleet Junction Improvements Environmental Statement Volume 2 - Appendix A PINS Scoping Opinion Responses February 2019

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## Notice

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**Volume 2 –  
Appendix A PINS  
Scoping Opinion  
Responses**

# Appendix A. PINS Scoping Opinion

## A.1 Scoping Opinion Responses

- A.1.1 The Environmental Scoping Report was published on the Planning Inspectorate (PINS) website in November 2017. A Scoping Opinion was received from PINS in January 2018 based on feedback from statutory consultation bodies. A response from Highways England to the Scoping Opinion comments from PINS is included in Table A.1 below. Detailed feedback from the statutory consultation bodies included in the Scoping Opinion from PINS are being considered as part of this Preliminary Design Stage and have been addressed in the ES.

**Table A.1: Planning Inspectorate scoping opinion comments and responses**

Comment	Highways England Response
<p><b>Chapter 2</b>                      The ES must include a description of the physical characteristics of the Proposed Development which clearly explains the dimensions, location and the horizontal and vertical alignments of the various project elements. Figures should be provided to support the description in the ES and depict the necessary detail.</p>	<p>Further details have been provided in Section 2.5 in the ES volume 1.</p>
<p><b>Chapter 2</b>                      As part of the description of the physical characteristics of the Proposed Development, the ES should provide a description of the volume of materials generated and used in the construction of the Proposed Development. It should also describe the demolition proposals. The ES should include a general construction programme for the development so it is clear how and when works will take place and how effects on the road network will be managed.</p>	<p>The volume of materials generated and used in the construction of the Proposed Developments include in Chapter 12 Materials and Waste in the ES volume 1, Programme information is included in Chapter 2 in Section 2.6 and ES volume 2 Appendix B OEMP.</p>
<p><b>Chapter 2</b>                      The Scoping Report states that both permanent and temporary land take will be required and that all land take lies within the DCO boundary shown on Figure A2 of the Scoping Report. Potential locations for construction compounds have been identified within the areas of temporary land. However, the Scoping Report does not include any figures showing which areas of land are likely to be required on a temporary basis or where construction compounds are likely to be located. The ES should provide a description of the land use requirements for both construction and operation phases. It should identify which areas of land are required permanently and which are required on a temporary basis.</p>	<p>The total areas of permanent and temporary land take are provided in hectares in Chapter 2 in section 2.5 in the ES in volume 1 under Order Limits.</p>
<p><b>Chapter 3</b>                      The review of alternatives in Chapter 3 of the Scoping Report is welcomed. The ES should include a discrete section that provides details of the alternatives considered and the reasons to support the selection of the chosen option, including a comparison of the environmental effects. The reasons should also include any specific consideration given to support the need for acquisition and demolition of residential properties.</p>	<p>Further details have been provided in Chapter 3 in the ES in volume 1.</p>

Comment	Highways England Response
<p><b>Chapter 3</b>                      The Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different development. The development parameters will need to be clearly defined in the draft DCO (decor) and therefore in the accompanying ES. It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations.</p>	<p>Details of the Options have been provided in Chapter 3 in the ES volume 1. Physical characteristics of the Proposed Development are described in ES volume 1, chapter 2 Section 2.5 Project Description.</p>
<p><b>Chapter 4</b>                      The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables:                      a To demonstrate how the assessment has taken account of this Opinion;                      b To identify and collate the residual effects after mitigation for each of the aspect chapters, including the relevant interrelationships and cumulative effects;                      c To set out the proposed mitigation and/or monitoring measures including cross-reference to the means of securing such measures (e.g. a dDCO requirement);                      d To describe any remedial measures that are identified as being necessary following monitoring; and                      e To identify where details in the Habitats Regulations Assessment report (where relevant), such as descriptions of European sites and their locations, together with any mitigation or compensation measures, are to be found in the ES</p>	<p>a Tables of comments and responses have been included in Volume 3 Appendix A of the ES.                      b This is included in the ES volume 1 under each topic where relevant.                      c This is included in the ES volume 1 under each topic where relevant. Appendix B OEMP includes a REAC.                      d This is included in the ES under each topic where relevant.                      e This is currently included in the ES volume 1 in section 4.19.</p>
<p><b>Chapter 4</b>                      The Inspectorate understands that traffic modelling will be used to underpin both the design of the Proposed Development and to assess its likely effects. The ES should clearly explain how traffic and transport modelling has been applied to the assessments in the ES. The Applicant should seek to agree the approach to traffic modelling with Kent County</p>	<p>Relevant topic chapters describe how traffic and transport modelling has been applied in the assessment.</p>

Comment	Highways England Response
<p>Council (KCC), Dartford Borough Council (DBC), Ebbsfleet Development Corporation (EDC) and Gravesham Borough Council (GBC).</p>	
<p><b>Chapter 4</b>                      The Inspectorate considers that where a DCO application includes works described as ‘associated development’, that could themselves be defined as an improvement of a highway, the Applicant should ensure that the ES accompanying that application distinguishes between; effects that primarily derive from the integral works which form the proposed (or part of the proposed) NSIP and those that primarily derive from the works described as associated development, for example through a suitably compiled summary table. This will have the benefit of giving greater confidence to the Inspectorate that what is proposed is not in fact an additional NSIP defined in accordance with s22 of the PA2008.</p>	<p>All the works that form part of this scheme are required as part of the proposed improvements to the Bean and Ebbsfleet Junctions there are therefore no ‘associated works’.</p>
<p><b>Chapter 4</b>                      Some of the text in the Scoping Report, particularly the legend for the figures in Appendix C, is small scale and difficult to read both on the paper and electronic copies. The Applicant is reminded that the information in the ES including any figures should be clear and accessible to readers.</p>	<p>Figures are now included in Volume 3 Figures in the ES so are clearer and more legible.</p>
<p><b>Chapter 4 - Baseline</b>                      The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.</p>	<p>This is reported in Section 4.6 in the ES volume 1.</p>
<p><b>Chapter 4</b>                      The consultation responses from DBC and GBC highlight concerns that the receptors identified in the Scoping Report do not recognise much of the development which is currently being implemented and occupied (see Appendix 2). The Applicant must ensure that the receptors considered in the EIA accurately reflect existing, current and future.</p> <p>DBC- It is disappointing that one of the reasons for the junction improvement is the new development in the area but there appears to be</p>	<p>An agreed list of development is being collated with inputs from DBC and GBC, and EDC and has been considered in the ES volume 1. The effects of the London Resort Scheme are not being assessed as there are no scenarios in which both projects will be built.</p>



Comment	Highways England Response
<p>little consideration of such development which has already being implemented and is occupied, particularly in terms of receptors. Instead the receptors seem to be based on a now out-dated baseline information and mapping. The Council would request that the Assessment is based on the developments that have been occupied recently and are continuing to be built out and will be occupied by the time the scheme is implemented. The Council considers that it is also important to note that growth in the area should be based on Core Strategy figures and is overall considerably more than the Ebbsfleet Garden City number often quoted through the document.</p> <p>GBC - The broad brush of the assessment process follows standard guidance and as such meets the overall objectives of the process, except for the points and additional information highlighted below. As a general point affecting a number of topics areas it is important that assessments in relation residential properties take account of properties for which planning permissions exist, as well as those which is currently on the ground. In Gravesham’s case this is relevant to Springhead where development is proceeding. EDC/17/0151 contains the latest masterplan (EDC website).</p>	
<p><b>Chapter 4</b>                      The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.</p>	<p>The surveys and timing has been included in the ES volume 1 in the relevant topic chapters.</p>
<p><b>Chapter 4</b>                      The study areas used for the assessments in the ES should reflect the zone of influence for the Proposed Development. It is acknowledged that this will vary for different aspects of the environment but the ES must clearly explain the justification for the extent of each study area. The Applicant should seek to agree the study areas with the relevant stakeholders wherever possible.</p>	<p>The study area for each topic is defined in the ES volume 1 and has been shared with relevant consultation bodies and local community during the pre-application consultation process.</p>

Comment	Highways England Response
<p><b>Chapter 4</b>                      The comments from DBC and GBC (see Appendix 2) highlight concerns that the receptors identified in the Scoping Report do not include the occupants of new development which is in the process of being implemented, and in some cases, is already occupied. The assessments in the ES must include examples of the full range of receptors likely to be significantly affected by the Proposed Development.</p>	<p>An agreed list of development is being collated with inputs from DBC and GBC, and EDC and will be considered in the ES.                      The effects of the London Resort Scheme are not being assessed as there are no scenarios in which both projects will be built.</p>
<p><b>Chapter 4</b>                      Strategic traffic modelling will underpin several assessments in the ES. It must be based on growth figures that take account of the permissions already being implemented, extant permissions yet to be implemented and the allocations in the relevant Local Plan documents. It should also take account of traffic growth associated with any other major developments such as the London Resort.</p>	<p>The ES will describe the strategic traffic baseline and modelling used to inform the assessment.                      An agreed list of development is being collated with inputs from DBC and GBC, and EDC and has been considered in the ES.                      The effects of the London Resort Scheme are not being assessed as there are no scenarios in which both projects will be built.</p>
<p><b>Chapter 4</b>                      The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the EIA, which clearly states which effects are 'significant' and 'non-significant' for the purposes of the EIA. Any departure from that methodology should be described in individual aspect assessment chapters.</p>	<p>The EIA methodology is described in Chapter 4 of the ES volume 1.</p>
<p><b>Chapter 4</b>                      The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.</p>	<p>A section titled 'Dealing with uncertainties' has been included in ES volume 1 in Section 4.17.</p>
<p><b>General Comment - Residues and emissions</b>                      The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. Specific reference should be made to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases, where relevant. This information should be provided in a clear and consistent fashion and may be integrated into the relevant aspect assessments.                      Commentary to be provided only if there is an issue or omission in</p>	<p>Residues and Emissions have been assessed and reported in the ES volume 1 in the relevant chapters.</p>

Comment	Highways England Response
<p>relation to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases or greenhouse gases (GHG). Specific areas to consider include impact on soil, farming production and field drainage.</p>	
<p><b>General Comment - Mitigation</b>                      Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should also address how any mitigation proposed is secured ideally with reference to specific DCO requirements or other legally binding agreements.                      The Scoping Report identifies measures to be included in the Construction Environmental Management Plan as mitigation for effects on several aspects of the environment. If mitigation is being relied on to avoid significant effects, then the ES should clearly state what these measures are and how their delivery would be secured.</p>	<p>A mitigation and residual effects section is included in each topic chapter in the ES volume 1.</p>
<p><b>General Comment - Major accidents and disasters</b>                      Section 4.13 of the Scoping Report states that the ES will consider the vulnerability of the Proposed Development to the risk of major accidents and/or disasters and any consequential changes in the predicted effects of it on aspects of the environment. The ES will define ‘Major’ events relevant to the Proposed Development using professional judgement and then describe the potential for any change in the significance of effects on aspects of the environment. Major events will be reported in the relevant ES topic chapters.                      The Inspectorate has had regard to the information in the Scoping Report and considers that this is appropriate given the nature and characteristics of the Proposed Development. However, where the assessments in the ES rely on professional judgement the reasoning behind it should be clearly explained and justified.</p>	<p>This is discussed in Section 4.15 in the ES volume 1.</p>
<p><b>General Comment - Transboundary effects</b>                      The Inspectorate considers that where Regulation 32 applies, this is likely to have implications for the examination of a DCO application. The</p>	<p>This is reported in the ES volume 1 in Section 4.17.</p>

Comment	Highways England Response
<p>Inspectorate recommends that the ES should identify whether the Proposed Development has the potential for significant transboundary impacts and if so, what these are, and which EEA States would be affected.</p>	
<p><b>Air Quality - Para 5.4.18- 19 (Receptors)</b>                      Paragraph 5.12.2 indicates that three AQMAs are likely to be affected by the Proposed Development. The Scoping Report does not clearly explain how the impacts to the AQMA will be assessed. The assessment in the ES should be explicit in assessing impacts to the AQMA and explain how the Proposed development will/will not contribute to the achievement of any relevant AQMA Air Quality Action Plan. The Inspectorate notes the response from GBC that Figure A-1 of the Scoping Report does not show the correct boundaries for the A2 AQMA (see Appendix 2 of this Opinion). The ES must be based on the up to date boundaries of the relevant AQMA.</p>	<p>Receptors within the AQMAs have been included in the air quality assessment, and pollutant concentrations at these receptors will be estimated to show the change with the scheme. AQMA are identified on Figure 5.1 in Volume 3 of the ES.</p>
<p><b>Air Quality - Para 5.4.18-19 (Receptors)</b>                      The list of receptors does not include Ebbsfleet Marshes Local Wildlife Site (LWS) or the areas of ancient woodland within 200m of the DCO boundary, despite the observation in the Biodiversity chapter of the Scoping Report that there is potential for these sites to be affected by dust these receptors should be assessed in the ES including the impacts from increased dust emission on the LWS and the ancient woodland.</p>	<p>If the sites are potentially sensitive to dust these have been included within the ES as part of the construction dust assessment.</p>
<p><b>Air Quality - Para 5.6.1 and 5.7.5 (Assessment of construction vehicle emissions)</b>                      Paragraph 5.6.1 of the Scoping Report states that quantitative assessment of construction traffic emissions will be undertaken if information on traffic levels and movements is available. However, paragraph 5.7.5 states that a quantitative assessment will be undertaken. The ES should include a quantitative assessment of the effects of construction traffic emissions</p>	<p>The air quality assessment will be included in the ES based on the traffic model and available traffic data available at that time.                      The two paragraphs are saying the same thing: paragraph 5.75 also notes that an assessment will be carried out based on the available information available at this stage.</p>
<p><b>Air Quality - Para 5.7.6 (operational impacts)</b>                      The operational air quality assessment will consider PM10 and NOx. It is noted that impacts associated with fine particulate matter (PM2.5) would not be assessed as part of the air quality assessment. No evidence of the existing PM2.5 levels has been provided within the Scoping Report. The Inspectorate considers that the ES should include an assessment of impacts associated with increased PM2.5 resulting from the Proposed</p>	<p>Highways England periodically reviews the latest measured PM2.5 concentrations collected across the UK by the Department for Environment, Food and Rural Affairs (Defra). None of the measured PM2.5 concentrations were above the annual mean EU limit value of 25µg/m<sup>3</sup> in 2017. The highest measured concentration, with sufficient data capture (90% or more) was 16µg/m<sup>3</sup> at Camden roadside, substantively below the limit value.</p>

Comment	Highways England Response
<p>Development. In determining significance, the assessment should take into account performance against relevant target/limit values. GBC has also advised that the ES should consider the effects of PM2.5 (see Appendix 2).</p>	<p>Highways England has calculated an increase in PM2.5 associated with an example of a large increase in 10,000 vehicles a day at a point very close to the edge of a motorway (5m). This results in an approximate increase in PM2.5 of 0.5µg/m<sup>3</sup>, and even allowing for an uncertainty estimate of a factor of 2, would result in a maximum change 1µg/m<sup>3</sup>.</p> <p>Combining a maximum increase in road side PM2.5 of 1µg/m<sup>3</sup> with the maximum measured PM2.5 concentration of 16µg/m<sup>3</sup> in the UK, would result in a concentration of 17µg/m<sup>3</sup>, which is 8µg/m<sup>3</sup> below the limit value.</p> <p>On this basis there is no risk that an individual scheme would exceed the PM2.5. EU limit value and consequently Highways England will not undertake an assessment of PM2.5 for this scheme.”</p>
<p><b>Air Quality - Para 5.8 (vulnerability to major accidents and disasters)</b>                      This section of the Scoping Report describes potential vulnerabilities and their likely effects on air quality. It does not explain if or how these events would be assessed in line with the approach described in section 4.13 of the Scoping Report. The ES should assess any significant effects on air quality from major accidents and disasters using the approach described in section 4.13 of the Scoping Report.</p>	<p>An assessment in line with Section 4.9 is included in the ES.</p>
<p><b>Noise and vibration - Para 6.4.2-6 (Receptors)</b>                      The Scoping Report lists various general categories of noise-sensitive receptors within 1km of the Proposed Development. It does not make any reference to the NIAs. The ES should clearly identify noise sensitive receptors. The receptors should include the NIAs, or the ES should explain how the receptors that have been chosen take the NIAs into account.</p>	<p>The ES provides a table (6.10) with all NIAs close to the scheme and the properties within that NIA, to make sure that the NIAs are taken into account.</p>
<p><b>Noise and vibration - Para 6.7.2 (Noise Modelling)</b>                      The ES should explain how noise modelling of baseline conditions and the effects of the Proposed Development has been undertaken. It should provide a justification for the approach used and be agreed with relevant consultees wherever possible.</p>	<p>The ES includes more details of the modelling.</p>
<p><b>Noise and vibration - Para 6.7.9 (Def of SOAEL and LOAEL)</b>                      The Scoping Report states that the thresholds assigned will be based upon prevailing guidance for environmental noise assessments and noise thresholds associated with impacts on human health. To be consistent</p>	<p>ES Includes more information on the SOAEL and LOAEL for construction and operational noise.</p>

Comment	Highways England Response
<p>with the Noise Policy Statement for England, SOAEL and LOAEL should be defined for all of the construction and operational noise and vibration matters assessed. The ES should explain how SOAEL and LOAEL have been defined, which standards have been relied on and why these standards are appropriate.</p>	
<p><b>Noise and vibration - Para 6.7.16 (Mitigation in modelling)</b>                      The Scoping Report states that detailed noise modelling will be undertaken with potential noise mitigation in place and the proposed measures will be reviewed based on the results of the noise modelling. While the iterative approach to developing mitigation is welcomed, the ES must clearly explain which specific mitigation measures have been taken into account in the noise modelling presented in the ES.</p>	<p>ES includes details of all barriers in DM and DS.</p>
<p><b>Noise and vibration - Para 6.8 (vulnerability to major accidents and disasters)</b>                      This section of the Scoping Report describes potential vulnerabilities and their likely effects on noise levels. It does not explain if or how these events would be assessed in line with the approach described in section 4.13 of the Scoping Report. The ES should assess any significant effects resulting from major accidents and disasters using the approach described in section 4.13 of the Scoping Report.</p>	<p>The assessment in the ES uses typical data predicted over a significant amount of time, and unless long term, these accidents and disasters would not affect this.</p>
<p><b>Noise and vibration - Para 6.9.1 (consultation)</b>                      The Applicant should make efforts to agree the locations and methods for the collection baseline noise data and the choice of noise sensitive receptors with the councils.</p>	<p>There was consultation with the LPA in April 2018, with their comments taken into account in the ES.</p>
<p><b>Biodiversity - Table 7-6 (Scoped Out - European sites and non-statutory Local Nature Reserves)</b>                      Effects on these sites have been scoped out on the grounds that they are not within the EZoI for the Proposed Development. However, the Inspectorate has concerns about how the EZoI are defined and so does not agree at this stage that these sites can be scoped out. The definition of the EZoI appears to be based on the standard guidance within the DMRB. The Scoping Report states that these distances encompass all the predicted impacts of the Proposed Development but only provide limited justification to support this. The ES must clearly justify the EZoI and therefore the study area used for assessment purposes. This applies to all ecological receptors. KCC, DBC and Natural England</p>	<p>Further traffic modelling and air quality assessment has confirmed that there will be no impacts on designated sites outside of the study area. This is confirmed in the ES. The study area and EZoI is defined for all receptors in the ES volume 1 (Section 7.3).</p>

Comment	Highways England Response
<p>(NE) have also raised concerns about the adequacy of the study area in relation to effects on designated sites (see Appendix 2).</p>	
<p><b>Biodiversity - Table 7-6 (Scoped Out - Effects on aquatic invertebrates)</b>                      Table 7-6 of the Scoping Report indicates that it is considered unlikely based on the data collected to date, that notable aquatic invertebrates would be affected by the Proposed Development but that this will be confirmed during the Preliminary Design Stage. It is unclear therefore whether effects on aquatic invertebrates have been scoped out or not. On the basis of the evidence provided in the Scoping Report the Inspectorate does not agree to effects on aquatic invertebrates being scoped out of assessment in the ES.</p>	<p>It is not anticipated that aquatic invertebrates will need detailed assessment. Full data is presented in the ES (Section 7.6, para 7.6.77-80).</p>
<p><b>Biodiversity - Table 7-6 (Scoped Out - Effects on water vole and otter)</b>                      The Scoping Report proposes to scope out effects on these species on the basis of data collected and because the Ebbsfleet River is hard engineered in the area surrounding the Proposed Development and culverted beneath the A2. As the Scoping Report does not identify the extent of the river that has been subject to hard engineering and does not include the data referred to in the Scoping Report, the Inspectorate does not agree to effects on these species being scoped out.</p>	<p>It is not anticipated that otter and water vole will need detailed assessment. Full data is presented in the ES (Section 7.6, para 7.6.51-55). Based on the data collected to date, a precautionary approach has been taken for the potential presence of otter/water vole.</p>
<p><b>Biodiversity - General (Supporting info)</b>                      Although Figure A-1 shows the location of the SSSI and the ancient woodland, it does not show the location of the LWS or other features of ecological value described in the Scoping Report. The ES must include plans or figures which show the locations of designated statutory and non-statutory wildlife sites, ancient woodland and habitats of principal importance within the EZoI.</p>	<p>Relevant designated statutory and non-statutory wildlife sites, ancient woodland and habitats of principal importance will be shown on figures in the ES volume 3.</p>
<p><b>Biodiversity - Para 7.4 (Phase 1 habitat survey)</b>                      The results of the Phase 1 habitat surveys are described in the Scoping Report but no plans or figures are provided. The ES should include the outputs of all the ecological survey work, including relevant plans and figures illustrating the location of all valuable ecological receptors within the EZoI for the Proposed Development (but note the advice on confidential information provided in section 3.4 of this Opinion).</p>	<p>All survey maps will be provided in the ES Appendices (volume 2) and Volume 3.</p>



