

M25 junction 28 improvement scheme

TR010029

9.26 Applicant's Response to Written Questions

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Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

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M25 junction 28 scheme Development Consent Order 202[x]

9.26 Applicant's response to Examining Authority's First Written Questions

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1. Introduction

- 1.1.1 This document sets out Highways England's response to the Examining Authority's first round of Written Questions (ExAQs). Where the ExAQs have requested that Highways England provide new documents, these are submitted at Deadline 2 with the associated ExAQ referenced in the document title.

Question number	Doc ref and question to:	Question	Highways England's response
1. General			
GQ1.1	Approach to Mitigation (Applicant)	<p>As will be set out in more detail in the individual subject areas below, the ExA is concerned with the Applicant's overall approach to mitigation in this application. The Applicant's approach relies heavily on those identified issues and a series of statement commitments to mitigation contained the Register of Environmental Assessment Commitments (REAC) [APP-097]. The REAC itself relies on a series of documents, such as the Construction Environmental Management Plan (CEMP) to detail such mitigation.</p> <p>However, the CEMP is considered light in detail and heavily reliant on matters being resolved at the detailed stages and crucially, after consent would have been granted. There are further concerns, such as the commitment to provide an Arboricultural Method Statement (AMS): this is not listed as a document to form part of the CEMP, nor is it secured in the draft DCO [APP-015].</p> <p>The ExA is concerned that the approach fails to provide adequate details of how the Applicant intends to mitigate the impacts of the Proposed Development, and the ExA cannot be certain at</p>	<p>Highways England has assessed the environmental impacts of the Scheme (APP-026 to APP-087) and where possible, the mitigation measures have been incorporated into the Preliminary Environmental Design (Figure 2.2) (APP-039) (which is a document that is to be certified as part of the Environmental Statement in Schedule 10 of the draft Development Consent Order (DCO) (APP-015)). For mitigation measures that cannot be embedded into the preliminary design, they have been identified in the Register of Environmental Actions and Commitments (APP-097). It will be the responsibility of the Principal Contractor to implement these measures during the future phases of the Scheme, such as detailed design, construction and operational stages.</p> <p>Highways England has updated Requirement 4, in Schedule 2 of the draft DCO (APP-015) to include the list of environmental control plans that must be produced under the CEMP.</p> <p>Highways England is also in the process of updating the Outline CEMP (APP-096) to include outline plans for air quality, noise and vibration, archaeology and tree protection and they will form part of Appendix F of the Outline CEMP (APP-096).</p> <p>Paragraph 4.4.3 of the Outline CEMP (APP-096) will be updated to provide the list of the environmental control plans which the Principal Contractor will need to prepare for the detailed design</p>

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1. General			
		<p>this stage that mitigation measures or practices would be adequate.</p> <p>The Applicant is required to take note of the ExA's initial view and either provide a statement response here, and/ or respond to the individual concerns in questions below and submit the additional documents required.</p>	<p>and construction stages and the updated Outline CEMP is proposed to be submitted at Deadline 3a. The Principal Contractor appointed by Highways England will be required to implement an Environmental Management System (EMS) accredited to ISO14001:2015 - Environmental management systems.</p>
GQ1.2	Scope and Assessment in the ES (Applicant)	<p>Chapter 4 of the Environmental Statement (ES) [APP-026] sets out the assessment methodology. In its Relevant Representation (RR) [RR-028], Transport for London (TfL) states that "no reference has been made to environmental policy within London, particularly the London Environment Strategy and Mayor's Transport Strategy. This is relevant for the topics of air quality, noise and vibration, biodiversity, drainage and water, materials and waste, and climate".</p> <p>i) Provide a response, explaining why, if TfL is correct, this document was not included within the assessment.</p>	<p>i) Highways England acknowledges the omission of reference to the London Environment Strategy in the preparation of the Chapters 1 to 4 (Introductory Chapters) of the Environmental Statement (ES) (APP-026). However, the strategy was included in the assessment. A response to this effect is provided in RR-28.28 (REP1-002) and outlined below.</p> <p>Highways England understands that the London Environment Strategy was published in May 2018 and sets out the Mayor's overall vision to protect and improve London's environment. As a Nationally Significant Infrastructure Project to the strategic road network, the primary policy framework under which the Scheme will be assessed is the National Policy Statement for National Networks (NPS NN). The Case for the Scheme (APP-095) presents a table of accordancy with the NPS NN in</p>