Comment	Highways England Response
<p><b>Biodiversity - Para 7.5 (Potential impacts)</b>                      The ES should assess impacts to valuable ecological receptors including ancient woodland. The Forestry Commission (FC) and NE in Appendix 2 have identified additional potential impacts on Darenth Wood SSSI and areas of ancient woodland which are not discussed in the Scoping Report. These include:</p> <ul style="list-style-type: none"> <li>· changes to groundwater or surface water run-off which could disturb ancient woodland soils; and</li> <li>· the loss of woodland and scrub which is likely to be acting as an ecological buffer for the SSSI</li> </ul>	<p>Potential impacts on Darenth Wood SSSI are described in the ES volume 1 Section 7.7, para 7.7.10-13) and potential impacts on ancient woodland are described in Section 7.7. para 7.7.14-15.</p>
<p><b>Biodiversity - Para 7.5.5 (Scheme design and ancient woodland)</b>                      It is noted that the design of the Proposed Development is being developed with a view to avoiding impacts on ancient woodland but that this will depend on developing a departure from standard for the Bean junction. The ES must clearly explain which junction design has been used for the assessment of effects on ancient woodland. It should quantify the area of habitats, including ancient woodland, that will be directly lost.</p>	<p>The Scheme will not involve any ancient woodland loss. Other habitats to be lost as a result of the Scheme are quantified in the ES volume 1 Section 7.7., para 7.7.19-26)</p>
<p><b>Biodiversity - Para 7.7.2 (Habitats and species surveys)</b>                      The ES should describe the methods used and the timing of surveys of habitats and species. If necessary, survey results should be updated to ensure that the assessments within the ES remain valid at the time any application is submitted.</p>	<p>Methods and timing of surveys is described in the ES volume 1 section 7.4, para 7.4.3-7.</p>
<p><b>Biodiversity - Para 7.7.6 (Use of professional judgement)</b>                      While reliance on professional judgement is legitimate, the ES should provide an explanation of the reasoning and evidence that support conclusions based on professional judgement.</p>	<p>Reasoning and evidence used throughout the assessment are provided in the relevant sections for each receptor, including ES volume 1 Section 7.6 for valuation of receptors and Section 7.9 for assessment of effects.</p>
<p><b>Biodiversity - Para 7.8.7 (List of proposed surveys)</b>                      This list includes National Vegetation Classification surveys for species-rich grassland but not for any of the other notable habitats listed in the Scoping Report. In line with the advice from consultees (FC, KCC, DBC and NE) the ES should include Phase 2 surveys for the woodland areas within the EZol.</p>	<p>Full results are provided in the ES Appendices (volume 2) and are summarised in the ES volume 1 Section 7.6, para 7.6.10-15, also para 7.6.22.</p>
<p><b>Biodiversity - Para 7.8.7 (List of proposed surveys)</b>                      The list of proposed surveys does not include any surveys necessary for the arboricultural assessment referred to in paragraph 7.4.7. The ES should identify the location, species and condition of any veteran trees</p>	<p>Full results are provided in the ES Appendices (volume 2) and are summarised in Section 7.6, para 7.6.17.</p>



Comment	Highways England Response
<p>identified within the EZoI. The FC has also advised that the ES should identify any ancient or veteran trees likely to be affected by the Proposed Development.</p>	
<p><b>Biodiversity - Para 7.8.7 (List of proposed surveys)</b>                      Any areas of land that are proposed for mitigation or compensation measures should also be subject to an appropriate level of survey to establish that their use for mitigation and compensation will not adversely affect other ecological features.</p>	<p>Mitigation areas were included in the extended Phase 1 habitat survey. Results are provided in the ES volume 1 Section 7.6, para 7.6.19-21 and 7.6..</p>
<p><b>Biodiversity - Para 7.9 (proposed consultation)</b>                      The bodies listed do not include KCC, DBC or GBC. The Applicant should also consult these bodies on species surveys and findings, design and potential mitigation measures. The Applicant is advised to agree the scope of the surveys to be included in the ES with the consultees.</p>	<p>The recommended bodies were consulted as recommended and full details are provided in the ES volume 1 Section 7.4, para 7.4.24.</p>
<p><b>Biodiversity - Para 7.10 (potential mitigation measures)</b>                      The ES should clearly explain how the 'avoid-mitigate-compensate' hierarchy has been applied to the assessment of effects of the Proposed Development, particularly in relation to effects on ancient woodland. Where compensation measures are proposed, the ES should clearly explain the evidence on the likely success of these measures</p>	<p>Referenced in the ES volume 1 Section 7.4, para 7.4.21-22.</p>
<p><b>Biodiversity - Para 7.10.1 (potential mitigation measures)</b>                      Translocation is proposed as a method to mitigate effects on man orchid populations. The ES should include evidence on the likely effectiveness of such a measure and, if necessary, measures to ensure the survival of the population after translocation.</p>	<p>Different approaches have been considered the ES volume 1 Section 7.8, para 7.8.1 and a Habitat Management Plan will be implemented to encourage flowering of translocated colonies.</p>
<p><b>Biodiversity - Para 7.11.2 (great crested newt surveys)</b>                      Surveys have not been carried out for ponds where ecological data already exists. This data should only be relied on in the ES if it can be demonstrated that the data would still be up to date by the time the application is submitted and the surveys are sufficiently robust to be relied on, especially if the data is being relied on to determine an absence of great crested newts.</p>	<p>Waterbodies have been re-surveyed where existing data is out of date. Further details are provided in the ES volume 1 Section 7.6, para 7.6.38-44.</p>
<p><b>Biodiversity - Para 7.11.5 (Search for water bodies within 500m of the Proposed Development)</b>                      Water bodies have been identified through the use of Ordnance Survey plans and aerial photographs. It is considered that even if additional water bodies are identified, the vast majority of water bodies will have been identified and this will be adequate to determine the approximate</p>	<p>Waterbodies within 500 m of the Scheme have been surveyed as far as access has allowed.</p>

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<p>abundance of great crested newts. The proposed approach is not considered to be in line with good practice. The Inspectorate is concerned that this approach would also limit the confidence in the anticipated population size. The Inspectorate considers that unless otherwise agreed with Natural England, a 500m area from boundary of the Proposed Development application site should be checked to establish if any additional waterbodies are present which require surveys for great crested newt.</p>	
<p><b>Biodiversity - Table 7-6 (Scoped Out - European sites and non-statutory Local Nature Reserves)</b>                      Effects on these sites have been scoped out on the grounds that they are not within the EZoI for the Proposed Development. However, the Inspectorate has concerns about how the EZoI are defined and so does not agree at this stage that these sites can be scoped out. The definition of the EZoI appears to be based on the standard guidance within the DMRB. The Scoping Report states that these distances encompass all the predicted impacts of the Proposed Development but only provide limited justification to support this. The ES must clearly justify the EZoI and therefore the study area used for assessment purposes. This applies to all ecological receptors. KCC, DBC and Natural England (NE) have also raised concerns about the adequacy of the study area in relation to effects on designated sites (see Appendix 2).</p>	<p>Clarification to NE comment sought and received with NE during meeting on 11/01/18. The EZoI is based on DMRB guidance (Vol 11, Section 4, Part 1, HD44/09). It is not anticipated that designated sites outside of the EZoI will need detailed assessment. However, if further traffic modelling and air quality assessment reveal potential impacts to any designated site, then detailed assessment will be provided in the ES. Further traffic modelling and air quality assessment has confirmed that there will be no impacts on designated sites outside of the study area. This is confirmed in the ES. The study area and EZoI is defined for all receptors in the ES volume 1 (Section 7.3).</p>
<p><b>Biodiversity - Table 7-6 (Scoped Out - Effects on aquatic invertebrates)</b>                      Table 7-6 of the Scoping Report indicates that it is considered unlikely on the basis of the data collected to date, that notable aquatic invertebrates would be affected by the Proposed Development but that this will be confirmed during the Preliminary Design Stage. It is unclear therefore whether effects on aquatic invertebrates have been scoped out or not. On the basis of the evidence provided in the Scoping Report the Inspectorate does not agree to effects on aquatic invertebrates being scoped out of assessment in the ES.</p>	<p>It is not anticipated that aquatic invertebrates will need detailed assessment. Full data is presented in the ES volume 1 (Section 7.6, para 7.6.77-80).</p>
<p><b>Biodiversity - Table 7-6 (Scoped Out - Effects on water vole and otter)</b>                      The Scoping Report proposes to scope out effects on these species on the basis of data collected and because the Ebbsfleet River is hard engineered in the area surrounding the Proposed Development and</p>	<p>It is not anticipated that otter and water vole will need detailed assessment. Full data is presented in the ES volume 1 (Section 7.6, para 7.6.51-55). Based on the data collected to date, a precautionary approach has been taken for the potential presence of otter/water vole.</p>

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<p>culverted beneath the A2. As the Scoping Report does not identify the extent of the river that has been subject to hard engineering and does not include the data referred to in the Scoping Report, the Inspectorate does not agree to effects on these species being scoped out.</p>	
<p><b>Biodiversity - General (Supporting info)</b>                  Although Figure A-1 shows the location of the SSSI and the ancient woodland, it does not show the location of the LWS or other features of ecological value described in the Scoping Report. The ES must include plans or figures which show the locations of designated statutory and non-statutory wildlife sites, ancient woodland and habitats of principal importance within the EZol.</p>	<p>LWS is included on the Environmental Constraints Plan Figure 2.1 in the ES Volume 3. Relevant designated statutory and non-statutory wildlife sites, ancient woodland and habitats of principal importance are shown on figures in the ES Volume 3.</p>
<p><b>Water - Para 8.4 (baseline)</b>                  This section of the Scoping Report describes the existing surface and groundwater conditions but no figure has been supplied showing the location of any of the features. The ES must include plans or figures which show the location of the water bodies, aquifers, Source Protection Zones and Flood Zones.</p>	<p>The location of the water bodies, aquifers, Source Protection Zones and Flood Zones is shown on Figures in Volume 3 in the ES.</p>
<p><b>Water - Para 8.7 (proposed assessment method)</b>                  The Scoping Report refers to the use of various methods recommended by the DMRB. The ES should include a brief description of the methodology rather than just referring to the DMRB and clearly explain how the significance of effects has been determined.</p>	<p>It was felt appropriate and proportionate for a scoping report not to describe the method proposed in detail. A full description has been included in the ES.</p>
<p><b>Water - Para 8.9 (proposed consultation)</b>                  The intention to consult the Environment Agency is welcomed. The Applicant should also consult KCC as the Lead Local Flood Authority for the area affected by the Proposed Development.</p>	<p>Consultation with stakeholders has been undertaken.</p>
<p><b>Water - Para 8.10.1 (potential mitigation measures)</b>                  The Scoping Report notes that mitigation measures will be provided if significant adverse effects are identified. These would be in addition to the embedded mitigation measures within the project's design. The assessments of residual effects in the ES should make it clear which mitigation measures have been taken into account when reaching conclusions about the significance of effects. It should also be clear which measures represent mitigation for the effects of the Proposed Development and which represent improvements to the water environment.</p>	<p>Detail of mitigation measures are outlined in the ES volume 1 in section 8.8</p>

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<p><b>Water - Table 8-4 (Consideration of surface water impacts)</b>                      Table 8-4 refers to effects on the quality of surface waters from run-off and it also refers to an assessment of flood risk. It is not clear from the Scoping Report whether alterations to the quantity of surface water run-off will be covered in the Flood Risk Assessment. The ES must include an assessment of the effects of an increase in surface water run-off. If mitigation such as a Sustainable Urban Drainage System is being relied on to avoid significant effects then the details of the mitigation proposals should be included in the ES. KCC, GBC and the Ebbsfleet Development Corporation (EDC) have also pointed out the need for the ES to consider surface water management issues.</p>	<p>An FRA covers this detail in the ES. Details of the drainage system and SUDs are also outlined.</p>
<p><b>Landscape - Para 9.2 (Study area)</b>                      The Scoping Report states that the study area has been based on a buffer of 1km from the perimeter of the Proposed Development but that consideration will be given to the wider area for impacts to landscape. Visual impacts beyond the 1km perimeter have been scoped out as they are not expected to be significant. However, the Scoping Report does not include any evidence to support the statement that the proposed study area is adequate to capture all likely significant effects. The ES should clearly explain and in the assessment of landscape and visual impacts. Paragraph 9.6.4 states that Zones of Visual Influence will be produced. The Inspectorate advises that this should be used as the basis for defining the study area.</p>	<p>ZTV plans have been added to the ES for Winter and Summer views. Views further than 1 km are indicated to the south east of the scheme in particular, however, there are existing long range views of the A2 from the south east and changes proposed would not make a significant change to these long views. This is explained in section 9.3 of the ES volume 1. Changes to lighting or increase in the number of gantries would be assessed.</p>
<p><b>Landscape - Table 9-5 (National Character Area - Regional Landscape Character Areas)</b>                      The Scoping Report states that the relatively small scale of the Proposed Development would not result in significant effects on landscape character for national or regional landscape character areas. The Scoping Report does not provide any supporting evidence to justify this approach. On that basis the Inspectorate does not agree that significant impacts to national and regional character areas can be scoped out of the ES. The ES should assess the potential impacts to both national and regional landscape character receptors for effects on these receptors.</p>	<p>Figure 9.2 is included in the ES volume 3 showing the National Character areas.</p>
<p><b>Landscape - Table 9-5 (Local Landscape Character Areas B and D - Beacon Wood Country Park, Darenth Country Park)</b>                      The potential for significant effects on these receptors has been excluded on the grounds that there is no indivisibility between them and the</p>	<p>The ZTV plans have been included in Figures 9.7 and 9.8 in Volume 3 in the ES that clearly show that there are no views of the scheme from Darenth Country Park. There are possible views from the edge of Beacon Wood Country Park and these will be verified on site, as will the possible views from</p>

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<p>Proposed Development. No supporting evidence (such as a Zone of Theoretical Visibility) has been provided to support this statement so the Inspectorate does not agree that impacts on these receptors can be scoped out. EDC also advise in their consultation response (see Appendix 2) that impacts on Darenth Country Park should not be scoped out from the assessment.</p>	<p>parts of character areas A and D. Although there are no views, Darenth Country Park has been included in the assessment</p>
<p><b>Landscape - Table 9-6 (Various residential receptors)</b>                      The potential for significant impacts to various residential receptors has been excluded on the basis of screening by existing vegetation or topography. No plans or figures have been provided showing the location of individual receptors which makes it difficult to verify the statements made in the Scoping Report. The Inspectorate does not agree that impacts on these receptors can be scoped out on the basis of the evidence presented in the Scoping Report.</p>	<p>Figure 9.6 showing Key Visual Receptors Locations is included in the ES Volume 3 and included in the ES.</p>
<p><b>Landscape - Table 9-8 (Various PRoWs)</b>                      No plans or figures have been provided to show the location of these PRoWs which makes it difficult to verify the statements in the Scoping Report. The Inspectorate does not agree that impacts to these receptors can be scoped out from assessment in the ES.</p>	<p>Figure 9.1 showing PRoW is included in the ES volume 3.</p>
<p><b>Landscape - Para 9.4 (Baseline conditions)</b>                      Table 9-3 describes the relevant key characteristics of the regional Landscape Character Areas. The ES should include plans or figures that show the location of these areas.                      It is not clear how the Local Landscape Character Areas have been derived (LLCA). The ES should explain the source of these LLCA and provide a map showing the location of the different areas.</p>	<p>Figure 9.3 is included in the ES volume 3 showing the location of the Local Landscape Character Areas. These were determined at the Option Selection Stage.</p>
<p><b>Landscape - Para 9.5.11-14 (Potential visual impacts)</b>                      The impacts described do not include the sequential effects on views experienced by users of PRoW or roads. While Chapter 13 of the ES (People and communities) refers to views from the road experienced by vehicle travellers it does not address effects on views from PRoW. The ES should assess the potential for significant sequential effects on road and PRoW users.</p>	<p>Sequential effects for PRoW users has been considered as part of the ES volume 1 and have been included in 9.6.44. Refer to Appendix I for baseline descriptions of sequential views from PRoW</p>
<p><b>Landscape - Para 9.6.7 (Visual receptors)</b>                      The consultation response from DBC (see Appendix 2) advises that much of the land north of the A2 is already covered by extant planning</p>	<p>The planning applications listed in the ES volume 1 Cumulative effects chapter table 15.4 Stage 2 Shortlist of 'Other Developments' have been assessed and included in ES volume 2 appendix I</p>

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<p>permissions. The Inspectorate considers that the ES should also assess impacts to these 'future receptors' in the visual impact assessment.</p>	
<p><b>Landscape - Para 9.9.1 (Proposed consultation)</b>                      The Applicant should make an effort to agree with relevant consultees (where possible) the visual receptors and the viewpoints to be used in the assessment. It is noted that DBC and GBC will be consulted.</p>	<p>DBC and GBC were consulted, on visual receptors and viewpoints. Additional receptor requested were included in the assessment in the ES volume 1 and shown on figure 9.6 in volume 3</p>
<p><b>Landscape - Para 9.11.2-3 (Details of highway infrastructure and construction infrastructure)</b>                      The Scoping Report states that certain details of highway infrastructure such as communications cabinets will not be available at the time of assessment although it is assumed that information on lighting, gantries and extent of site clearance will be. If detailed construction information is not available at the time of assessment, assumptions will be made about the location of haul roads, construction compounds and storage. Where details of highways and construction infrastructure are not available at the time of the assessment, the ES must explain what parameters the assessment has been based on and how these represent the worst case scenario for the Proposed Development. The ES should take account of the advice on flexibility in section 2.3 of this Opinion and the Inspectorate's Advice Note 9: Rochdale Envelope.</p>	<p>Where details of highways and construction infrastructure are not available at the time of the assessment, the ES has explained what parameters the assessment has been based on and how these represent the worst case scenario for the Proposed Development and take account of the advice on flexibility in section 2.3 of this Opinion and the Inspectorate's Advice Note 9: Rochdale Envelope.</p>
<p><b>Geology and Soils - Table 10.7 (Re-use of soils and waste soils)</b>                      The Scoping Report states that this matter is discussed in Chapter 12 Materials and Waste. However, the Inspectorate notes that the re-use of soils and waste water is not discussed within Chapter 12 and therefore the Inspectorate does not agree that this matter can be scoped out and an assessment should be included in the ES.</p>	<p>ES volume 1 Chapter 12 covers all aspects of re-use of soils including its appropriate use (environmental risk assessment).</p>
<p><b>Geology and Soils - Para 102.1 (Study area)</b>                      The Scoping Report lacks sufficient justification as to why a 500m study area extending from the red line boundary has been chosen. The Applicant should include a concise justification of their chosen study area within the ES.</p>	<p>Justification is provided in the ES volume 1, section 10.3.1</p>
<p><b>Geology and Soils - Para 10.4 (Baseline)</b>                      The Applicant should provide a figure outlining where the Local Geological Site (LGS), deneholes, potential ground stability risks and earthwork defects are located within the study area. This will make it easier to identify where areas of high value and/or sensitive receptors are located.</p>	<p>Figure 10.1 has been included in ES volume 3.</p>