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		<p>ii) Amend the relevant ES chapters accordingly and explain whether such changes would have any bearing on the significance of its findings.</p>	<p>Appendix B (including with regard to environmental aspects of the Scheme). A summary of the key legislation, strategies and policies taken into consideration as part of the development of the Scheme is presented in section 1.6 of the Chapters 1 to 4 (Introductory Chapters) of the ES (APP-026). Table 1.1 refers to the key regional and local policies that were considered through the development of the Scheme. This includes the Adopted and Draft London Plans and the Mayor's Transport Strategy 2018. The ES has individual chapters for air quality, noise and vibration, biodiversity, drainage and water, materials and waste, and climate (Chapters 5 to 14 - APP-027 to APP-036) where further consideration is given to the key local, regional and national policies applicable to the Scheme and relate to the particular topic.</p> <p>ii) Table 1.1 of the ES Chapters 1 to 4 (Introductory Chapters) (APP-026) will be updated to include the London Environment Strategy which was omitted in error during the preparation of the report. It is Highways England's view that the addition of the London Environment Strategy will not change the findings presented in the ES assessment as other key local and national polices have been considered within the ES assessments.</p>

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GQ1.3	Alternatives do Nothing (Applicant)	<p>Table 3.1 of Chapter 3 of the ES [APP-026] sets out a description of a 'do nothing' scenario which would include introducing traffic signals on the A1023 Brook Street approach, lane markings and signage. Paragraph 3.2.3 states that this option was discarded because it "would not address the problems at the junction". No explanation is given for this assertion.</p> <p>Provide this explanation.</p>	<p>Chapter 3 of the ES (APP-026) refers to a 'Do minimum' scenario that could include short term measures for improving the safety of, and some congestion issues at, the roundabout. Table 3.1 sets out an initial list of examples of what could be considered under this 'Do minimum' scenario, which includes optimising the traffic signals, providing new traffic signals at the Brook Street approach, revising lane markings and destination signing on the M25 junction 28 roundabout.</p> <p>When taken forward for more detailed assessment, it was found that the introduction of new traffic signals at the Brook Street approach to the roundabout was not feasible and would result in significant increases in congestion and delay. Therefore, the 'Do minimum' option was later redefined (as highlighted in Table 3.2 of the ES) as focusing on short term measures with signal optimisation at junction 28. This scenario (without signalling the Brook Street approach) formed the basis for the 'Do minimum' reference case for the scheme assessments and appraisal.</p> <p>Paragraph 3.2.4 of the ES states that the 'Do minimum' was discarded as it would not address the problems at the junction. Our assessments at that stage showed that the 'Do minimum' would offer minimum improvement in terms of safety and decongestion on the roundabout in the short term and importantly it would not provide very little capacity</p>

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1. General			
			enhancements to cater for future predicted traffic demand at the junction for the 2037 design year.
GQ1.4	Alternatives – Option B (Applicant)	<p>Table 3.4 of Chapter 3 of the ES [APP-026] sets out the three short-listed options for the proposed A12 eastbound off slip. These were Options 5B, 5C and 5F. Option 5F was chosen as the preferred option.</p> <p>Paragraph 3.2.19 states that Option 5B “would have the least visual impacts, people and communities and biodiversity...[and be the]...smallest [in] scale and so would have fewer components effecting the water environment”. Paragraph 3.2.21 suggests that Option 5F (the Proposed Development route) was selected as the preferred option primarily as a result of support from non-statutory bodies.</p> <p>Table 3.5 further explains that Option 5B was discarded because it “involves a departure from safety standards relating to the substandard distance between the successive diverges on the M25 anti-clockwise carriageway. This presents a significant concern over operational safety of the road user”. Paragraph 3.3.2 further states that Option 5B would be expected to approach and</p>	<p>i) Option 5B was shortlisted along with Options 5C and 5F because they offered the best value for money against achieving the Scheme objectives against other alternatives. Each of the three shortlisted options offered a high value for money, and while Option 5B does improve the capacity of junction 28, Options 5C and 5F both offered more capacity in the longer term beyond the design year (noting that Option 5B cannot be widened to 2 lanes given its geometry).</p> <p>At the Option Identification Stage, the options were assessed based on a concept design, and a high-level assessment of performance against their ability to achieve the Scheme objectives. The level of design was appropriate for the early Option Identification Stage and shortlisting, it was developed sufficiently to examine compliance with principal geometric parameters and standards. While this raised some issues relating to operational safety, it was important to consider the other merits of Option 5B in the multi criteria assessment against the other alternatives, including environmental and land take impacts. Option 5B was later discounted in the Option Selection Stage as summarised in point ii) below.</p>

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		<p>exceed capacity beyond the design year and could not be made two lanes.</p> <p>i) If this is the case, explain how it could possibly have made the short list given its obvious flaws.</p> <p>ii) That it did make the short list suggest that it was a viable alternative. Given that Option 5B was the least environmentally harmful option, explain how the decision-making process led to Option 5F being selected, and how much the popular support proved determinative.</p> <p>iii) Where it is said Option 5B “would have the least visual impacts” explain whether this assessment also included effects on trees and set out the differences in effects between Option 5B and 5F.”</p>	<p>ii) Option 5F was selected in preference to Options 5B and 5C based on multi-criteria technical assessments against achieving the Scheme objectives and deliverability, as well as a Value Management workshop undertaken in May 2017. Based on these, Option 5F was recommended as the preferred option based on the following:</p> <ul style="list-style-type: none"> a. Option 5F performed strongest in achieving the primary objective of improving journey times, and catering for future traffic demands most efficiently, and in doing so supporting future economic growth to 2037 and beyond. b. Options 5B and 5C were single lane options and forecast traffic volumes are expected to approach and exceed capacity beyond the design year. It is noted that two lanes cannot be provided on the Option 5B alignment. c. All options would improve network resilience on the roundabout, but Option 5F offers greater network resilience on the loop road too, by having two lanes. d. All options addressed the road safety issues on the roundabout. However, Option 5B involves a departure from safety standards relating to the sub-standard distance between the successive diverges on the M25

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			<p>anti-clockwise carriageway. This presents a significant concern over operational safety for the road user.</p> <ul style="list-style-type: none"> e. All options performed similarly in terms of minimising the impacts on air quality and noise. Option 5B would have created marginally worse potential impacts in relation to air quality. Option 5F was marginally preferable in relation to potential noise impacts. f. Option 5F was also viewed positively in terms of avoiding the alignment of the loop road going directly through the Grove Farm property and businesses, which Option 5B does. g. Option 5B required widening of the M25 viaduct over the junction 28 roundabout. The resulting disruption on other road users using the M25 and the A12 would have been considerable. Option 5F can be constructed without significant disruption to traffic on the M25, the A12 and the A12 slip roads. <p>This selection was also in line with the support reflected in the responses to the Options-Consultation 2016 (see section 3.7 of the Consultation Report (APP-022)). Highways England confirms that the popular support was not a determining factor in the preferred option; and only notes that the support for the selected option compared well with the</p>

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			<p>findings of the assessments and the value management workshop.</p> <p>iii) An environmental assessment of Options 5B, 5C and 5F was undertaken during the Option Selection Stage which included an assessment on the effects on trees. The landscape assessment considered that for Option 5B, during construction and operation there would be minor loss of trees in Grove Wood and existing highway vegetation, and that impacts on landscape character (including field patterns and landform) would likely be unnoticeable. Option 5F (and Option 5C) would result in moderate loss to field patterns, and partial loss to the distinctive landscape elements of Alder Wood and areas of highway vegetation resulting in moderate adverse effects during both construction and operation. Due to the smaller footprint of Option 5B, it would have the least adverse effects on landscape character and visual amenity, but it would not achieve the overall Scheme objectives. Option 5F has a larger footprint and would result in greater tree loss which would be mitigated through planting following construction and achieves the Scheme objectives as outlined in section 2.2 of Chapter 1 to 4 of the ES (APP-026).</p>
GQ1.5	Railway operations (Network Rail)	In its RR [RR-002], Network Rail states that it wishes to object to the Proposed Development on the ground that the proposed works might	As set out in Highway England's response to RR-002-3 (REP1-002) Network Rail's interest in this plot relates to the railway, which is excluded from the scope of Highways England's