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<p><b>Geology and Soils - Para 10.6.2 (Proposed level and scope of assessment)</b>                      The Applicant states that ground investigations will be carried out but the data collected is not expected to be included within the ES. Instead a simple level of assessment will be included in the ES, based on desk studies. A more detailed assessment will be undertaken when GI data is available and the results will be made available during the Examination. If a detailed assessment is required then this should be included in the ES along with the data from the GI.</p>	<p>The methodology has been reworded to reflect that the GI data/GQRA cannot be included within the ES. Only historical data have been used in the geology and soils assessment within the ES. The GI was unable to be completed by the ES submission deadline due to the lengthy process, restraints due to the high-risk nature of the site and external factors (sub-contractors).</p>
<p><b>Geology and Soils - Para 10.7 (Proposed assessment method)</b>                      The Scoping Report demonstrates some duplication of effort with assessments proposed for the risk of contamination of surface water bodies and groundwater being described in both this chapter of the Scoping Report and in Chapter 8 Road drainage. The methodologies appear to be slightly different. The ES should contain one assessment of the risks of contamination for surface water bodies and groundwater. If the assessment is relevant to more than one chapter the Inspectorate advises that it should be cross-referenced to avoid duplication.</p>	<p>There was an agreement with Highways England that the Water and Drainage Chapter (chapter 8) of the ES would assess the potential for spills on the highway and Geology and Soils chapter (chapter 10) of the ES would assess risk to controlled waters from land contamination. This has been completed within the ES.</p>
<p><b>Geology and Soils Para 10.7.9 (Determination of significance)</b>                      The Scoping Report states that major and moderate effects are, as a rule, considered to be significant but then states that professional judgement is also applied where appropriate. The ES should clearly explain the reasoning used to determine the significance of an effect. This also applies where professional judgement is being relied on to reach a conclusion.</p>	<p>Noted - this has been explained in the ES. See ES volume 1 section 10.4.12 to section 10.4.15</p>
<p><b>Geology and Soils - Para 10.7.11 (Impact assessment)</b>                      The receptors for the assessment of the potential effects the Proposed Development will have on human health are not clearly defined. The ES should provide a more detailed definition of what constitutes a 'nearby' receptor and how it relates to the extent of the anticipated impact)</p>	<p>Noted, receptors have been clearly defined in the ES. See ES volume 1 Chapter 10 table 10.4 which describes the sensitivity of a receptor. Any receptor within the 500 m study area is considered, as detailed in 10.4.10.</p>
<p><b>Geology and Soils - Para 10.7.16 (Agricultural soils assessment methodology)</b>                      The Applicant has developed a 'bespoke system' to assess the impact on the loss of BMV land but does not set out how the system will work. The Applicant should provide a description of the system within the ES. The Applicant has also included a partial methodology for the assessment of agricultural soils within Chapter 13 People and Communities. In the</p>	<p>BMV land impact assessment is included in the Soils and Geology chapter (Chapter 10) of the ES.</p>

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<p>ES, the Applicant should include all of this information within one chapter and cross-reference from other chapters as appropriate.</p>	
<p><b>Cultural Heritage - Table 11-4 (Scoped out - Historic landscape)</b>                      Paragraph 11.4.21 refers to the Historic Land Characterisation (HLC) by the Kent Historic Environment Record but only provides limited information on the features of the HLC. No plans or figures have been included in the Scoping Report to show the extent of these areas. The Scoping Report does not therefore provide enough evidence for the Inspectorate to agree with the statement in Table 11-4 that the scale of the Proposed Development is not at a level where an assessment of the historic landscape is required. The ES should either include an assessment or a fully reasoned justification for the lack of one.</p>	<p>The historic landscape will be assessed in the ES and VZI is set out in the cultural heritage chapter (ES volume 1 chapter 11).</p>
<p><b>Cultural Heritage - General Comment (Presentation of archaeological information)</b>                      KCC's response requests that archaeological information is presented to show the layout of key features rather than as point data. The Inspectorate agrees that the archaeological information in the ES should be presented in this way.</p>	<p>The ES figures 11.1, 11.2 and 11.5 in Volume 3 show all key features provided by the HER and include findspots and historic buildings, which are indicated using points.</p>
<p><b>Cultural Heritage -Para 11.2 (Study area)</b>                      Responses received from KCC, DBC, EDC and GBC (see Appendix 2) point out that the area around the boundaries of the Proposed Development is quite likely to contain valuable archaeological remains. The Inspectorate requires that the study area in the ES is sufficient to allow an understanding of the archaeological context of the site. The ES should assess impacts on all archaeological remains likely to be impacted by the Proposed Development.</p>	<p>Detail on the study area and its justification have are included in Section 11.3 of in the ES volume 1.</p>
<p><b>Cultural Heritage -Para 11.4.6 (Scheduled monuments)</b>                      The Scoping Report states that there are 5 Scheduled Monuments within the study area. However, the Palaeolithic sites near Bakers Hole appear to be beyond the limits of the study area. The ES should clearly identify which Scheduled Monuments are within the study area and likely to experience impacts from the Proposed Development.</p>	<p>Noted. This was picked this up following the submission of the Scoping Report and has been amended in the ES to address this. All assets have been recounted (note changes in number of Scheduled Monuments and Listed Buildings within the site/study area).</p>
<p><b>Cultural Heritage -Para 11.4 (Baseline conditions)</b>                      This section of the Scoping Report reviews the information available on known heritage assets. The response from Historic England (see</p>	<p>Noted, these additional sources/reports have been determined and included in the ES.</p>



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<p>Appendix 2) identifies additional sources of information which may not have been entered onto the Historic Environment Record. This information should be reviewed and where relevant used to inform the assessment in the ES.</p>	<p>See new text in ES under 'previous archaeological investigations' which makes reference to the other sources identified by Historic England. (ES volume 1 paras 11.6.32 – 11.6.38)</p>
<p><b>Cultural Heritage -Para 11.5 (Potential impacts)</b>                      The ES must assess the full range of impacts likely to result from the Proposed Development, including indirect impacts such as alteration to groundwater levels. This point is reinforced by the responses from Historic England, KCC, DBC and GBC in Appendix 2.</p>	<p>Cumulative impacts are addressed in section 11.10 in the ES volume 1.</p>
<p><b>Cultural Heritage -Para 11.7.1 (Assessment method)</b>                      The Scoping Report gives a very broad description of the methods to be used in carrying out the assessment and it is noted that some points (such as the location and extent of trial trenching) are still to be resolved. The reporting in the ES must explain the methods used in the assessment and which guidance was used to inform the choice of method.</p>	<p>Details of the methods used in the assessment are included in Section 11.4 in the ES volume 1.</p>
<p><b>Cultural Heritage -Para 11.9 (Proposed consultation)</b>                      It is noted that the Applicant intends to consult Historic England and the Kent Heritage Conservation Team. The Applicant is advised to agree the scope and methods of fieldwork with these bodies.</p>	<p>Consultation has been undertaken and the scope and methods of fieldwork have been agreed.</p>
<p><b>Cultural Heritage -Para 11.10 (Potential mitigation measures)</b>                      Historic England have advised that nationally significant archaeological remains should be conserved in situ and physical and setting impacts for all assets should be reduced as far as possible. The ES should explain how consideration has been given to these points, and how the scheme has been designed to conserve heritage assets where possible.</p>	<p>Noted, the ES shows how consideration has been given to avoidance of impacts and conservation of assets firstly through design and how any remaining impacts have been reduced as far as possible where such effects are likely to be unavoidable.</p>
<p><b>Cultural Heritage -Para 11.10 (Potential mitigation measures)</b>                      The NNNPS states that where there is a high probability of as yet undiscovered heritage assets with archaeological interest, the Secretary of State should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction. The ES should contain a mitigation</p>	<p>Noted, mitigation measures are included in the ES volume 1 section 11.8.</p>

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<p>strategy which explains the actions that would be taken in the event of discovering previously unrecorded heritage assets during construction.</p>	
<p><b>Cultural Heritage -Para 11.11.1 (Assumptions)</b>                      The Scoping Report assumes that works necessary for the delivery of the Proposed Development will be restricted to land within the study area and will avoid assets of medium to high value. However, if the DCO does not restrict works in this way then the ES must assess the full range of impacts which could result from the works consented in the DCO.</p>	<p>Consideration of all scheme impacts within the agreed Scheme boundary have been addressed in the ES.</p>
<p><b>Cultural Heritage -Para 11.11.2 (Limitations)</b>                      The Scoping Report states that the locations for construction compounds, soil storage, ecological mitigation and water management have not been decided and these additional works have the capacity to have impacts on heritage assets. If the locations of these have not been confirmed at the time of assessment then the ES must explain the parameters that the assessment has been based on and how these represent the worst case scenario for the effects of the Proposed Development.</p>	<p>The potential impacts of the locations for construction compounds, soil storage, ecological mitigation and water management have been included in the ES where information is available.</p>
<p><b>Materials and Waste - Para 12.6.3/ Table 12-5 (Scoped out - Vulnerability to major accidents and disasters)</b>                      The Applicant states that a review of major accidents and disasters has been undertaken and is considered to not have a significant effect on material resources. However, the Inspectorate notes that the Scoping Report lacks evidence of the review into how accidents and disasters will impact waste and materials. Therefore, the review should be included and discussed within the ES</p>	<p>This has been addressed in section 4.15 in the ES volume 1.</p>
<p><b>Materials and Waste - Para 12.4 (Baseline)</b>                      The baselines reported for material resources and waste infrastructure capacity are based on data gathered in 2014/15 and 2011 and 2015 respectively. By the time construction commences this information is likely to be out of date. The ES should include a future baseline based on the most recent data available to the Applicant. KCC have advised that updated evidence on waste capacity is now available (see Appendix 2).</p>	<p>Noted, ES has been updated with data from the report below:                       Kent Waste Needs Assessment 2017 - Construction, Demolition &amp; Excavation Waste Management Needs</p>

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<p><b>Materials and Waste - Para 12.5.2 (Potential impacts)</b>                      The Inspectorate acknowledges that the amount of waste arising is unknown at this stage of the Proposed Development. The assessment in the ES should be based on the most likely waste arisings for the Proposed Development. If this information is not available, a worst case scenario estimation of the quantity of waste generated should be used to inform the assessment within the ES.</p>	<p>Noted, assessment will be based on worst case if no other, more relevant information is available at the point of writing the ES.</p>
<p><b>Materials and Waste - Para 12.6 (Level and scope of assessment)</b>                      The consultation response from KCC advises that it is not clear from the Scoping Report if the junction improvements would lead to the sterilisation of Minerals Safeguarding Areas for sand and gravel. The ES should make it clear if the Minerals Safeguarding Areas will be affected; if they are then the Applicant should undertake a Minerals Assessment in consultation with KCC.</p>	<p>This has been addressed in Chapter 10 geology and soils in the ES.</p>
<p><b>Materials and Waste - Para 12.11.1 (Assumptions and limitations)</b>                      It is stated that contaminated soils will be considered separately to contaminated waste. However, no details of how contaminated soils will be considered are included within the Scoping Report. An assessment of impacts associated with contaminated soils should be included within the ES.</p>	<p>This has been addressed in Chapter 10 geology and soils in the ES.</p>
<p><b>P&amp;C - Para 13.1.1, 13.5.24, 13.5.16, 13.6.12 (Agricultural land and agricultural soils)</b>                      The Scoping Report states that DMRB Volume 11, Section 3, Part 6 (Land Use), will be incorporated within this Chapter, in accordance with IAN 125/15. However it is then stated that agricultural soils and agricultural land will be considered within the Geology and Soils Chapter of the ES.                      The Scoping Report also outlines that a full Agricultural Land Assessment may be required, if over 20ha of Best and Most Versatile (BMV) land will be lost as part of the scheme.                      It appears that agricultural land take, type of husbandry and severance are currently proposed to be assessed by both the People and Communities chapter and the Geology and Soils Chapter. The ES should contain one assessment for these matters. Where this assessment is</p>	<p>The assessment of agricultural land (BMV) has been addressed in the Geology and Soils section 10.7. Soil degradation will still be included in ES Geology and Soils chapter 10 paragraphs –10.6.27-28 as per their DMRB topic guidance.                       Agricultural land classification plan (ES volume 3 Figure 10.2) has been produced for the ES.</p>

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<p>relevant to more than one chapter in the ES, the Inspectorate advises that it should be cross-referenced to avoid duplication.</p>	
<p><b>P&amp;C - Para 13.2.1 (Study areas)</b>                      The ES should include a clear justification for each of these study areas with corresponding figures to aid understanding.                      The Inspectorate notes that DMRB Volume 11, Section 3, Part 8, Para 2.2, states that community facilities ‘and their catchment areas’ should be covered by the assessment. It should be clear in the ES how this requirement has been taken into account in the selection of appropriate study areas. The ES should explain how the routes affected by the Proposed Development have been identified for the purposes of the assessment of community severance, accessibility and connectivity.</p>	<p>Figure 13.1 in the ES Volume 3 has been prepared and has been amended as required for the main ES to illustrate the location of the key receptors to the proposed scheme. The study area and justification will be set out more clearly and this is based on mixture of professional judgement and experience and will include potential receptors identified in other chapters that are relevant to people and communities.</p> <p>Methodology has been clarified and the identified NMU routes for NMU assessment are shown in the P&amp;C figure.</p>
<p><b>P&amp;C - Para 13.2.1 (Study areas for amenity effects)</b>                      The consultation responses from KCC, EDC and DBC advise that current congestion around the Bean junction leads to drivers seeking alternative routes, which suggests that the effects of the Proposed Development in relation to driver stress could extend over a greater area than the study area described in the Scoping Report. The ES should clearly explain how the study area has been defined and how this captures the zone of influence of the Proposed Development.</p>	<p>There is no specific guidance in DMRB regarding study area extend. The driver stress assessment within the People and Communities study area is influenced by the traffic model/ assessment undertaken for the wider scheme. Driver stress assessment will draw on the traffic modelling data available for the ES looking at the Affected Route Network (ARN – as detailed in chapter). This takes in a range of data that extends beyond the scheme boundary and 500 m buffer.</p>
<p><b>P&amp;C - Para 13.4 (Baseline conditions)</b>                      The Applicant is advised to include plans and figures to depict the location of receptors included within the assessment to aid understanding, such as community facilities and PRoW.</p>	<p>Figure 13.1 in the ES Volume 3 has been prepared has been amended as required for the main ES showing the key receptors being considered in the assessment including: private dwellings, community assets and facilities (as outlined in DMRB Volume 11, Section 3, Part 8, Para 2.2) development land, public rights of way.</p>
<p><b>P&amp;C - Para 13.4.5-8 (Baseline conditions)</b>                      When identifying community facilities, the Applicant is advised to include reference to DMRB Volume 11, Section 3, Part 8, Para 2.2 , which identifies key community facilities to be included in the assessment (where relevant): doctors’ surgeries; hospitals; aged person homes; schools; shops; post offices; churches and parks, play areas, sport centres etc. In some cases it may be necessary to assess other important</p>	<p>Figure 13.1 in the ES Volume 3 includes the facilities including schools, churches, healthcare facilities, post office, open spaces and community halls if they are within the study area/ or those which are outside that are likely to be affected during construction/ operation in line with the DMRB guidance and/ or where responses from community consultation have highlighted a receptor. Additional receptors (outside of those included in DMRB guidance) are also recognised in the settlement appraisal within the P&amp;C baseline.</p>

Comment	Highways England Response
<p>facilities (for example, libraries, railway stations, bus services, riding schools).</p>	
<p><b>P&amp;C - Para 13.4.13 (Community severance)</b>                      The level of impact for community severance is not anticipated to be significant for community access to services and facilities. The Inspectorate is not satisfied that sufficient evidence has been provided to support this statement. The ES should assess the effects of temporary and permanent closures and diversions of footpaths and PRoW on community severance. The consultation response from KCC reinforces this point (see Appendix 2).</p>	<p>The ES looks at the potential for community severance and reports impacts as a result of the proposed scheme. There is potential for community severance during construction, such as between communities and their facilities to the south of the A2 and communities and facilities to the north.</p>
<p><b>P&amp;C - Para 13.7.21 (Amenity effects)</b>                      The Scoping Report states that amenity effects will be assessed elsewhere in the ES. It should be clearly stated in the ES where amenity effects have been assessed.</p>	<p>Assessment within the ES identifies receptors likely to experience a combination of two or more significant amenity effects. This assessment draws from the findings of other chapters within the ES, including LVIA, Noise and vibration, Air quality etc.</p>
<p><b>P&amp;C - Para 13.7.24/ Table 13-8 (Assessment criteria)</b>                      The Scoping Report states the assessment criteria for the assessment of community facilities and land used by the community have been developed using professional judgement. However, the criteria use phrases such as ‘substantial change to a modest number’ without providing any detail on what constitutes a substantial change or a modest number. The ES methodology should include some quantification of the terms used to aid understanding of the way significance has been determined.</p>	<p>Assessment methodology within the ES provides quantification.</p>
<p><b>P&amp;C - Para 13.7.26 (Community severance)</b>                      The Scoping Report provides a definition of the term ‘community severance’.                      The Applicant is advised that DMRB Volume 11, Section 3, Part 8 states that severance may also be caused by the demolition of a community facility or the loss of land used by members of the public. This effect should also be considered within the assessment of community severance in the ES.</p>	<p>Assessment within the ES is mindful of potential severance resulting from demolition or loss of land.</p>

Comment	Highways England Response
<p><b>P&amp;C - Para 13.7.28, 13.9.2 (Surveys)</b>                      The Scoping Report states that a number of surveys will be undertaken to establish the current use of community facilities, private assets and access routes.                      The Inspectorate advises that the nature and methodology of the surveys undertaken to inform the assessment of People and Communities should be agreed with relevant consultees and explained in the ES.</p>	<p>No new surveys were undertaken. Previous data available provided baseline information.</p>
<p><b>P&amp;C - Para 13.7.35 (Guidance for assessment of effects on agricultural holdings)</b>                      The Scoping Report states that assessment methodology approach has been partly informed by former Planning Policy Guidance Note 7.                      The Inspectorate notes that Planning Policy Guidance Notes have been withdrawn and advises that the Applicant should take care to ensure any guidance referred to is relevant and applicable.</p>	<p>Noted. Reference to PPG 7 has been removed from the ES. Note: this is now part of Geology and Soils.</p>
<p><b>P&amp;C - Para 13.9 (Proposed consultation)</b>                      The Applicant is advised to also consult KCC in relation to effects on the local highways network for which they are the highways authority.</p>	<p>KCC have been consulted in regard to effects on the highways network. KCC were a key consultee throughout preparation of the ES and Transport Assessment.</p>
<p><b>P&amp;C - Para 13.11.1 (Assumptions and limitations)</b>                      The Applicant should set out any assumptions underpinning the People and Communities assessment in their ES, such as any relating to the traffic model and the inclusion of committed developments and use of now withdrawn guidance.</p>	<p>Assumptions for the people and communities chapter are shown in the ES methodology. Assumptions for data that the P&amp;C chapter has drawn on e.g. Noise, AQ, landscape and transport has not been included as these are noted elsewhere to avoid repetition, though some reference in chapter 13 may remain where relevant for understanding.</p>
<p><b>Climate - Para 14.2.4 (Scoped out - Study area)</b>                      The report states that the study area is dependent on the availability of design and construction information and that if such data is not available, part or all of the affected life cycles will be excluded from the assessment.                      The Inspectorate does not agree that this approach is acceptable. Where construction and design information are unavailable the assessment should be based on assumptions about construction activities and design which correspond to the worst case scenario for the Proposed Development.</p>	<p>The worst case scenario will be assessed based on assumptions agreed with the project team and topic specialists of related environmental topics that include materials and waste, and air quality/greenhouse emissions.</p>
<p><b>Climate - Table 14-16 (Scoped out - Climate vulnerability)</b>                      Table 14-16 of the Scoping Report proposes to scope out average air</p>	<p>A definition of extreme weather event has been added to the ES glossary.</p>

Comment	Highways England Response
<p>temperature change, precipitation, wind speed change and humidity from further assessment. The Inspectorate accepts that the major risks from climate change are likely to arise from extreme events and agrees that other effects can be scoped out. However, the ES must make it clear what it means by 'extreme weather events'.</p>	
<p><b>Climate - Table 14-5 (Scheme emissions baseline)</b>                      The life cycle stages shown in this table do not appear to match the life cycle stages listed in Table 141 of the Scoping Report. If the assessment in the ES is based on the life cycle stages identified in Table 14-1 then it must be clear which baseline emissions are associated with each stage. Where proxy emissions are used from other schemes then the ES should explain how similar those schemes are to the proposals for the Bean and Ebbsfleet junctions.</p>	<p>The lifecycle stages in the ES volume 1 chapter 14 Table 14-5 have been specified out with PAS 2080. However, simple comparison enables relevant alignment to be made, i.e. construction, operation, and in-use, align with A1-5, B6 and B9, as stated.</p> <p>Regarding proxy schemes. these have been used as best available data.</p>
<p><b>Climate - Table 14-9 (Climate vulnerability assessment)</b>                      The Scoping Report does not provide any detailed justification as to how exposure and sector sensitivity has been determined for each climate variable. The ES should explain the criteria used to determine these categories.</p>	<p>The ES explains the criteria used to determine exposure and sector sensitivity.</p>
<p><b>Climate - Table 14-9 (Vulnerability to major accidents and disasters)</b>                      This section of the Scoping Report describes potential vulnerabilities and their likely effects on emissions and the resilience of the Proposed Development to climate change. It does not explain if or how these events would be assessed in line with the approach described in section 4.13 of the Scoping Report. The ES should report on the effects on these matters from major accidents and disasters using the approach described in section 4.13 of the Scoping Report.</p>	<p>This is addressed in Section 4.16 in the ES volume 1.</p>
<p><b>Cumulative Effects - Para 15.2.3-4 (Distance thresholds for identifying other developments)</b>                      The thresholds are stated to be based on professional judgement and taking into account the nature and location of the Proposed Development. The ES should provide more detail on the considerations that have led to the choice of these thresholds. The Applicant is advised to agree the</p>	<p>Further details on threshold defining process can be produced for the ES, though the methodology is already fairly substantial and directs the reader to relevant materials which go into further details such as PINS advice note 17 and DMRB guidance.</p> <p>We have liaised with the LPAs (EDC, GBC &amp;DBC) to help assist with the production of the list of developments. EDC developments will be covered by</p>



Comment	Highways England Response
<p>developments to be included in the CEA with DBC, EDC, GBC, KCC and the EA.</p>	<p>GBC and DBC. DBC have replied and produced a list. We are waiting on GBC response. They have been emailed again.</p>
<p><b>Cumulative Effects - Para 15.2.9 (London Resort)</b>                      The Scoping Report states that the London Resort is not included in the list of the development projects to be included in the CEA because it currently has no formal planning status. The responses from DBC, GBC, KCC and NE raise concerns about the omission of the London Resort from the CEA.                      The ES must assess all likely significant effects, including cumulative effects. If a degree of uncertainty exists about the delivery of another development which could have cumulative effects with the Proposed Development then the CEA should be based on the approach described in the Inspectorate’s Advice Note 17. This advises assigning developments to different tiers based on the progress they have made towards consent and implementation.</p>	<p>The list of NSIP developments within the 10km study area for the CEA chapter is under consideration and will be identified and assessed within the ES. There are four NSIPs within the current boundary. Lower Thames Crossing has been inherently assessed due to inclusion in the traffic modelling. Tilbury 2 and Tilbury Energy Centre will be considered for assessment in ES. London Resort will not be included due to the critical interdependency between the two projects. Should London Resort go ahead the Proposed Scheme would not go ahead.</p>
<p><b>Cumulative Effects - Para 15.3.3 (Consideration of cumulative effects within each aspect chapter)</b>                      The Scoping Report states that the potential for cumulative effects will also be considered as part of the assessments in each chapter of the ES. Apart from Chapter 13, the previous sections of the Scoping Report do not provide any detail on how CEA would be undertaken. The ES must clearly explain the methodology used to assess cumulative effects for each aspect of the environment covered in the ES. The potential for cumulative effects should be addressed for all the categories of receptor identified in Chapters 5 – 14 of the Scoping Report.</p>	<p>Relates to topic chapters. This has been updated in the ES with the inclusion of cumulative effects sections within each topic chapter. Each discipline has been provided with the updated list of developments correct as of 11.01.18.</p>
<p><b>Cumulative Effects - Table 15-2 (Zone of influence/study area)</b>                      The study areas for the CEA appear to be the same as defined for the assessment of individual topics. As with comments elsewhere in this Opinion, the study area for the assessment should be established having regard to the extent of the likely impacts of the Proposed Development and be sufficient to ensure a robust assessment.</p>	<p>Correct- Following guidance in PINS advice note 17 these were based on the ZOI identified in each chapter and justification is in the relevant chapter. The thresholds proposed are appropriate to most topics in the EIA.                      The traffic model will take account of the operational effects of major developments in the area and the wider surrounding region using thresholds as established by the transport planners. This will be particularly relevant for</p>



Comment	Highways England Response
	Air Quality and Noise operational effects and will ensure the effects assessed are cumulative.
<p><b>Cumulative Effects - Table 15-2 (Zone of influence for AQ CEA)</b>                      Table 15-2 defines this as within 200m of the site boundary. Chapter 5 states that it will be 200m from the construction site boundary for construction dust but for construction traffic and during operation it will be based on the ARN. The ES must take a consistent approach to the definition of the zone of influence for impacts from the Proposed Development alone and cumulatively. DBC also raise this point in their consultation response (see Appendix 2).</p>	This has been updated to reflect any changes in the individual topic chapters methodologies. In case of any future changes information provided in the topic chapter has primacy to table 15-2 in Volume 1 chapter 15 and is reviewed and updated into the table when the topic chapters are amended.
<p><b>Cumulative Effects - Para 15.5 (Assumptions and limitations)</b>                      The Scoping Report identifies the speculative nature of the development projects list as a limitation of the assessment. The Inspectorate advises that the approach described in Advice Note 17 should be followed, with development projects assigned to different tiers as a way of capturing the varying levels of certainty about project delivery.</p>	The PIER provides a tiered approach to the developments this is in the development schedule and follows PINS advice note structure.

**Table A.2: Bean Parish Council comments and responses**

Comment	Atkins Response
<p><b>Chapter 2</b>                      Page 20 para 2.4.6 says, the A296/Bean Lane roundabout, which is converted to a three-arm roundabout and the existing A296 layout is retained. This is different from the published scheme.</p>	Correct, the Project Description in section 2.4 of the Environmental Impact Scoping Report (rev C02 dated November 2017) is superseded. The scheme design has subsequently changed to keep the B255 southbound to A296 eastbound slip road open, so the A296/Bean Lane roundabout will remain a four-arm roundabout
<p><b>General comment</b>                       Pages 108, 111 and 226 Beacon Road instead of Beacon Drive</p>	This has been amended in the ES – all say Beacon Drive.
<p><b>General comment- Pages 239 to 246</b></p>	References amended to be relevant to A2BE Scheme.

Comment	Atkins Response
<p>Include many References that appear 'cut and paste' from a project in Surrey (M25 Jcn 10 Wisley?).</p>	
<p><b>Chapter 16 - Pages 223 to 233, Table 16-1</b></p> <p>Ightham Cottages and Spirits Rest Horse Sanctuary omitted. Should be in Table and Scoped-in. Nothing is decided.</p>	<p>This table is not in the ES.</p>
<p><b>Air Quality - Comment on Figure Fig B-2</b></p> <p>Shows dozens more properties exposed to dust if a compound is permitted against gardens. During Works by Birse, in 2004, the compound did not extend further south than Footpath DR19.</p>	<p>This figure shows the indicative area which could be affected by construction dust, around the Scheme boundary, as that is the information currently available. Information on the indicative locations for the office and site compounds will be available for the ES.</p>
<p><b>Landscape - Page 111, Table 9-6.</b></p> <p>1-11 Ightham Cottages [Scoped out] - Residential properties demolished. Need to Scope-in, otherwise no environmental reason to demolish! We have asked HE and EDC to liaise on rebuilding 1-11 further back, away from AQMA</p>	<p>These cottages have been scoped back into the assessment.</p>
<p><b>P&amp;C - Page 168, para 13.4.4</b></p> <p>Confuses A296 for A2 Further properties south of the A2 and within the Bean triangle including Thrift Cottage and Woodbine Cottage</p>	<p>Table 13.14 Bean and Ebbsfleet Junctions – potential residential and private property receptors correctly refer to properties south of the A2 and within the Bean triangle including Thrift Cottage and Woodbine Cottage.</p>
<p><b>P&amp;C - Page 171</b></p> <p>Springhead horse sanctuary instead of Spirits Rest Horse Sanctuary</p>	<p>This has been updated in the ES.</p>
<p><b>Comment on Figure A-2 Site Location Plan DCO boundary.</b></p> <p>This includes contractor's compounds but has not been published; They should be separately identified as temporary areas. One extends the site to the seventeen back gardens at 1-33 Beacon Drive (odd no's).</p>	<p>Potential compound locations have been considered throughout Stage 3 (Preliminary Design). Likely site office and storage areas (aka compounds) have been identified on the 'Design Fix 3' (August/September 2018) drawings, with the main site office shown in the northwest corner of Bean Triangle. This would be located adjacent to the Kingsferry Coaches Commuter Car Park, with the car park remaining operational. The area of land south east of Bean South Roundabout (aka Hope Cottages Roundabout) has been included within the</p>

Comment	Atkins Response
<p>This is unacceptable. Previous Works compounds here did not cross Footpath DR19.</p> <p>Also shows the free Kingsferry Coaches Commuter Car Park within the red-line; for Contractors use? It has a LDC from DBC and must be kept in use to support the service to Canary Wharf &amp; Westminster.</p>	<p>scheme boundary (formerly the red line boundary) primarily for environmental mitigation planting. This is not the preferred location for the construction compound, however the decision on compound locations will be taken at a later stage with the appointed Contractor. Should this field be reconsidered, the compound could be located north of footpath DR19, to be agreed with stakeholders.</p>

**Table A.3: Dartford Borough Council**

Comment	Atkins Response
<p><b>General Comment</b>                      It is disappointing that one of the reasons for the junction improvement is the new development in the area but there appears to be little consideration of such development which has already being implemented and is occupied, particularly in terms of receptors. Instead the receptors seem to be based on a now out-dated baseline information and mapping. The Council would request that the Assessment is based on the developments that have been occupied recently and are continuing to be built out and will be occupied by the time the scheme is implemented.</p>	<p>The baseline has now been updated throughout the Environmental Statement to take this into account and the most up to date base mapping available used.</p>
<p><b>General Comment</b>                      The Council considers that it is also important to note that growth in the area should be based on Core Strategy figures and is overall considerably more than the Ebbsfleet Garden City number often quoted through the document.</p>	<p>Future growth in the study area is modelled through use of an uncertainty log which is based on the ‘near certain’ or ‘more than likely’ developments within the area. A cordoned traffic model for A2BE has been extracted from the Lower Thames Area Model (LTAM) and the LTAM uncertainty log was used as a basis for A2BE. These developments and details were discussed with the local planning authorities. The Core Strategy figures will be higher as they include long term developments that are in the early stages of planning as well as those meeting the uncertainty criteria above.</p>
<p><b>General Comment</b>                      The Council’s development plan consist of the Core Strategy 2011, Development Plan Polices 2017 (DPP) and the proposals map 2017. Policies from the DPP are quoted but the document is not. For the avoidance of doubt Dartford Borough Council is the plan-making authority for those areas of the Ebbsfleet Development Corporation within its boundary.</p>	<p>Development policies have been addressed in the topic chapters in the ES.</p>

Comment	Atkins Response
<p><b>General Comment</b>                      A recurring error on plans and documents is that Watling Street is referred to as Roman Road. This appears in OS maps as Watling Street (Roman Road) which has led to the error.</p>	<p>This has been amended on all plans and in the ES chapters.</p>
<p><b>General Comment</b>                      Pages 108, 111 and 226 it should be Beacon Drive not Beacon Road.</p>	<p>This has also been identified by other stakeholders and has been amended in the ES.</p>
<p><b>General Comment</b>                      P.168 13.4.4 last bullet Bean triangle is not south of the A2, it is directly north of the A2.</p>	<p>This has also been identified by other stakeholders and has been amended in the ES.</p>
<p><b>General Comment</b>                      Page 171 “Springhead horse sanctuary” should be the Spirits Rest Horse Sanctuary.</p>	<p>This has also been identified by other stakeholders and has been amended in the ES.</p>
<p><b>General Comment</b>                      P.239-246 seem to include references which are not relevant to this project, referring to documents which are related to Surrey.</p>	<p>This has also been identified by other stakeholders and has been amended in the ES.</p>
<p><b>Air Quality – General comment</b>                      The Assessment should consider impacts on the new dwellings identified in the adopted Local Plan, most of which have been granted planning permission and many of which are under construction or have been occupied (but do not show on the base mapping used by HE). Many of these houses granted planning permission will be occupied by scheme completion and so may require mitigation</p>	<p>We have included the new receptors within the air quality assessment for the ES. We have consulted with Dartford Borough Council to determine particular areas of concern.</p>
<p><b>Air Quality</b>                      p.45. It is not only major incidences which impact on air quality in the Borough. Due to the inter-connectivity of the strategic and local road network in the area and the close proximity of the M25, tunnel approach road (A282) and the A2 any incident can have a major and wider impact on the network. Since these incidences are regular occurrences they can and do have a longer term impact on air quality and this should be considered fully as part of the assessment. The Council can assist with providing more background on the impacts of incidences on the AQMAs.</p>	<p>The heading of this section is major accidents and disasters which is a new requirement within EIA. This section therefore only refers to major events.</p>
<p><b>Air Quality</b>                      The scoping report states that Evaluation of compliance with EU limit values will be undertaken in accordance with IAN 175/13. It should be noted that the PCM model used by Defra to determine compliance with</p>	<p>Defra is required to report to the EU regarding compliance with EU limit values. It uses a national PCM model to assess compliance. For Highways England road schemes, guidance is provided on how to include the results of the assessment in terms of compliance with EU limit values. However, this forms</p>

Comment	Atkins Response
<p>this directive does not identify a breach of EU limit values on the existing road network, which is not consistent with local air quality monitoring results.</p>	<p>only one part of the assessment. Within the results section, the estimated concentrations at receptors are compared with national objectives within the Air Quality Strategy.</p>
<p><b>Air Quality</b>                      The existing junction at Bean is heavily affected by traffic accessing Bluewater Shopping Centre. This traffic is greater at certain times of the year for extended periods and this needs to be reflected in the air quality model.</p>	<p>The air quality assessment is based on outputs from the traffic model, and will take into account traffic variation over a typical day. The traffic model does not usually provide outputs for different periods of a year.</p>
<p><b>Air Quality</b>                      The existing continuous monitoring station is located on land that is to be lost as a result of the development. As part of the mitigation for the development the Council would require this monitor should be moved to the south of the junction prior to development to enable a baseline to be established in the area where residential receptors are to remain</p>	<p>This will be discussed Highways England once the Scheme is approved.</p>
<p><b>Air Quality</b>                      The Council has concern that the air quality impact at the residential receptors, Hope Cottages, will be increased to an unacceptable degree. The Council considers that the assessment should address clearly the impact on these residential receptors and include mitigation for addressing these impacts.</p>	<p>The assessment has considered the effect on air quality at these receptors, and if necessary consider any mitigation.</p>
<p><b>Air Quality</b>                      Residential areas that may be impacted by the scheme should include Knoxfield Traveller Caravan site, Darenth Wood Road</p>	<p>Receptors to be used in the air quality assessment have been discussed with Dartford Borough Council.</p>
<p><b>Noise – General Comment</b>                      The Assessment should consider impacts on the new dwellings identified in the local Plan, most of which have been granted planning permission and many of which are under construction or have been occupied (but do not show on the base mapping used by HE). Many of these houses granted planning permission will be occupied by scheme completion and so may require mitigation.</p>	<p>It is noted that the Council will be contacted and this is welcomed.</p>
<p><b>Biodiversity</b>                      It suggest that an NVC of the woodlands is carried out - particularly as areas of woodland are to be lost/impacted as part of these works. The</p>	<p>Text in the ES added to state that further NVC surveys may be necessary in areas of high botanical interest (i.e. ancient woodland and other priority habitats) in order to update existing data and inform Detailed Design. NVC</p>

Comment	Atkins Response
<p>results of these surveys will help inform the final design, any mitigation required and on-going management of the woodland.</p>	<p>surveys have been carried out to inform the assessment. The results of these surveys are provided in the ES.</p>
<p><b>Biodiversity – Designated Sites</b></p> <p>The submitted application has detailed that it has only considered the impact on designated sites within 2km. While it is likely that any impacts associated the construction of the works may be restricted to 2km The Council has concerns that the impacts associated with the operational phase may be greater. The Thames Estuary and Marshes Ramsar and SPA and the south Thames Estuary and Marshes SSSI are within 10km of the proposed junction. It is possible that the works will result in an increase in traffic which could result in an increase in nitrogen deposition within the designated sites.</p> <p>It is recommended that an ecologist review the results of the traffic modelling and air quality reports to assess whether the development is likely to have an impact on the designated sites</p> <p>The HRA to be submitted with the planning application must ensure it takes the findings of all the relevant reports when considering whether the works will have a likely significant effect on the designated sites</p>	<p>Further traffic modelling has been undertaken and as a result no designated sites further afield than the existing study area will be subject to any adverse impacts as a result of the Scheme. Further detail is provided in the ES and HRA report (ES volume 2 appendix C).</p>
<p><b>Biodiversity – General Comment on Surveys</b></p> <p>The results of the ecological surveys must be regularly reviewed to identify if there is a need for additional surveys to be carried out or the surveys to be repeated and the results of the ecological surveys may highlight that that survey area needs to be expanded – e.g. require additional information on bat commuting routes.</p> <p>All surveys must be carried out at the optimum time of year for the species/habitats. For example it's not appropriate to carry out the NVC surveys for all habitats at the same time of year. The survey areas must include the proposed mitigation/compensation areas to provide an understanding about whether the mitigation can be implemented and if it will have a negative impact on other habitats/species of interest. All surveys must be completed prior to the submission of the application. The surveys must include all areas associated with the development – this includes construction compounds; The surveys must ensure they include any habitat/features outside the boundary line which will be impacted by the proposed work</p>	<p>Ecology surveys have been undertaken at the appropriate time of year and updated as required. Further details are provided in the ES.</p>

Comment	Atkins Response
<p><b>Biodiversity – General Comment Mitigation</b></p> <p>Due to the scale of the development a detailed mitigation strategy will have to be produced and submitted with the planning application to provide an understanding of how the impact can be mitigated and if it can be implemented.</p> <p>Where it is not possible to avoid or mitigate for the impact details of compensation to be carried out must be submitted with the application.</p> <p>It is considered that development must follow the mitigation hierarchy: The ‘mitigation hierarchy’ described in British Standard BS 42020:2013, involves the following step-wise process:</p> <p>Avoidance – avoiding adverse effects through good design; Mitigation – where it is unavoidable, mitigation measures should be employed to minimise adverse effects;</p> <p>Compensation – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm; Enhancement – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.</p> <p>The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).</p>	<p>The mitigation strategy is detailed in the ES. This includes provision of compensation where required. The mitigation hierarchy is referenced in the ES. Enhancement measures are embedded within the mitigation strategy.</p>
<p><b>Landscape – Section 9</b></p> <p>Para 9.4.2 The land use description north of the A2 does not reflect clearly the fact that this land is all identified for residential and mixed use development that has planning permission and is likely to be delivered by the time the junction is implemented and in fact that some of it is already being built and occupied. This is also not reflected in the visual receptors listed at para 9.6.7.</p>	<p>Receptors in new development areas will be added to the paragraph on visual receptors and added to ES volume 3 Figure 9.6 and the location of visual receptors agreed with Dartford BC and Gravesham BC. Receptors from the new developments have been included in the assessment and added to Figure 9.6 and ES volume 2 Appendix I</p>
<p><b>Cultural – Consultation</b></p> <p>It is good to note that Historic England and KCC heritage will be consulted on the EAR, but it is disappointing that previous advice from these bodies has not been considered within the scoping report. KCC</p>	<p>The Figures in Volume 3 of the ES are presented with Schedule Monuments and archaeological sites as features and archaeological monument while findspots and listed buildings are points.</p>



Comment	Atkins Response
<p>heritage provide DBC with advice on archaeology and heritage matters, they advise the following:</p> <p>In Table 11-5 Value of heritage assets, archaeological assets of recognised international importance which are not World Heritage Sites should also be included in the Very High category. Sites such as the Palaeolithic 'elephant' site should probably be considered to be internationally important and it is possible that the Springhead Roman religious focus and settlement could also be considered of international significance.</p> <p>The assessment of Palaeolithic archaeological potential and Pleistocene geology should be carried out by a recognised Palaeolithic specialist with appropriate knowledge and experience of the area. KCC heritage have prepared a standard specification which covers what would be required for a desk based assessment with known Palaeolithic potential including Palaeolithic characterisation and are happy to provide that to Highways England for use in this scheme</p> <p>Extensive archaeological fieldwork has been carried out previously in the area of the scheme and archaeological information should be presented in the ES in a way which shows the layout of key features and structures (where known) rather than just as point data. Overlays of the proposed groundworks on the archaeological layout information should be provided to aid understanding of the impact of the proposed scheme.</p> <p>Depending on the results of the desk-based assessment and the expected impact of the proposed works there may well be a need to undertake archaeological field evaluation to inform the ES. KCC heritage advise that they would be happy to discuss this need further as work progresses. Regarding 11.9.3, the need for geophysical survey should be reassessed on completion of the OBA as it may still be useful in some areas.</p> <p>The direct and indirect impact on waterlogged archaeological remains and paleoenvironmental evidence associated with the River Ebbsfleet should be assessed.</p> <p>Assessment of likely locations for construction compounds, service diversions, ecological mitigation etc should be undertaken at this stage where their locations are known. Later assessment of these works</p>	<p>Agreed, archaeological field assessment will be undertaken depending on the results of the desk based assessment.</p> <p>Noted Direct and indirect impact on waterlogged archaeological remains and palaeoenvironmental evidence associated with the River Ebbsfleet have been assessed in the ES.</p> <p>Assessment of construction compounds, service diversions, ecological mitigation etc has already been undertaken and is included in the ES.</p> <p>The Roman potential of the Scheme has already been assessed and is included in the ES.</p>



Comment	Atkins Response
<p>should be programmed where locations cannot be predicted at this stage.</p> <p>The wider archaeological potential of the area beyond the proposed 500m study area should be studied to understand the archaeological context of the area. For example the potential for the presence of similar Palaeolithic remains as found on the M25/A2/A282 scheme should be considered, and the potential for further high status Roman burials along the route of Roman Watling Street as found on the A2 Pepperhill to Cobham scheme should also be considered.</p>	
<p><b>P&amp;C – Page 166</b></p> <p>Page.166 has an inaccuracy with regard to the planning position and the Ebbsfleet Development Corporation. The EDC are the planning authority for development management matters only. Dartford Borough Council and Gravesham Borough Council remain the plan-making authorities for their respective areas covered by the EDC. It is therefore inaccurate to state that there is no local plan of the EDC area. The adopted Local Plans of the relevant authorities cover this area.</p> <p>Dartford development plan is made up of the Core Strategy 2011, Development Policies Plan 2017 and Proposals map 2017.</p> <p>The receptors in the new developments which will come forward before or during the assessment period should be taken account of. As well as the new dwellings community facilities and open space is proposed and has been provided in some cases which should be considered. For instance, there is a new school in Castle Hill and further schools are proposed across Ebbsfleet Valley.</p> <p>Para 13.4.10 It is not clear what this statement relates to as much of this route is enclosed by mature trees.</p> <p>Paragraph 13.4.16 and 13.4.17 in respect of driver stress notes that current levels of congestion are manageable. Whilst this may be the case at the Ebbsfleet junction, the Bean junction already experiences congestion at peak times and outside normal peaks. It is also susceptible to delays caused by frequent problems at the Dartford crossing and drivers seeking alternative routes across Dartford’s road network. This is a matter that Highways England colleagues in Area 5 acknowledge and are working collaboratively with the Council to</p>	<p>Noted and this has been corrected in the ES volume 1 Table 13.1: Legislation, regulatory and policy framework for people and communities.</p> <p>Paragraph 13.12.1 states there may be loss of amenity to residents of new Ebbsfleet Green development during construction due to noise, visual and dust/emissions impacts. This is explored further in the ES.</p> <p>Para 13.4.10: this has been removed the corresponding and amended in the ES.</p> <p>Noted comments relating to driver stress. A quantitative assessment for driver stress has been undertaken in the ES drawing on data from the traffic model and should address the local network in addition to the A2.</p> <p>Beneficial impacts have been reported in the ES.</p>

Comment	Atkins Response
<p>alleviate impacts on the local network. The strategic and local road network in this area are inter-related and cannot be separated due to proximity of a number of junctions on the strategic road network and the Dartford Crossing all closely connected by the local roads. Therefore driver stress is not just limited to the A2, but other local roads as well. Driver stress on the section of the A2 in the vicinity of both junctions is also considerable, because of the high volume of traffic and also the close proximity of junctions leading to weaving between Pepperhill, Ebbsfleet and Bean junctions which essentially reduces the four lane A2 to two free flowing outer lanes.</p> <p>Paragraph 13.4.22 correctly states that the A2 acts as a barrier to movement for NMU's. Further detail should be provided to support this statement, noting the existing communities to the south of the A2 (e.g. Bean, Betsham and Southfleet), the existing connections which cross the A2 (including National Cycle Route 1) and the services which are located to the north and which will be available as part of the new developments. The scheme has the potential to provide real benefits in reducing severance.</p> <p>Para 13.4.25 Bluewater is a regional shopping centre and has planning permission to expand. The business receptors listed here do not include potential for others to come forward as part of the new mixed use developments.</p>	
<p><b>P&amp;C – Scope and extent</b>                  It would be useful if the People and Communities chapter set out clearly the scope and extent for the geographical study area and if this differs for the various assessments as this is not clear at the moment.</p>	<p>Figure 13.1 has been amended in the ES Volume 3 to illustrate the location of the key receptors to the proposed scheme. The study area and justification has been set out more clearly and this is based on mixture of professional judgement and experience and will include potential receptors identified in other chapters that are relevant to people and communities.</p>
<p><b>Cumulative effects – Table 15.1</b>                  It is disappointing that the list of development projects at Table 15.1 p.215 which is to be considered for cumulative assessment is very limited and does not include growth in the wider area. There are additional sites that the Council consider should also be taken account of and are happy to provide Highways England with an updated list of development sites and discuss with them which ones they consider are likely to have an impact with regard to cumulative development.</p>	<p>The list has been updated since the submission of the Scoping Report and has received input from Dartford. This newer version will be checked against these comments to ensure that the developments here are removed, amended or added as necessary. Discussion on LR has established that we will not be including it in CEA due to critical interdependencies in the project</p>

Comment	Atkins Response
<p>Table 15.1 - The Bluewater planning permission set out in this table has expired (12/01464) and has been replaced by 16/0107/OUT and the reserved matters submission 17/01202/REM. The St Clements Way planning permission 12/01404/FUL only covers part of this site. Planning permission 14/01344/FUL and 16/01913/FUL are for further dwellings and covers the southern part of the area which directly abuts the red line. These sites are almost completed and occupied.</p> <p>The Council has some concern that London Resort is not being considered at all, as a cumulative development. The Council considers there should be consideration of this scheme as it has been accepted as an NSIP scheme by the Secretary of State.</p>	
<p><b>Cumulative effects – Zone of Influence</b></p> <p>Table 15.2 - Air quality zone of influence should cover a much wider study area which includes the wider strategic road network. The Council understands that further traffic modelling work is to be submitted and would request that they be involved with discussions on this to ensure that the correct study area and cumulative development is taken into account. The Council has expressed previous concerns that the traffic modelling and full assessment of the junction proposals was not made available at consultation stage and no details have been made available with regard to queue lengths at the proposed junctions.</p>	<p>The thresholds proposed are appropriate to most topics in the EIA, however we do say in the EIA Scoping Report that we will also use the traffic model to take account of the operational effects of major developments in the area and the wider surrounding region. This will be particularly relevant for Air Quality and Noise operational effects and will ensure the effects assessed are cumulative and beyond 1.5km. The modelling study area will also inform the Transport Assessment.</p> <p>The CEA follows guidance from PINS advice note 17 that for each environmental topic the likely spatial ZOI should be determined. Having reflected the identified ZOI for each topic the CEA should obtain relevant information on ‘Other Development’ in that ZOI. The CEA currently goes beyond all of the ZOI with the exception of Materials and Waste and Climate Change, which are assessed on a wider regional and national spatial area.</p> <p>We have been in contact with DBC and informed them of this and they currently accept this position.</p>

**Table A.4: Environment Agency**

Comment	Atkins Response
<p><b>General Comment – Disapplication of consents</b></p> <p>If the applicant intends to seek to disapply any Environment Agency regulation through the DCO process, we would strongly recommend</p>	<p>The Environment Agency has been consulted with about various topics for this Scheme.</p>

Comment	Atkins Response
<p>they approach us to discuss, so that we can agree suitable protective provisions as soon as possible.</p>	
<p><b>Biodiversity</b></p> <p>We request clarification on whether any works are proposed within 8 metres of the river Ebbsfleet. We seek to protect and enhance the ecological value of this river corridor. The applicant will need a flood risk activity permit for any works they carry out within 8 metres of the Ebbsfleet.</p>	<p>There are no proposed drainage works within 8 metres of the River Ebbsfleet. All works are on the drainage network upstream of the outfall. There will however be survey works of the outfall itself and the pollution control structures (which are within 8 metres of the River). If these structures need replacing/repairing following the survey then a permit will be required.</p>
<p><b>Water</b></p> <p>We note that a detailed flood risk assessment and a water framework assessment will be carried out and submitted with the DCO application. We welcome this and would encourage the applicant to engage with us regarding the preparation of these documents through our pre-application service. We can also provide relevant data to the applicant through an information request to <a href="mailto:ksle@environment-agency.gov.uk">ksle@environment-agency.gov.uk</a>.</p> <p>The applicant should be aware that due to the sensitivity of the underlying aquifer, the highways drainage will need careful design to avoid pollution of the aquifer. We would welcome further discussion on this point with the applicant at the earliest opportunity.</p>	<p>We have consulted and engaged with Natural England through the pre-planning application service.</p>
<p><b>Geology</b></p> <p>We note that a land contamination risk assessment and an impact assessment will be carried out. We welcome this and would encourage discussion with the applicant on this.</p>	<p>Noted</p>

**Table A.5: Ebbsfleet Development Corporation**

Comment	Atkins Response
<p><b>Biodiversity – NVC woodlands</b>                      We question why an NVC of the woodlands are not proposed to be carried out, particularly if areas of woodland are to be lost/impacted as part of these works. The results of these surveys will help inform the final design, any mitigation required and on-going management of the woodland.</p>	<p>NVC surveys have been undertaken for the woodlands. The results are provided in the ES.</p>
<p><b>Biodiversity – designated sites</b>                      The submitted report has detailed that it has only considered the impact on designated sites within 2km. Whilst it is likely that any impacts associated the construction of the works may be restricted to 2km we have concerns that the impacts associated with the operational phase may be greater. The Thames Estuary and Marshes Ramsar and SPA and the south Thames Estuary and Marshes SSSI are within 10km of the proposed junction. It is possible that the works could result in an increase in traffic which could result in an increase in nitrogen deposition within the designated sites.</p>	<p>Further traffic modelling has been undertaken and as a result no designated sites further afield than the existing study area will be subject to any adverse impacts as a result of the Scheme. Further detail is provided in the ES and HRA report (ES volume 2 appendix C).</p>
<p><b>Biodiversity – Traffic modelling</b>                      An ecologist must review the results of the traffic modelling and air quality reports to assess whether the development is likely to have an impact on the designated sites. The HRA to be submitted with the planning application must ensure it takes the findings of all the relevant reports when considering whether the works will have a likely significant effect on the designated sites.</p>	<p>Further traffic modelling has been undertaken and as a result no designated sites further afield than the existing study area will be subject to any adverse impacts as a result of the Scheme. Further detail is provided in the ES and HRA report (ES volume 2 appendix C).</p>
<p><b>Biodiversity – General Comment on Surveys (Same as DBC)</b>                      The results of the ecological surveys must be regularly reviewed to identify if there is a need for additional surveys to be carried out or the surveys to be repeated and the results of the ecological surveys may highlight that that survey area needs to be expanded – e.g. require additional information on bat commuting routes.</p> <p>All surveys must be carried out at the optimum time of year for the species/habitats. For example it's not appropriate to carry out the NVC surveys for all habitats at the same time of year. The survey areas</p>	<p>Ecology surveys have been undertaken at the appropriate time of year and updated as required. Further details are provided in the ES.</p>

Comment	Atkins Response
<p>must include the proposed mitigation/compensation areas to provide an understanding about whether the mitigation can be implemented and if it will have a negative impact on other habitats/species of interest. All surveys must be completed prior to the submission of the application. The surveys must include all areas associated with the development – this includes construction compounds; The surveys must ensure they include any habitat/features outside the boundary line which will be impacted by the proposed work</p>	
<p><b>Biodiversity – Mitigation (Same as DBC)</b>                      I would like to highlight that development must follow the mitigation hierarchy: The ‘mitigation hierarchy’ described in British Standard BS 42020:2013, involves the following step-wise process:                      Avoidance – avoiding adverse effects through good design; Mitigation – where it is unavoidable, mitigation measures should be employed to minimise adverse effects;                      Compensation – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm;                      Enhancement – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.</p> <p>The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).</p>	<p>The mitigation strategy is detailed in the ES. This includes provision of compensation where required. The mitigation hierarchy is referenced in the ES. Enhancement measures are embedded within the mitigation strategy.</p>
<p><b>Water</b>                      The report outlines that there has been an intensive assessment of water quality, however there is no mention of the management of surface water as a result of increased impermeable area. I consider that a Flood Risk Assessment / Drainage Strategy be compiled to demonstrate how surface water is controlled to minimise flood risk as a result of the development. In this process consideration.</p>	<p>The FRA covers this detail in the ES including details of the drainage system and SUDs.</p>
<p><b>Landscape</b>                      The report sets out a detailed scope of the factors which we would normally expect to be included. These include both summer and winter photographs to inform the visual assessment, photomontages</p>	<p><i>A zone of theoretical visibility has been produced, Figures 9.7 and 9.8 which show that there is no inter visibility between the scheme and Darenth Woods Country Park. however Darenth Country Park has been included in the assessment refer to Figure 9.6 and Appendix I. Impact on Green Belt is not</i></p>

Comment	Atkins Response
<p>with the assessment to be undertaken in line with the relevant guidance including GLVIA3. The EIA should ensure both landscape and townscape effects are assessed. The scoping report makes reference to Green Belt policy and illustrate the Green Belt on the Environmental Constraints Plan however it does not appear to include an assessment of the impacts on the Green Belt. This should be included as the majority of the DCO boundary lies within the Green Belt and the proposals may give rise to issues of openness. Darenth Wood Country Park is stated as being scoped out of the landscape receptors due to 'no potential visual or physical effects on the Country Park.' Darenth Wood Country Park does however directly adjoin the western edge of the DCO boundary and should therefore be included as a landscape receptor given its immediate proximity to the proposals.</p>	<p><i>assessed as part of the landscape chapter, although openness of the landscape will be considered?</i></p>
<p><b>Cultural</b>                      Table 11.5 Value of Heritage Assets, archaeological assets of recognised internal importance which are not World Heritage Sites should also be included in the 'Very High' category. Sites such as the Palaeolithic 'elephant' site should be considered to be internationally important and it is possible that the Springhead Roman religious focus and settlement could also be considered of international significance.</p>	<p>Noted, this has been updated in the ES to include assets as well as sites.</p>
<p><b>Cultural – Palaeolithic</b>                      The assessment of Palaeolithic archaeological potential and Pleistocene geology should be carried out by a recognised Palaeolithic specialist with appropriate knowledge and experience of the area. Our heritage advisors at Kent County Council have prepared a standard specification which covers what would be required for a desk based assessment with known Palaeolithic potential including Palaeolithic characterisation and would be happy to provide that to Highways England for use in the scheme.</p>	<p>Agreed, evaluations are being taken with the appropriate methodology with KCC county archaeological advisor.</p>
<p><b>Cultural</b>                      Extensive archaeological fieldwork has been carried out previously in the area of the scheme and archaeological information should be presented in the ES in a way which shows the layout of key features and structures (where known) rather than just as point data. Overlays of the proposed groundworks on the archaeological layout information</p>	<p>Where there is polygon HER data available we will integrate into new distribution map figure to shows the features of structures. This may have to be ordered in if we don't already have the data. The remaining the HER data (such as findspots) will have to remain as points.</p>



Comment	Atkins Response
<p>should be provided to aid understanding of the impact of the proposed scheme.</p>	
<p><b>Cultural</b>                      Depending on the results of the desk-based assessment and the expected impact of the proposed works there may well be a need to undertake archaeological field evaluation to inform the ES and we would like further discussions on this as work progresses. Regarding paragraph 11.9.3, the need for geophysical survey should be reassessed on completion of the DBA as it may still be useful in some areas.</p>	<p>Agreed, as advised archaeological field evaluation will be undertaken and geophysical survey will be reassessed based on the results.</p>
<p><b>Cultural</b>                      The direct and indirect impact on waterlogged archaeological remains and palaeoenvironmental evidence associated with the River Ebbsfleet should be assessed.</p>	<p>Agreed, we will be assessing waterlogged archaeological remains.</p>
<p><b>Cultural – construction compounds</b>                      Assessment of likely locations for construction compounds, service diversions, ecological mitigation etc. should be undertaken at this stage where their locations are known. Later assessment of these works should be programmed where locations cannot be predicated at this stage.</p>	<p>The assessment of construction compounds, service diversion and ecological mitigation has already been undertaken and is included in the ES.</p>
<p><b>Cultural</b>                      The wider archaeological potential of the area beyond the proposed 500m study area should be studied to understand the archaeological context of the area. For example, the potential for the presence of similar Palaeolithic remains found on the M25/A2/A282 scheme should be considered, and the potential for further high status Roman burials along the route of Roman Watling Street as found on the A2 Pepperhill to Cobham scheme should also be considered.</p>	<p>The Roman potential of the study area has already been assessed and is included in the ES.</p>
<p><b>P&amp;C – Section 13.4</b>                      Paragraph 13.4.17 states that current levels of congestion are manageable. Whilst this may be the case for Ebbsfleet Junction, the Bean Junction already experiences congestion at peak times. It is also susceptible to delays caused by frequent problems at the Dartford</p>	<p>Noted. Reference to congestion to other parts of the SRN added to the ES.                      Beneficial impacts have been reported in the ES.</p>

Comment	Atkins Response
<p>crossing and drivers seeking alternative routes across the local road network.</p> <p>Paragraph 13.4.22 identifies that the A2 acts as a barrier for movement for non-motorised users. This is true and the scheme has the potential to provide real benefits in reducing the problem of severance and this should be considered in the assessment.</p>	
<p><b>Cumulative effects</b></p> <p>Paragraph 15.2.3 identifies thresholds and spatial areas when considering cumulative effects. It is important that the traffic modelling and impact of the scheme is assessed looking at the whole of the Dartford Borough Council and Gravesham Borough Council areas rather than specifying particular distances from the site.</p> <p>It will be important for the list of projects outlined in table 15-1 is updated and Highways England engages with the Local Planning Authorities on the up to date position.</p>	<p>The transport modelling does consider a much wider range of developments which is therefore inherently included in AQ and Noise assessments which use the traffic modelling.</p> <p>The approach taken is congruent with that set out in PINS advice note 17.</p> <p>The local authorities have been asked to contribute to the development schedule. So far only DBC have provided further information including information on behalf of EDC.</p>

**Table A.6: Forestry Commission England**

Comment	Atkins Response
<p><b>General Comment on Noise</b></p> <p>Ancient woodland habitats adjacent to the road improvements will be impacted by: Noise disturbance. And... Outside the nationally significant infrastructure project regime, Government policy is to bring forward targeted works to address existing environmental problems on the Strategic Road Network and improve the performance of the network. This includes ... avoiding significant adverse impacts from noise and vibration.</p>	<p>General commentary and is covered in the ES.</p>
<p><b>Biodiversity – Ancient woodland</b></p> <p>The information supplied does not identify the exact amount of ancient woodland and other woodland which will be physically lost or impacted through disturbance due to this scheme. Our assessment (see woodland constraints map attached) identifies approximately 1 hectare of ancient woodland and 18 hectares of other woodland within the red DCO boundary.</p>	<p>Areas of woodland to be lost through permanent and temporary habitat clearance has been provided in the ES. FC constraints map includes all aw and other woodland in Bean Triangle. Atkins clarified in meeting with FC on 11/01/18 that this entire area is not to be removed. FC clarified in same meeting that a compensation ratio of 30:1 is not expected, but an upper limit for another scheme presented by HE in a previous separate meeting.</p>

Comment	Atkins Response
<p>Ancient Woodlands and Veteran Trees* are acknowledged as an irreplaceable habitat and a part of our Natural Heritage asset. Where loss is unavoidable, then, any compensation woodland creation should be significant. For instance, Highways England suggested a ratio of 30:1 in a presentation to us on 5th October 2017. Ancient woodland habitats adjacent to the road improvements will be impacted by: Pollution: aerial gases/nutrients/salt/heavy metals/litter; and Noise disturbance.</p>	<p>There will be no ancient woodland loss as a result of the Scheme. The area of woodland (non-ancient) and number of veteran trees to be lost as a result of permanent/temporary land take is provided in the ES.</p>
<p><b>Biodiversity – Mitigation</b>                      Recommended mitigation for impacts would include establishing a management regime that maintains a dense multi-storey woodland structure in a belt that has 20 meter buffer adjacent to the roadside boundary (i.e. edge of road not edge of carriageway)</p>	<p>The mitigation strategy is detailed in the ES. This includes provision of compensation where required. Mitigation measures include a buffer of at least 20 m adjacent to ancient woodland where practicable and not limited by the presence of the existing carriageway. Implementation of a habitat management plan is provided in the mitigation strategy.</p>
<p><b>Biodiversity – Woodland</b>                      Other woodlands which have provided significant buffering of the ancient woodland will be lost or impacted through disturbance. Given the intimate nature of the site, the Forestry Commission recommends that migratory woodland creations is also significant, focussing on buffering and linking of existing woodland, and enhancing the green infrastructure grid. The Forestry Commission would draw your attention to what has already been achieved in just 10 years at Jeskyns1 .                      Ensuring woodlands are protected and managed will also contribute to meeting the new requirements of Article 3(1) of the EIA Directive. Careful consideration of the role trees and woodlands play in the Scheme will ensure delivery of a more resilient landscape and contribute towards reducing greenhouse emissions, increasing carbon sequestration and to the wider climate change agenda.</p>	<p>Vegetation providing a buffer to existing ancient woodland will be retained.</p>
<p><b>Biodiversity – overall comment</b>                      Overall, we recommend that Highways England consider how they can optimise the Natural Capital Value of the compensation woodland creation and woodland management to enhance the network of greenspace in this rapidly growing area to:                      1. Enhance ecological networks</p>	<p>Compensation woodland will be planted adjacent to existing woodland/ancient woodland to extend and increase the total area of the woodland block.</p>

Comment	Atkins Response
<p>2. Establish links between the growth areas north of the A2 with wider countryside south of the A2</p> <p>3. Establish links between accessible greenspace south of the A2.</p>	
<p><b>Biodiversity – Policy/legislation to be included in ES</b></p> <p>The UK Forestry Standard (4th edition published August 2017).                      Managing ancient and native woodland in England (last updated August 2016),                      National Planning Practice Guidance – Natural Environment Guidance (published January 2016)                      Our plan to protect and increase biodiversity – Highways England biodiversity plan (published June 2015)                      Standing Advice for Ancient Woodland and Veteran Trees (published April 2014, updated November 2017)                      Natural England Commissioned Report (NERC 132) Edition 3 (published November 2013)                      BS 42020:2013 Biodiversity. Code of practice for planning and development (published August 2013)                      Ancient and other veteran trees: further guidance on management (published February 2013)                      Government Forestry and Woodlands Policy Statement (published January 2013)                      Impacts of nearby development on ancient woodland – addendum (published December 2012)                      BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (published April 2012)                      Biodiversity 2020: a strategy for England’s wildlife and ecosystem services (published August 2011).                      Natural Environment White Paper “The Natural Choice” (published June 2011)                      Impacts of nearby development on the ecology of ancient woodland (published October 2008)                      Keepers of Time – A Statement of Policy for England’s Ancient and Native Woodland (published June 2005).</p>	<p>Reference to this legislation is included in the ES.</p>

Comment	Atkins Response
<p>A Habitats Translocation Policy for Britain – (published July 2003)                      Veteran Trees: A guide to good management – (published February 2000)</p>	
<p><b>Biodiversity – Baseline conditions</b>                      The Forestry Commission welcomes the recognition and inclusion of ancient woodlands and veteran trees as part of this assessment. To meet the new requirements for climate outlined in Article 3(1) of the EIA Directive, the Forestry Commission would recommend that all woodlands are included as part of the ecological baseline conditions assessment.</p>	<p>All woodlands relevant to the Scheme have been included in the assessment.</p>
<p><b>Biodiversity – Designated sites and Ancient Woodland</b>                      In line with the NPPG, the Forestry Commission recommends that these tables clearly defines the status of all ancient woodland sites, Ancient Semi-Natural Woodland (ASNW), Plantations on Ancient Woodland Sites (PAWS), veteran trees and woodland habitats recognised as a habitat of principal importance under Section 41 of the NERC Act 2006 are included in all survey work and study reports. This will ensure that a thorough assessment will acknowledge the impacts on any potential losses of irreplaceable and important woodland habitats.                      Ancient woodlands and veteran trees are irreplaceable and are considered important for their wildlife, soils, recreation, cultural value, history and contribution to the landscape. Therefore, ancient woodlands and veteran trees must be included in all future habitat* and species surveys in relation to the Scheme within the application boundary of the Project.</p>	<p>The status of all ancient woodlands relevant to the Scheme is defined in the ES.</p>
<p><b>Biodiversity – Habitats</b>                      All ASNW, PAWS and ancient woodland areas should be included in the study area to: ensure these areas are treated equally in terms of protection afforded to ancient woodlands; and, to secure the future of one of the most diverse ecosystems in perpetuity.                      In line with the attached Forestry Commission A2 Bean Junction and A2 Ebbsfleet Junction maps, the Forestry Commission would seek clarification of woodland status and location of woodlands described</p>	<p>The status of all ancient woodlands relevant to the Scheme is defined in the ES. The locations of all ancient woodlands relevant to the Scheme are provided on maps in the ES. All woodland HPI relevant to the Scheme is also included in the assessment and the locations of these are provided on maps in the ES. All ancient woodland and woodland HPI relevant to the Scheme has been included in habitat surveys. Further details and results are provided in the ES.</p>

Comment	Atkins Response
<p>as plantation woodland and semi-natural broadleaved woodland within the 1km and 2km scheme boundary. As outlined in the NPPG, it is important to recognise ASNW and PAWS have the same status as ancient woodlands. Including these sites within the study area will ensure these irreplaceable habitats continue to provide local ecological networks important for securing and enhancing ecosystem services including biodiversity, and for holding nature conservation value of the area.</p> <p>Consideration must also be given to lowland beech and yew woodland, mixed broadleaved woodland, wood-pastures and parkland<sup>9</sup>. Under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006<sup>10</sup>, these habitats “are of principal importance for the purpose of conserving biodiversity.” Therefore, these woodland habitats must also be included in all future habitat surveys to ensure adherence to the requirements of the NPSNN report</p> <p>To ensure compliance with the climate change requirements outlined in Article 3(1) of the EIA Directive, the Forestry Commission would also recommend inclusion of all woodland sites that fall within the scheme boundary</p>	
<p><b>Biodiversity – Designated sites</b></p> <p>The Forestry Commission would recommend that the ES clearly states that Darenth Wood SSSI is designated due to the wood comprising of the most valuable ancient woodland in north west Kent and includes several rare woodland types. Due to this designation, Darenth Wood contains a significant amount of nationally important irreplaceable habitats.</p>	<p>The description for Darenth Wood SSSI has been amended in the ES in-line with its citation.</p>
<p><b>Biodiversity – Habitats</b></p> <p>The Forestry Commission recommends that veteran trees, ancient woodlands (including ASNW and PAWS sites) and all woodland habitats recognised as a habitat of principal importance under Section 41 of the NERC Act 2006 are included in all future survey work to ensure that a thorough assessment will acknowledge the impacts on any potential losses of an irreplaceable habitat. The Forestry Commission would also highlight the Irreplaceable habitats including</p>	<p>All woodlands and veteran trees relevant to the Scheme have been included in survey work and further details including survey results are provided in the ES.</p>

Comment	Atkins Response
<p>ancient woodland and veteran trees section of the National Policy Statement National Networks</p>	
<p><b>Biodiversity – Designated sites, ancient woodland and notable habitats</b></p> <p>The attached Forestry Commission Woodland Constraints map has identified within the DCO boundary 19.0 hectares of woodland, of that 1.02 hectares is ancient woodland; between the DCO and the 1km Ecological Zone of Influence, a further 235 hectares of woodland, of which 115.2 hectares is ancient woodland. The Forestry Commission would seek clarity of the status and location of all woodland including ancient woodland and lowland mixed deciduous woodland habitats within the Scheme boundary.</p> <p>The attached Forestry Commission Woodland Constraints map has identified within the DCO boundary 19.0 hectares of woodland, of that 1.02 hectares is ancient woodland; between the DCO and the 1km Ecological Zone of Influence, a further 235 hectares of woodland, of which 115.2 hectares is ancient woodland. The Forestry Commission would seek clarity of the status and location of all woodland including ancient woodland and lowland mixed deciduous woodland habitats within the Scheme boundary.</p> <p>To meet the Government’s objective to improve woodlands’ resilience to climate change and contribute to climate change adaptation, along with addressing climate change as part of the new requirements outlined in Article 3(1) of the EIA Directive, the Forestry Commission would recommend that impacts to all woodlands are assessed to allow an in-depth appreciation of the beneficial and adverse environmental consequences at the geographic scale of the Scheme. From these results, the Forestry Commission will be able to work with the applicant to identify appropriate measures that will avoid, reduce and / or compensate for significant effects to woodlands due to the construction and operation phases of the Scheme.</p>	<p>The status of all ancient woodlands relevant to the Scheme is defined in the ES. The locations of all ancient woodlands and woodland HPI relevant to the Scheme are provided on maps in the ES. All woodland HPI relevant to the Scheme is also included in the assessment and the locations of these are provided on maps in the ES.</p> <p>All ancient woodland and woodland HPI relevant to the Scheme has been included in habitat surveys. Further details and results are provided in the ES.</p>
<p><b>Biodiversity – Method</b></p> <p>The Forestry Commission would be pleased to work with the applicant to consider the impacts of other neighbouring developments such as the Lower Thames Crossing and the Ebbsfleet Garden City to maximise the environmental benefits that can be achieved by working</p>	<p>The FC have been consulted on the PEIR. Direct impacts to ancient woodland have been avoided.</p>



Comment	Atkins Response
<p>in partnership. We would be pleased to advise further on these strategic opportunities to consider the cumulative impacts of all developments to consider biodiversity impacts at the wider landscape scale.</p>	
<p><b>Biodiversity – Mitigation</b></p> <p>The Forestry Commission would also encourage the inclusion of measures to build the evolving network of green infrastructure to link the Thames side towns to adjacent countryside. This will aid the promotion of help encourage people to access the countryside by the local community for quiet enjoyment. There are a range of options for green infrastructure and the Forestry Commission would draw attention to what has been achieved at Jeskyns. Linking Jeskyns to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of landscape scale green infrastructure.</p>	<p>Compensation woodland will be planted adjacent to existing woodland/ancient woodland to extend and increase the total area of the woodland block. Landscape links have been considered in the mitigation strategy and planting will be reinstated and enhanced to maintain and reinforce existing linkages.</p>
<p><b>Biodiversity – Assumptions and limitations</b></p> <p>The Forestry Commission would recommend that all woodland habitats are clearly marked on a constraints map which shows the Scheme Ecological Zone of Influence. In line with the Forestry Commission Woodland constraints map attached to this response letter, a constraints map that shows the status and location of all woodland including ancient woodland and lowland mixed deciduous woodland habitats within the Scheme boundary will allow the Forestry Commission to work with the applicant to identify appropriate measures that will avoid, reduce and / or compensate for significant effects to woodlands due to the construction and operation phases of the Scheme.</p>	<p>All woodlands are mapped on a plan in the ES.</p>
<p><b>Climate</b></p> <p>The Forestry Commission welcomes the inclusion of the effects on climate (including greenhouse gas emissions) and vulnerability of the project to climate change, with a particular focus on adaptation as part of addressing climate change in line with the new requirements outlined in Article 3(1) of the EIA Directive. To meet the requirements, the Forestry Commission would like to reiterate the importance of all woodlands in making our rural and urban landscapes more resilient to the effects of climate change and contribution to wider climate change</p>	<p>Effects on Climate. It is agreed with the Forestry Commission that wood has a valid role as a construction material, and trees and woodlands contribute towards reducing greenhouse emissions, increasing carbon sequestration. However, wood is not a practical material for any major components of a road scheme and will not be considered further on this basis. The role of trees and woodlands will also not be considered as it is outside the scope of assessment. Further, the role of trees and woodlands contribute towards reducing greenhouse emissions, increasing carbon sequestration cannot be assessed, or influenced at a project level.</p>

Comment	Atkins Response
<p>adaptation. Consideration for how sustainable woodland creation and management of England’s Woodlands can be secured and the use of timber as a construction material is utilised within this scheme will secure the role that woodlands have in reducing greenhouse emissions and carbon sequestration.</p> <p>The Forestry Commission would recommend consideration of the role trees and woodlands would contribute towards the Scheme’s ability to deliver a more resilient landscape and contribute towards reducing greenhouse emissions, increasing carbon sequestration and contribution to wider climate change adaptation.</p>	<p>Vulnerability to climate change - Agreed and this will be considered in the ES.</p>
<p><b>Climate – Policy</b></p> <p>Table 14-2: Legislation, regulatory and policy framework for climate change</p> <p>This table outlines the relevant sections of a variety of relevant documents pertinent to climate change resilience and climate change. The Forestry Commission would recommend the addition of the following paragraphs (see appendices for further information):</p> <p>National Planning Policy Framework (NPPF) 2012: Paragraphs 7, 95, 99, 109, 156</p> <p>National Policy Statement for National Networks (NPSNN) Government’s vision and strategic objectives for the national networks; and: Paragraphs 3.3, 3.5, 4.25, 4.38, 4.40, 5.22, 5.24</p>	<p>The level of detail suggested in not appropriate to a scoping report and is excluded on this basis.</p>
<p><b>Climate – Mitigation measures</b></p> <p>Table 14-14</p> <p>The Forestry Commission would highlight the role that trees can play in providing shade for roads, footpaths and cycleways, and the contribution towards wider climate change adaptation and carbon sequestration using locally sourced timber in construction of appropriate structures including sound baffles.</p>	<p>Effects on Climate. Repeated, as above, it is agreed with the Forestry Commission that wood has a valid role as a construction material, and trees and woodlands contribute towards reducing greenhouse emissions, increasing carbon sequestration. However, wood is not a practical material for any major components of a road scheme and will not be considered further on this basis. The role of trees and woodlands will also not be considered as it is outside the scope of assessment. Further, the role of trees and woodlands contribute towards reducing greenhouse emissions, increasing carbon sequestration cannot be assessed, or influenced at a project level.</p> <p>Vulnerability to climate change - Agreed and this will be considered in the ES.</p>
<p><b>Climate – Summary -Vulnerability</b></p> <p>Table 14-16: Findings of the scoping phase: climate vulnerability</p>	<p>Agreed and this will be considered in the ES.</p>

Comment	Atkins Response
<p>Table 14-16 has highlighted climate vulnerabilities during both construction and operation of the Scheme. Again, the Forestry Commission would highlight the role that trees can play in reducing localised flooding by intercepting rainfall and maintaining soil permeability, reducing the impacts of extreme winds and solar radiation.</p>	

**Table A.7: Gravesham Borough Council**

Comment	Atkins Response
<p><b>General Comment</b>                      As a general point affecting several topics areas it is important that assessments in relation residential properties take account of properties for which planning permissions exist, as well as those which is currently on the ground. In Gravesham’s case this is relevant to Springhead where development is proceeding. EDC/17/0151 contains the latest masterplan (EDC website).</p>	<p>The Environmental Statement takes this into account in baseline and cumulative assessment.</p>
<p><b>Air Quality</b>                      Analysis should be based on the latest version of the Emissions Factor Toolkit (currently November 2017) and any updates that may occur during the preparation of the EIA. It is noted that although nitrogen dioxide NO2 and particulate matter PM10 are to be modelled and monitored, there is a significant omission of PM2.5, which should be included in the analysis. It is already included in the Public Health Outcomes Framework (PHOF) for Public Health purposes. This issue was raised in relation to the Lower Thames Crossing where the Scoping Opinion requests that PM2.5 be assessed.                      Future pollution levels with the implications of electric or other technology along with self-driving vehicles are great unknowns. The base position should be an analysis based on the current trends and understanding and any allowance for potential future changes should be done as a sensitivity test.                      As stated above, part of the route is within the A2 Trunk Road Air Quality Management Area, and measures should be taken to mitigate any adverse impact on this AQMA during both the construction and operation phase so that air pollution levels do not worsen in the</p>	<p>The air quality assessment will be undertaken using the Highways England’s speed band data which will be based on the latest version of the Emissions Factor Toolkit (EFT).</p> <p>We are currently seeking advice from Highways England regarding including PM2.5, as it is not included in the DMRB guidance.</p> <p>The air quality assessment follows Highways England guidance which is included in the DMRB and Interim Advice Notes (IANs). Trend analysis on monitoring data is carried out to determine the likely future NO2 concentrations consistent with the long-term trends IAN 170/12.</p> <p>The EFT provides emission factors up until 2030 and includes provision for electric vehicles.</p> <p>The assessment will consider receptors within the A2 AQMA where they are within 200 m of an affected road, and where necessary will consider any mitigation measures.</p>

Comment	Atkins Response
<p>existing AQMA and also so that its area does not need to be expanded.</p> <p>An unknown without up to date traffic modelling is any possible implications on other highways in the Borough from the scheme. In particular any impact on the Pepper Hill junction as a result of the scheme needs to be examined in detail. Note that this has significant lorry usage due to waste vehicles accessing the Pepper Hill Waste and Recycling transfer facility on Station Road, Southfleet (B262).</p>	<p>We are expecting to receive the traffic data in March 2018, and then we will determine our study area. We will use this during consultation.</p>
<p><b>General Comment on Noise</b></p> <p>The scheme recognises at 6.4.4 there are noise sensitive receptors within Gravesend that are within 1km of the scheme and at 6.4.8: A noise survey will be undertaken at the Preliminary Design Stage to ascertain the baseline noise levels at noise sensitive receptors within the study area of the Scheme. The final design of the Scheme will be used to further inform the production of the Preliminary Design Stage noise model.</p> <p>The Noise Important Areas in Gravesham along the A2 are identified which will also feed into this process.</p>	<p>General commentary and is covered in the ES.</p>
<p><b>Geology and Soils</b></p> <p>The area to the north has been subject to extensive excavation and landfill as a result of the chalk industry and the construction of infrastructure. Within Gravesham Springhead is solid ground, but the Blue Lake is a flooded former chalk pit. From past experience solution features and poor chalk quality are known issues in the area. The area to the north has been subject to extensive excavation and landfill as a result of the chalk industry and the construction of infrastructure. Within Gravesham Springhead is solid ground, but the Blue Lake is a flooded former chalk pit. From past experience solution features and poor chalk quality are known issues in the area.</p>	<p>Landfill has been considered as part of the assessment in chapter 10 of the ES volume 1. Ground gas and groundwater monitoring are recommended (section 10.4.22).</p> <p>Dissolution has been addressed and is also displayed on the geological hazards figure, with mitigation measures presented in ES volume 1 10.8. Section 10.4.22 details that the GI will assess the potential for dissolution in areas of proposed soakaways.</p>
<p><b>Cultural</b></p> <p>The area of the Ebbsfleet junction has been subject to extensive archaeological research as a result of the HS1 (Channel Tunnel Rail Link (CTRL) at the time) and A2 widening. The wider area, where not subject to quarrying, has yielded major finds of international significance. It should therefore be assumed by default that anywhere in this area could yield high value archaeology. KCC Archaeology will</p>	<p>This has been noted in the ES, and appropriate mitigation measures have been put in place to assure any high value archaeology is not compromised.</p>

Comment	Atkins Response
be able to supply much more precise information and guidance. This applies to both permanent and temporary works.	
<p><b>Cumulative effects</b></p> <p>It is understood that the Ebbsfleet junction scheme does not deal with the situation where London Resort gets permission and its version of the junction is built. There does need consideration of the scenario where the HE scheme is built and then London Resort version is required subsequently. There needs some statement on any potential physical impact from the HE scheme on the LR proposals. This scheme needs to be assessed with and without Lower Thames Crossing, not least because this will need to operate for at least 5 years before that scheme could open. Also it is possible that construction impacts could overlap. Table 15.1 – make clear which Borough schemes are in for EDC applications so they can be related to the correct Local Plan.</p>	Due to critical interdependencies in the projects there is no scenario where both the LR and A2BE Scheme would go ahead and therefore it is HE's position that this scenario does not need to be tested.

**Table A.8: Historic England**

Comment	Atkins Response
<p><b>Noise - General Comment</b></p> <p>The ES should include an assessment of what additional impact changed noise or light levels might have on the setting of heritage assets.</p>	General commentary and is covered in the ES.
<p><b>Cultural – General Comment on surveys</b></p> <p>In terms of physical impacts, it is vital that special attention is paid to that part of the scheme north of Ebbsfleet junction, where unscheduled Roman remains of national importance are known to exist and could be impacted by the development. A thorough assessment of this area should be undertaken in order to identify exactly where archaeological remains may have already been destroyed, where they remain preserved in situ and where potentially undisturbed /unrecognised remains might survive.</p> <p>This assessment should be carried out by an archaeological consultant and informed by the readily available results of previous investigations; most notably those published by Wessex Archaeology following their major investigation of the area ahead of the HS1 rail link. Other sources</p>	A thorough assessment of unscheduled Roman remains has already been included in the ES.

Comment	Atkins Response
<p>of information which should be consulted include the recent geophysical survey at Ebbsfleet Green (Archaeology South-East), and all information obtained by Wessex Archaeology in connection with the London Entertainment Resort Project. Such information may not yet have been entered into the Historic Environment Record. To ensure the assessment is fully comprehensive, it is essential that the exact nature and location of all development works (including temporary haul roads, site compounds, etc.) are understood and used to inform the scope of the assessment</p> <p>The ES's assessment of other (known and potential) non-designated remains should certainly include consideration of; the potential for further Roman archaeology, including cemeteries and roads; highly significant Palaeolithic remains; and the archaeological potential of Darenth Wood. The assessment should be informed by consultation with the KCC Heritage Conservation Team, who will be able to provide a good insight into the area's potential for non-designated archaeology, and Palaeolithic remains in particular.</p> <p>We would be pleased to engage with the applicant and KCC when designing the appropriate form, scope and methodology of fieldwork.</p>	<p>Agreed, we will consider newly published investigations from Wessex Archaeology. As well as include the geophysical survey at Ebbsfleet Green (Archaeology South-East).</p> <p>The potential for further Roman remains has been assessed and updated accordingly. Mitigation measures have been adopted to reduce any potential harmful effects of the scheme including a watching brief during construction and investigative trenches by Wessex Archaeology.</p>
<p><b>Cultural – General Comment on surveys</b></p> <p>An assessment of the potential impact on archaeological remains of changes to flood risk and ground water levels/conditions should thus also be undertaken as part of the ES, and in compliance with historic England's guidance on preserving archaeological remains. This assessment should additionally assess the cumulative impact that known additional planned development would have on the archaeological resource, and particularly for the undesignated remains around Ebbsfleet Junction.</p> <p>In terms of assessing the development's impact upon setting, we would expect published guidance on the setting of heritage assets (Historic England Good Practice in Planning Note 3) to be consulted. We would be pleased to provide further advice as to the adequate application of the guidance, if required.</p>	<p>Agreed, the potential impact of flood risk should be investigated further and included in the ES. An assessment will be undertaken to assess how undesignated heritage assets will be affected by the scheme.</p> <p>The ES has been updated to reflect this comment.</p>
<p><b>Cultural – General Comment on surveys</b></p> <p>In terms of assessing the development's impact upon setting, we would expect published guidance on the setting of heritage assets (Historic</p>	<p>Noted, this has been included in the updated ES.</p>

Comment	Atkins Response
<p>England Good Practice in Planning Note 3) to be consulted. We would be pleased to provide further advice as to the adequate application of the guidance, if required.</p>	
<p><b>Cultural Heritage - Input to Development Design</b>                      The results of the ES and all archaeological field assessment should be used to inform the final development design. An optimum balance between development and conservation, which meets the criteria of the NPPF and has credible costed provision for appropriate mitigation, can only be achieved with the benefit of a good understanding of heritage significance. The applicant should seek to preserve nationally significant archaeological remains insitu and reduce physical and setting impacts to all heritage assets as far as is possible; for example through the careful placement of services, bunds, compounds, planting and other permanent and temporary installations and sub-surface intrusions. Where harm remains, the applicant should seek to provide appropriate mitigation. The applicant should be aware of the potentially high costs that may be required for archaeological mitigation, including investigations, and that sufficient provision is made for this.</p>	<p>Noted.</p>

**Table A.9: Kent County Council**

Comment	Atkins Response
<p><b>Chapter 1 Introduction - 1.4 Key legislation and policy</b>                      Table 1-2: Policy overview, paragraph 1.4.8 The table makes reference to KCC's Local Transport Plan (LTP) - this reference needs to be corrected as the document has a lifespan up until 2031, rather than 2030.</p>	<p>Amended in Table 1.1 Planning Policy in the ES.</p>
<p><b>Chapter 2 The Project - Para 2.1 The need for the project</b>                      Paragraphs 2.1.2 to 2.1.7 KCC understands that further modelling is being undertaken, which will need to be reviewed by Kent Highways and Transportation. This section should be updated to reference the latest modelling work, once available.</p>	<p>This comment is related to the traffic modelling that was available at the time (based on Stage 2). Since then the traffic modelling has been updated for Stage 3 and is based on the Lower Thames Area Model (LTAM). The outputs have been discussed with KCC and reviewed by the Kent Highways and Transportation team with initial positive feedback provided by email on 16 November 2018. This section has been updated with reference to the latest modelling work.</p>
<p><b>Chapter 2 The Project - Para 2.4 Project description</b></p>	<p>This comment is related to the traffic modelling that was available at the time (based on Stage 2). Since then the traffic modelling has been updated for</p>



Comment	Atkins Response
<p>Paragraphs 2.4.1 to 2.4.10 KCC has concerns regarding the junction design, which have not yet been satisfactorily addressed by the applicant. KCC has also not seen any of the most recent modelling work to fully understand the predicted traffic conditions at both junctions.</p>	<p>Stage 3 and is based on the Lower Thames Area Model (LTAM). The outputs and operation of the junctions has been discussed with KCC and reviewed by the Kent Highways and Transportation team with initial positive feedback provided by email on 16 November 2018.</p>
<p><b>Chapter 2 Alternatives – 3.2 Development of alternatives</b>                      Section 3.2 sets out why alternative options for both junctions were discounted. It is considered that further detail should be provided as part of the EIA regarding the appraisal of the different options and the reasons why the preferred options were selected. This should include reference to the Scheme Assessment Report, published in August 2017. Whilst it is understood that traffic growth as a result of planned developments is built into the junction designs, the proposal for London Resort, which is likely to have a significant impact on the design and traffic volumes, has not been included. KCC would like to see continued liaison between the applicant and the leisure park promotor to ensure a joined up approach to the requirements for highways improvements along this section of the A2.</p>	<p>Further detail has been provided on the alternatives and the reasons why the preferred options were selected. The traffic modelling has been updated for Stage 3 and is based on a cordoned portion of the Lower Thames Area Model (LTAM). The LTAM uncertainty log has been adjusted for A2BE to include specific developments that meet the uncertainty criteria and planned developments have been discussed with the Local Planning Authorities. Growth across the has been compared to guidance levels (NTEM) and ensured to be consistent with the LTAM cordoned area used for A2BE. The proposal for London Resort is separate to the A2BE scheme. Continued liaison between London Resort and A2BE is anticipated.</p>
<p><b>Chapter 16 - Summary</b>                      Table 16-1 Summary of the environmental topics scoped in and out of the EIA. The proposal should be designed to enable construction traffic to remain on the Strategic Road Network where possible and impacts on the local highway network during the construction period will need to be carefully considered and mitigated through consultation with KCC.</p>	<p>Construction traffic has been considered in the assessment process and further details can be found in the CEMP.</p>
<p><b>Biodiversity – Ecological surveys</b>                      Clarification should be provided around why a national vegetation classification (NVC) survey of the woodlands is not proposed to be carried out - particularly if areas of woodland are to be lost/impacted as part of these works. The results of the surveys being carried out will help inform the final design, any mitigation required and ongoing management of the woodland.</p>	<p>NVC surveys have been undertaken for the woodlands. The results are provided in the ES.</p>
<p><b>Biodiversity – Designated Sites</b>                      While it is likely that any impacts associated the construction of the works may be restricted to 2km, KCC has concerns that the impacts associated with the operational phase may be greater. The Thames Estuary and Marshes Ramsar site and the south Thames Estuary and Marshes Site of Special Scientific Interest (SSSI) are within 10km of the proposed junction. It is possible that the works will result in</p>	<p>Further traffic modelling has been undertaken and as a result no designated sites further afield than the existing study area will be subject to any adverse impacts as a result of the Scheme. Further detail is provided in the ES and HRA report (ES volume 2 appendix C).</p>

Comment	Atkins Response
<p>an increase in traffic, which could result in an increase in nitrogen deposition within the designated sites.                      KCC advises that an ecologist will need to review the results of the traffic modelling and air quality reports to assess whether the development is likely to have an impact on the designated sites.                      The Habitats Regulation Assessment (HRA) will need to ensure that it considers all the findings from the relevant reports when considering whether the works are likely to have a significant effect on the designated sites.</p>	
<p><b>Biodiversity – General Comment on Surveys (Same as DBC and Ebbsfleet DC)</b>                      The results of the ecological surveys must be regularly reviewed to identify if there is a need for additional surveys to be carried out or the surveys to be repeated and the results of the ecological surveys may highlight that that survey area needs to be expanded – e.g. require additional information on bat commuting routes.                      All surveys must be carried out at the optimum time of year for the species/habitats. For example it's not appropriate to carry out the NVC surveys for all habitats at the same time of year. The survey areas must include the proposed mitigation/compensation areas to provide an understanding about whether the mitigation can be implemented and if it will have a negative impact on other habitats/species of interest. All surveys must be completed prior to the submission of the application. The surveys must include all areas associated with the development – this includes construction compounds. The surveys must ensure they include any habitat/features outside the boundary line which will be impacted by the proposed work</p>	<p>Ecology surveys have been undertaken at the appropriate time of year and updated as required. Further details are provided in the ES.</p>
<p><b>Biodiversity – Mitigation (Same as DBC and Ebbsfleet DC)</b>                      KCC would like to highlight that development must follow the mitigation hierarchy: The 'mitigation hierarchy' described in British Standard BS 42020:2013, involves the following step-wise process:                      Avoidance – avoiding adverse effects through good design; Mitigation – where it is unavoidable, mitigation measures should be employed to minimise adverse effects;                      Compensation – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm; Enhancement – planning decisions often present the opportunity to deliver benefits for</p>	<p>The mitigation strategy is detailed in the ES. This includes provision of compensation where required. The mitigation hierarchy is referenced in the ES. Enhancement measures are embedded within the mitigation strategy.</p>

Comment	Atkins Response
<p>biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.</p> <p>The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).</p>	
<p><b>Water – Assessment</b></p> <p>There has been an intensive assessment of water quality, there is no mention of the management of surface water as a result of increased impermeable area. KCC would therefore recommend a Flood Risk Assessment/Drainage Strategy is compiled to demonstrate how surface water is controlled to minimise flood risk as a result of the increased impermeable area.</p> <p>Reference should be made to the KCC Drainage and Planning Policy Statement (September 2015) for considerations on drainage submissions to support planning applications.</p> <p>The Flood Risk Assessment should appropriately consider any identified flood risk or surface water management issues, with appropriate mitigation recommended wherever necessary</p>	<p>The FRA for the Scheme covers this detail in the ES including details of the drainage system and SUDs.</p>
<p><b>Cultural – Assessment</b></p> <p>KCC advises that in Table 11-5 ‘Value of heritage assets’, archaeological assets of recognised international importance, which are not World Heritage Sites, should also be included in the Very High category. Sites such as the Palaeolithic ‘elephant’ site should probably be considered to be internationally important and it is possible that the Springhead Roman religious focus and settlement could also be considered of international significance.</p> <p>The assessment of Palaeolithic archaeological potential and Pleistocene geology should be carried out by a recognised Palaeolithic specialist with appropriate knowledge and experience of the area. KCC has prepared a standard specification, which covers what would be required for a desk based assessment with known Palaeolithic potential, including Palaeolithic characterisation, and is able provide this to Highways England for use in this scheme upon request.</p>	<p>Agreed, this has been updated in the ES.</p> <p>There has been an assessment of the Palaeolithic archaeological potential by the KCC advisory specialist.</p>

Comment	Atkins Response
<p><b>Cultural – Assessment</b></p> <p>Extensive archaeological fieldwork has previously been carried out in the area for the scheme and archaeological information should be presented in the ES in a way which shows the layout of key features and structures (where known), rather than just as point data. Overlays of the proposed groundworks on the archaeological layout information should be provided to aid understanding of the impact of the proposed scheme.</p>	<p>The Figures in Volume 3 of the ES have been represented with Scheduled Monuments and archaeological sites as features and archaeological monuments, findspots and listed buildings as points.</p>
<p><b>Cultural – Assessment</b></p> <p>Depending on the results of the desk-based assessment and the expected impact of the proposed works, there may be a need to undertake archaeological field evaluation to inform the ES. KCC is happy to discuss this need further as work progresses.</p> <p>The direct and indirect impact on waterlogged archaeological remains and palaeoenvironmental evidence associated with the River Ebbsfleet should be assessed.</p> <p>Assessment of likely locations for construction compounds, service diversions and ecological mitigation should be undertaken where the restricted space of the area will result in limited options for their location. Later assessment of these works should be programmed where locations cannot be predicted at this stage.</p> <p>The wider archaeological potential of the area beyond the proposed 500m study area should be studied to understand the archaeological context of the area. For example, the potential for the presence of similar Palaeolithic remains as found on the M25/A2/A282 should be considered and the potential for further high status Roman burials along the route of Roman Watling Street should be considered.</p>	<p>Noted, an archaeological field evaluation is being undertaken and the results incorporated as an addendum to the ES.</p> <p>Agreed, the direct and indirect impact on waterlogged archaeological remains and palaeoenvironmental evidence will be assessed.</p> <p>The assessment of likely locations for compounds, service diversions and ecological mitigation has been undertaken and potential locations have also been assessed.</p> <p>The study area was defined by reference to relevant guidance and professional judgement and is beyond the minimum distance recommended by DMRB Volume 11, Section 3, Part 2 HA 208/07 Cultural Heritage.</p>
<p><b>Materials – assessment</b></p> <p>It is unclear from the Scoping Report as to whether the safeguard area is affected. If the proposed highway improvements to the A2 do affect these safeguarded sand and gravel deposits, a Minerals Assessment will be required. The study would need to identify how the mineral deposits should be either safeguarded from sterilisation or be sterilised by the development in an acceptable manner, having evidenced why an exemption from the presumption to safeguard is acceptable (in</p>	<p>This has been addressed in Chapter 10 geology and soils in the ES. Mineral safeguard deposits are assessed in the ES, discussion to be had with Kent regarding this.</p>

Comment	Atkins Response
<p>accordance with Policy DM 7 of the Kent Minerals and Waste Local Plan 2013-30).</p>	
<p><b>Materials – Baseline</b>                      The Waste baseline, paragraph 12.4.6 of the Scoping Report refers to waste materials. The County Council is in the process of reviewing the waste capacity needs of the adopted Kent Minerals and Waste Local Plan 2013-30. The consultation on the updated evidence is now public information and can be accessed via the following link:  <a href="http://mylimehouse.kent.gov.uk/portal/second_call_for_sites_2016/document_library/">http://mylimehouse.kent.gov.uk/portal/second_call_for_sites_2016/document_library/</a> The data on construction, demolition and excavation (CD&amp;E) waste referred to in Chapter 12 of the Scoping Report is dated from 2012. The updated data is now available and should be used to inform the DCO process.</p>	<p>Noted, ES will be updated with data from the report below:                       Kent Waste Needs Assessment 2017 - Construction, Demolition &amp; Excavation Waste Management Needs</p>
<p><b>P&amp;C – Study area</b>                      KCC recommends that the geographical study area is set out within the Scoping Report. Whilst it is understood that this will be determined by the magnitude of impacts, an indication of the study area would be useful at this stage.</p>	<p>Figure 13.1 in the PEIR Volume 3 has been amended for the ES to illustrate the location of the key receptors to the proposed scheme and its study area. The study area and justification will be set out more clearly and this is based on mixture of professional judgement and experience.</p>
<p><b>P&amp;C – Mitigation</b>                      The Scoping Report sets out the effects of construction traffic on vehicle travellers and nonmotorized users. Closer examination of the effects of construction should be undertaken and appropriate mitigation measures should be suggested where required.</p>	<p>The Scheme design includes a range of built in mitigation, for example ensuring affected NMU routes are reinstated and the provision of alternate access to property. Additional mitigation will be implemented where significant adverse effects are identified and will be informed by consultation with landowners and other stakeholders. This will be reported in the ES.</p>
<p><b>P&amp;C – Policy /legislation</b>                      Table 13-1 Legislation, regulatory and policy framework for people and communities This table refers to local policies and strategies that relate to people and communities. KCC's Kent and Medway Growth and Infrastructure Framework should also be referenced, as it examines the projected future growth for the area and implications on transport, including the links with the LTP. The current GIF was published in 2015, and a GIF update is currently being prepared for publication in the new year.</p>	<p>Noted and amended in Table 13.1 of the ES volume 1.</p>
<p><b>P&amp;C – Baseline</b>                      Paragraph 13.4.16 and 13.4.17</p>	<p>Noted comments relating to driver stress. Details on driver stress are provided in the ES drawing on data from the traffic model and should address the local network in addition to the A2.</p>

Comment	Atkins Response
<p>In assessing driver stress, the Scoping Report states that current levels of congestion are manageable. Whilst this may be the case at the Ebbsfleet junction, the Bean junction already experiences congestion at peak times and is susceptible to delays caused by frequent problems at the Dartford Crossing, with drivers seeking alternative routes across Dartford's road network. Therefore, driver stress is not just limited to the A2, but other local roads as well. Driver stress on the section of the A2 in the vicinity of both junctions is also considerable; because of the high volume of traffic and also the close proximity of junctions leading to weaving between Pepperhill, Ebbsfleet and Bean junctions, which essentially reduces the four lane A2 to two free flowing outer lanes.</p> <p>Paragraph 13.4.22</p> <p>The scheme has the potential to provide real benefits to non-motorised road users. The Scoping Report correctly identifies the A2 as a barrier to movement for non-motorised users, including pedestrians, cyclists and equestrians. Further consideration should be given to these users, especially in relation to the existing communities to the south of the A2, such as Bean, Betsham and Southfleet, and the existing connections that cross the A2 and the services located to the north.</p>	<p>A summary of beneficial impacts is included in the ES volume 1.</p>
<p><b>P&amp;C – Consultation</b>                      Section 13.9 Proposed consultation                      As the Local Highway Authority, KCC should also be consulted in relation to matters relating to people and communities and impacts on the highway network</p>	<p>Noted. KCC have been consulted and will continually be consulted in regard to effects on the highways network. KCC shall remain a key consultee throughout preparation of the ES and Transport Assessment.</p>
<p><b>P&amp;C – ProWs</b>                      KCC would like to raise concerns regarding paragraph 13.5.13, Community severance, which relates to the temporary or permanent closure or diversion of footpaths.</p> <p>The impact on recreational use as a consequence of path closures can be severe and lead to large numbers of complaints and/or users causing damage to fences to continue use. Closures should be kept to a minimum in terms of numbers and duration, and alternative routes should be provided wherever possible. Where paths are directly affected, opportunities should be sought within the construction to improve the condition of paths as far as is possible.</p>	<p>Noted. Discussions will be held with KCC Public Rights of Way an Access Service.</p>

Comment	Atkins Response
Discussions should be held with the KCC Public Rights of Way and Access Service at the earliest opportunity to discuss how closures will be managed.	

**Table A.10: Medway Council**

Comment	Highways England Response
<p><b>General Comment</b>                      It will be crucial to ensure that the traffic modelling inputs capture the scale of growth in Medway in order to understand future year traffic flows for the purposes of the various environmental assessments. Clearly this will also need to be coordinated with the Lower Thames Area Model (LTAM). Council officers responded to HE request for growth data in Summer 2017 for the purposes of the LTAM, however this would have evolved following consultation and the emerging evidence base. The council intends to consult on a 2-development strategy, including site allocations, in early 2018; therefore HE will need to ensure that the latest information is used in modelling work. It should be noted that Medway has developed an Aim Sun Model with a calibrated 2016 base year, however HE's validation process has been ongoing for the most part of 2017. Medway Council would welcome a conclusion to this matter to ensure effective coordination of modelling across the region.</p>	<p>Medway's growth data was included in the Traffic Model.</p>

**Table A.11: National Grid**

Comment	Atkins Response
<p><b>General Comment</b>                      NGET wish to express their interest in further consultation while the impact on our assets is still being assessed. NGET will require appropriate protection for retained apparatus including compliance with relevant standards for works proposed within close proximity of its apparatus; providing that the order affects NGET apparatus in any way.</p>	<p>NGET will be consulted further as any new information is developed.</p>
<p><b>Landscape - General Comment</b>                      If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted</p>	<p>A comment has been added to the paragraph on design and mitigation concerning heights of trees and shrubs adjacent to power lines.</p>



Comment	Atkins Response
beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.	

**Table A.12: Natural England**

Comment	Atkins Response
<p><b>Air Quality – Assessment</b></p> <p>Natural England recommend that the ES includes an assessment of the potential air quality impacts to Darenth Wood SSSI from the proposed scheme. The proposed assessment methodology detailed within Section 5.7 of the Scoping Report appear to be focussed on human rather than ecological receptors. The scope of the assessment should ensure that air quality impacts to Darenth Wood SSSI during the construction and operational phases of the scheme are fully considered within the ES along with any mitigation measures that may be required.</p> <p>The increase in vehicle movements will need to be considered in-combination with other plans or projects where impacts to Special Protection Areas, Special Areas of Conservation or Wetlands of International Importance under the Ramsar Convention (Ramsar Sites) may result. We would therefore suggest that the Applicant liaises with the Local Planning Authorities to ensure that any transport modelling fully considers the in-combination impacts of this proposal with developments proposed within their local plans.</p> <p>Natural England also advises that the Applicant considers the recommendations of the Judgment in <i>Wealden District Council v. Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority</i> [2017] EWHC 351 (Admin) when undertaking the air quality impact assessment.</p> <p>In addition to the consideration of air quality impacts to Darenth Wood SSSI, the ES should also include a detailed assessment of the potential impacts that may result to other sensitive ecological receptors such as ancient woodland, priority habitats and the habitats supporting protected or priority species which are susceptible to changes in air quality, along with details of the proposed mitigation measures.</p>	<p>The Darenth Wood SSSI is likely to be included within the air quality assessment for the ES as it is likely to be within 200 m of a road affected by changes in traffic, as defined in the DMRB. This is noted at paragraph 5.4.20 of the scoping report.</p> <p>Once we have determined our study area for the air quality assessment, we will consult with the local authorities to determine relevant receptors for inclusion in the assessment.</p>

Comment	Atkins Response
<p><b>Biodiversity – Designated sites</b>                      The ES should thoroughly assess the potential for the proposal to affect designated sites at the national, European and international level. European sites (ego designated Special Areas of Conservation and Special Protection Areas) fall within the scope of the Conservation of Habitats and Species Regulations 2017. In addition paragraph 118 of the National Planning Policy Framework requires that potential Special Protection Areas, possible Special Areas of Conservation, listed or proposed Ramsar sites, and any site identified as being necessary to compensate for adverse impacts on classified, potential or possible SPAs, SACs and Ramsar sites be treated in the same way as classified sites.</p> <p>The proposal has the potential to result in direct and indirect impacts to the Site(s) of Special Scientific Interest (SSSIs) detailed below. Information on the SSSIs and their special interest features can be found at <a href="http://www.magic.gov.uk">www.magic.gov.uk</a>. The ES should include a full assessment of the direct and indirect effects of the development on the features of special interest within these sites and should identify such measures as may be required in order to avoid, minimise or reduce any adverse significant effects. Further site-specific guidance is provided below.</p> <p>Darenth Wood Site of Special Scientific Interest (SSSI)                      The ES should fully consider the likely impacts from the proposal to species and habitats associated with Darenth Wood SSSI; in particular the ES should include an assessment of the following:</p> <ul style="list-style-type: none"> <li>• The direct loss of any habitat within the SSSI (should the scheme be modified to require this)</li> <li>• The impacts from any removal of woodland and scrub habitat adjacent to Darenth Wood which are likely to be acting as an ecological buffer to the SSSI</li> <li>• Air quality impacts that may occur to Darenth Wood as a result of the proposed scheme bringing traffic closer to the SSSI</li> </ul>	<p>Full details of the assessment regarding European sites are provided in the HRA report (ES volume 2 appendix C). The potential impacts on designated sites are detailed in the ES.</p>
<p><b>Biodiversity – HRA</b>                      Should the scheme information identify that an increase in vehicle movements could result in a Likely Significant Effect (LSE) on a European/Internationally designated site or be uncertain, the competent authority (in this case the Planning Inspectorate) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.</p>	<p>Further traffic modelling has been undertaken and as a result no designated sites further afield than the existing study area will be subject to any adverse impacts as a result of the Scheme. Further detail is provided in the ES and HRA report.</p>

Comment	Atkins Response
<p>Where a LSE is identified, the Environmental Statement should include a chapter detailing the necessary information for the competent authority to undertake the Appropriate Assessment, often referred to as a 'Statement to Inform an Appropriate Assessment'.</p>	
<p><b>Biodiversity –Protected species</b>                      The ES should assess the impact of each phase of the proposal on all protected species including, for example, great crested newts, reptiles, birds, water voles, badgers and bats.                      The ES should thoroughly assess the impact of the proposals on habitats and species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.                      Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.                      Natural England advises that a habitat survey (equivalent to Phase 2) is carried for the scheme, in order to identify any important habitats present. In addition, ornithological, botanical and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The ES should include details of:</p> <ul style="list-style-type: none"> <li>• Any historical data for the site affected by the proposal (ego from previous surveys);</li> <li>• Additional surveys carried out as part of this proposal;</li> <li>• The habitats and species present; •</li> </ul> <p>The status of these habitats and species (e.g. whether priority species or habitat);</p> <ul style="list-style-type: none"> <li>• The direct and indirect effects of the development upon those habitats and species;</li> <li>• Full details of any mitigation or compensation measures that might be required.</li> <li>• Full details of any enhancement measures that are to be delivered</li> </ul>	<p>Ecology surveys have been undertaken at the appropriate time of year and updated as required. Further details of the surveys undertaken (including a habitat survey), impact assessment and mitigation strategy are provided in the ES, including consideration of HPI, SPI, BAP habitats and species.</p>
<p><b>Biodiversity – Ancient woodland</b>                      We would recommend that as a first principle, the detailed design should aim to avoid impacts to ancient woodland and other habitats of</p>	<p>There will be no ancient woodland loss as a result of the Scheme. The mitigation strategy is detailed in the ES, including measures to avoid indirect impacts to ancient woodland.</p>

Comment	Atkins Response
<p>nature conservation importance to avoid biodiversity and landscape impacts. If impacts cannot be fully avoided, compensatory habitat provision will be required and it would appear appropriate for this to be delivered in conjunction with other projects such as the Lower Thames Crossing.</p>	
<p><b>Biodiversity</b> –Locally important wildlife sites                      The ES will need to consider any impacts upon local wildlife and geological sites. Local Sites are identified by the local wildlife trust, geoconservation group or a local forum established for the purposes of identifying and selecting local sites. They are of county importance for wildlife or geodiversity. The ES should therefore include an assessment of the likely impacts on the wildlife and geodiversity interests of such sites. The assessment should include proposals for mitigation of any impacts and if appropriate, compensation measures.                      Natural England recommends that advice is sought from local wildlife trust geoconservation group who will be able to provide more details on local wildlife and geological sites.</p>	<p>A full assessment of potential impacts to LWS’s is provided in the ES, along with a mitigation strategy to avoid/minimise any potentially adverse impacts.</p>
<p><b>Biodiversity – Mitigation general comments</b>                      Natural England recommends that the scheme should deliver a net benefit for biodiversity whilst helping to facilitate people’s access to and enjoyment of their local environment.                      Natural England recommends that the scheme should deliver a net benefit for biodiversity whilst helping to facilitate people’s access to and enjoyment of their local environment.                      Where off-site compensation will be required for any of the habitats or species impacted by the development, the long-term security and management of the site(s) needs to be secured and we recommend that this should be detailed within the ES.</p>	<p>Habitat creation will result in an increase in the total area of terrestrial and aquatic habitats, which will be beneficial in the long-term once planting has become established.</p>
<p><b>Landscape – General comment</b>                      The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change</p>	<p>An outline landscape character assessment of the study area has been carried out and 7-character areas have been identified, these are shown on figure 9.3 in ES volume 3 Landscape Character Areas (Local) this will be assessed fully for the ES. Cumulative effects will be considered of those developments with planning permission at time of the detailed assessment for the ES and will be based on the following table within the Cumulative effects chapter table 15.4 Stage 2 Shortlist of ‘Other Developments’ (ES volume 1). .</p>

Comment	Atkins Response
<p>and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.</p> <p>The landscape assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescales of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.</p>	
<p><b>Geology – General comment</b></p> <p>The Applicant should consider the following issues as part of the Environmental Statement:</p> <ol style="list-style-type: none"> <li>1. The degree to which soils are going to be disturbed/harmed as part of this development and whether 'best and most versatile' agricultural land is involved. This may require a detailed survey if one is not already available. For further information on the availability of existing agricultural land classification (ALC) information see <a href="http://www.magic.gov.uk">www.magic.gov.uk</a>. Natural England Technical Information Note 049 - Agricultural Land Classification: protecting the best and most versatile agricultural land also contains useful background information.</li> <li>2. If required, an agricultural land classification and soil survey of the land should be undertaken. This should normally be at a detailed level, for example one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres. The Environmental Statement should provide details of how any adverse impacts on soils can be minimised. Further guidance is contained in the Defra Construction Code of Practice for the Geology Sustainable Use of Soil on Development Sites.</li> </ol>	<p>Noted: BMV and agricultural soils have been assessed within the ES volume 1 in chapter 10. Soil quality with regards to agriculture is not assessed within Chapter 10, Moved to Chapter 13 Peoples and Communities.</p>
<p><b>Geology</b></p> <p>The ES will need to consider impacts on geological sites. Local sites of geodiversity. Mitigation and compensation measures need listing in ES</p>	<p>Noted: No Geological SSSIs have been identified within the study area and are therefore not considered within the ES, an LGS and RTD and chalk mineral resource zones associated with the local geology have been assessed.</p>

Comment	Atkins Response
	<p>Natural England were contacted, and the response have been included in the ES stating they will have no significant comments (ES volume 1 section 10.6.57).</p> <p>The mineral resource zones have been deemed to not be of significant value by Kent County Council (ES volume 1 section 10.7.8).</p>
<p><b>P&amp;C – ProWs</b></p> <p>The EIA should also consider potential impacts on access land, public open land, and rights of way in the vicinity of the development. Appropriate mitigation measures should be incorporated for any adverse impacts to pedestrians and non-motorised vehicle users. Natural England also recommends reference to the relevant Right of Way Improvement Plans (ROWIP) to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.</p>	<p>Noted. The Scheme design includes a range of built in mitigation, for example ensuring affected NMU routes are reinstated and the provision of alternate access to property. Additional mitigation will be implemented where significant adverse effects are identified and will be informed by consultation with landowners and other stakeholders. This is in the ES.</p> <p>Reference to ROWIP in policy table 13.1 of the ES volume 1.</p>
<p><b>Cumulative effects – general comment</b></p> <p>The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):</p> <ol style="list-style-type: none"> <li>existing completed projects;</li> <li>approved but uncompleted projects;</li> <li>ongoing activities;</li> <li>plans or projects for which an application has been made and which are under consideration by the consenting authorities; and</li> <li>plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.</li> </ol> <p>Natural England welcomes the list of projects contained with Appendix D ‘Other Development Matrix for Cumulative Effects Assessment’ which will be considered as part of the cumulative assessment. Specific projects that Natural England is currently aware of which we consider should form part of the cumulative impact assessment are:</p>	<p>The ES provides further detail on the methodology and now includes further information on the tiering system which has been used to identify ‘Other Development’ and the certainty ascribed to each development. The tiering system used is taken from PINS advice note 17 (and is broadly similar to that set out in Natural England’s comment).</p> <p>The methodology now also includes more details on ‘in combination’ effects.</p> <p>Lower Thames crossing is included inherently due to the traffic modelling which underpins the Noise and Air Quality assessments.</p> <p>London Resort has not be included as per HE instruction due to critical interdependencies between the schemes, rather than a lack of any formal planning status – which it does in fact have due to a scoping report submission and inclusion on the PINS list of projects.</p> <p>Site allocations within local plans are included in the methodology. The traffic model uses its own list of developments which extends much further in scope and scale than the CEA Schedule of Developments.</p> <p>LPA’s have been consulted with and given the opportunity to raise potential issues around developments that should be included.</p>

Comment	Atkins Response
<ul style="list-style-type: none"> <li>• Lower Thames Crossing</li> <li>• The London Resort – Natural England notes in Section 15.2.9 of the Scoping Report that the applicant does not consider this proposal to have any formal planning status. However this proposal was included within the projects to be considered as part of the cumulative assessment within the recent Lower Thames Crossing Scoping Report, another Highways England promoted scheme. As such, Natural England considers that it would be appropriate for the London Resort to be considered as part of the assessment.</li> </ul> <p>On a more general note, Natural England recommends that the existing and emerging housing allocations within the relevant Local Plans should also be included within the table, particularly in relation to the potential in-combination effects from traffic generated air quality impacts.</p> <p>Natural England also recommends that the views of the Local Planning Authorities should be sought in relation to potential developments that should form part of the cumulative effects assessment as they may be aware of other developments that are likely to come forward in the near future.</p>	

**Table A.13: Public Health England**

Comment	Atkins Response
<p><b>General Comments</b></p> <p>We believe the summation of relevant issues into a specific section of the ES report provides a focus which ensures that public health is given adequate consideration. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.</p> <p>It is noted that the current proposals do not appear to consider possible health impacts of Electric and Magnetic Fields (EMF). The proposer should confirm either that the proposed development does include or impact upon any potential sources of EMF; or ensure that an adequate</p>	<p>The assessment of the effect of the Scheme on Population and Human Health will be reported in ES topic chapters: Air Quality, Noise, Road drainage and the Water Environment; Geology and Soils and People and Communities.</p>



Comment	Atkins Response
<p>assessment of the possible impacts is undertaken and included in the ES.</p>	
<p><b>General comment – General approach</b>                      The EIA should consider best practice guidance such as the Government’s Good Practice Guide for EIA. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases. It is not PHE’s role to undertake these assessments on behalf of promoters as this would conflict with PHE’s role as an impartial and independent body.                      Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES.</p>	<p>The assessment of the effect of the Scheme on Population and Human Health is a requirement under the 2017 EIA regulations. This assessment will be reported in ES topic chapters: Air Quality, Noise, Road drainage and the Water Environment; and People and Communities. The assessment will also consider the development, operational, and decommissioning phases.                      The main alternatives considered have been addressed in Chapter 3 of the ES volume 1.</p>
<p><b>General comment – Receptors</b>                      The ES should clearly identify the development’s location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land.                      Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.</p>	<p>Human and environmental receptors are identified in each topic chapter in the ES.</p>
<p><b>General comment - Impacts arising from construction and decommissioning</b>                      Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases.                      Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.</p>	<p>The assessment of impacts arising from emissions due to construction and decommissioning on all receptors are identified in each topic chapter and the monitoring and mitigation during these phases is described.                      A CEMP has been prepared ensure best practice measures are undertaken to reduce and/or mitigate and impacts on health.</p>

Comment	Atkins Response
<p>We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective CEMP and DEMP will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.</p>	
<p><b>General comment – Health and safety</b>                      Within the EIA PHE would expect to see information about how the promoter would respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.                      The EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation’s potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations.                      A 2009 report, jointly published by Liverpool John Moors University and the HPA, examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: “Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible.” PHE supports the inclusion of this information within EIAs as good practice.</p>	<p>The A2BE scheme includes both strategic road network managed by Highways England and local road network where Kent County Council is the highway authority. Highways England has an asset support contract with A-One+ and Kent County Council works with Amey. Both maintenance providers will have obligations related to incident management and compliance with standards. During construction the appointed contractor will also have various duties in relation to management of incident and where applicable this will include liaison with other parties.</p>
<p><b>Air Quality – Baseline</b>                      When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these:</p>	<p>The air quality assessment follows guidance in the Design Manual for Roads and Bridges (DMRB) and will include the consideration of the likely effects of the Scheme on receptors within the relevant AQMAs.</p>

Comment	Atkins Response
<ul style="list-style-type: none"> <li>• should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)</li> <li>• should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst-case conditions)</li> <li>• should include modelling considering local topography.</li> </ul>	<p>The assessment will use one year’s meteorological data from a nearby suitable station for the base year assessment. It is common practice to use the same year of meteorological data as the base year for the traffic model to ensure a good comparison of the measured data and the modelled data for the same year can take place for verification purposes.</p> <p>It is considered best practice to use the same meteorological data for the base year as for the future opening year, so that any adjustment factors used in the verification of the base year can be applied to the future year modelling.</p> <p>The dispersion modelling of roads is typically undertaken assuming flat terrain as this can be considered a conservative assumption.</p>
<p><b>Water – baseline</b>                  When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:</p> <ul style="list-style-type: none"> <li>• should include assessment of potential impacts on human health and not focus solely on ecological impacts</li> <li>• should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)</li> <li>• should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure</li> <li>• should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc) alongside assessment of potential exposure via drinking water</li> </ul>	<p>This has been covered in the ES in Chapter 8.</p>
<p><b>Geology – General comment</b>                  We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report. Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed and the potential impact on nearby receptors and control and mitigation measures should be outlined.</p>	<p>Noted. Risk assessment of potential ground gas, migration of contamination and potential impact on receptors has been discussed in detail in the ES using baseline data and assessed with a precautionary approach.</p> <p>Monitoring of ground gas is recommended within the monitoring section (Volume 1 section 10.11). The mitigation measures section (ES volume 1 10.8) lists relevant good practice guide recommendations to prevent new contamination and the creation of pathways.</p> <p>Chapter 12 discusses the reuse of soils and waste soils.</p>

Comment	Atkins Response
<p>Relevant areas outlined in the Government’s Good Practice Guide for EIA include:</p> <ul style="list-style-type: none"> <li>• effects associated with ground contamination that may already exist</li> <li>• effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination</li> <li>• impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.</li> </ul>	
<p><b>Waste – General comment</b>                      The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal). For wastes arising from the installation the EIA should consider:</p> <ul style="list-style-type: none"> <li>• the implications and wider environmental and public health impacts of different waste disposal options</li> <li>• disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated</li> </ul>	<p>The Scheme will endeavour to move waste up the hierarchy which should reduce environmental and public health impacts.</p> <p>Impacts on public health from transport covered in transport, air quality, noise and health impact assessment.</p> <p>Further to the above, public health impacts of waste facilities are consider as part of their permit application.</p> <p>Disposal routes and Transport methods covered in Transport Assessment.</p>

**Table A.24: PINS Scoping Opinion comments log with responses – Royal Mail**

Comment	Atkins Response
<p><b>General comment</b>                      Royal Mail requires more information and certainty about traffic management measures that will be put in place to mitigate construction impacts on traffic flows on the A2 and M25.</p>	<p>The Transport Assessment and the Construction Environment Management Plan (CEMP) provides details about traffic management measures for the Scheme.</p>
<p><b>General comment</b>                      The ES should include information on the needs of major road users (such as Royal Mail) and acknowledge the requirement to ensure that major road users are not disrupted though full advance consultation by the applicant at the appropriate time in the DCO and development process.</p>	<p>The Transport Assessment and the Construction Environment Management Plan (CEMP) provides details about traffic management measures for the Scheme.</p>
<p><b>General comment</b></p>	<p>We understand the Royal Mail has a distribution centre in the area and meetings are being planned to discuss the scheme in further detail. At present</p>

Comment	Atkins Response
<p>The ES and DCO application should include detailed information on the construction traffic mitigation measures that are proposed to be implemented by Highways England / its contractor, including a draft Construction Traffic Management Plan (CTMP).</p>	<p>there is a high-level traffic management plan, and this will be developed further in subsequent design and construction phases. Relevant details from this have been included in the ES.</p>
<p><b>General comment</b>                      Royal Mail is fully pre-consulted by Highways England / its contractor on any proposed road closures / diversions/ alternative access arrangements, hours of working and the content of the CTMP. The ES should acknowledge the need for this consultation with Royal Mail and other relevant major road users.</p>	<p>It is recognised that further discussion is required with various stakeholders to develop the traffic management plan during the forthcoming stages.</p>

**Table A.35: PINS Scoping Opinion comments log with responses – Southern Water**

Comment	Atkins Response
<p><b>General comment</b>                      Southern Water’s current sewerage records show that there are multiple foul sewer within the site. No new development/building works will be permitted to be constructed over or within 3.0 metres of the existing sewers. Sewer record attached for your information.                      The proposed works will be subject to consultations under the New Roads and Street Works Act. Southern Water will rely on these consultations to ensure that all existing plant is appropriately protected. Furthermore, due to changes in legislation that came in to force on 1st October 2011 regarding the future ownership of sewers it is possible that a sewer/s now deemed to be public could be crossing the above property.</p>	<p>Southern Water’s sewer locations have been plotted on our scheme drawings based on C2 returns. Liaison with Southern Water as part of the NRSWA C3 process has been ongoing. It is not anticipated that any diversions of Southern Water apparatus will be required. It is recognised that further discussion with Southern Water is required to ensure that any sewers passing under the works areas are suitably protected.</p>

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