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		<p>[ExA emphasis] interfere with the safe and efficient operation of the railway. The Works Plans [APP-006] show Work No.7 (M25 northbound improvement works) commencing northwards of the Network Rail bridge (i.e. not underneath it) towards the development site.</p> <p>Explain in more detail how the Proposed Development (other than Compulsory Acquisition (CA) matters which are asked in the section below) would affect the operation of the railway.</p>	<p>compulsory acquisition powers (see Book of Reference (APP-021) and the description of plot 4/2)).</p> <p>The Book of Reference (APP-021) provides the following description of plot 4/2:</p> <p><i>All interests and rights excluding railway in 935 square metres, or thereabouts, of motorway (London Orbital Motorway (M25)) under bridge carrying railway (Shenfield to Liverpool Street) situated to the north east of 25 Nags Head Lane, Brentwood.</i></p> <p>Highway England has made it clear in the Book of Reference that the railway is excluded from its powers of compulsory acquisition. The Scheme does not interfere with the operation or management of the bridge or the railway line. Discussions are ongoing between Highways England and Network Rail to make this clear and will be set out in the revised Statement of Common Ground with Network Rail (REP1-012).</p>
GQ1.6	Construction Practices (Applicant)	<p>The application does not make provision for a Code of Construction Practice (CoCP). This document provides a consistent approach to the control of construction activities and mitigates potential impacts on people and the environment. Such a document sits alongside a CEMP / Landscape and Ecology Management and Monitoring Plan (LEMP) etc and is equally</p>	<p>i) Highways England's DCO schemes do not require the preparation of a CoCP. Instead they require an Outline CEMP to be prepared in accordance with the design guidelines of Highways England Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Part 5 HA 205/083, Volume 11, Section 2, Part 6 HD 48/084, and Interim Advice Note (IAN) 183/14 Environment Management Plans (which has been recently replaced by LA120 -</p>

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		<p>secured in a DCO. The absence of a CoCP is telling, as TfL in its RR [RR028] expresses concerns about a lack of information on the construction programme and timing of works.</p> <p>i) Explain why the application omits a CoCP.; Or;</p> <p>ii) Provide a CoCP into the Examination and secure it with a Requirement in the draft DCO.</p>	<p>Environmental Managements Plans). The Outline CEMP (APP-096) was submitted as part of the DCO application in line with Highways England's DMRB requirements. Paragraph 1.3.3 of the Outline CEMP sets out the purpose and the actions needed to manage environmental effects identified within the environmental assessment during construction and operation of the Scheme. Requirement 4, in Schedule 2 of the dDCO (APP-015) requires the preparation of a CEMP and its approval in writing before the authorised development can commence.</p> <p>ii) Response provided in i) above.</p>
GQ1.7	<p>Construction Practices (Applicant) (Gardens of Peace Muslim Cemetery)</p>	<p>In its RR [RR-024], The Gardens of Peace Muslim Cemetery (Gardens of Peace) considers that it has had insufficient information to determine the likely effects of the construction period on its operation, and it will be unable to fully operate and will be "entirely in the hands of [the Applicant's] contractors". At Procedural Deadline B [PDB009] the Gardens of Peace stated that limited engagement has taken place [with the Applicant].</p> <p>For the Applicant:</p>	<p>i) See Highways England's response to RR-24.8 9 (REP1-002).</p> <p>During the pre-application phase and subsequent discussions with Cadent Gas Limited ("Cadent"), it was identified that it would be necessary to divert an existing high-pressure gas main (owned and operated by Cadent), that runs through the site of the proposed internal loop road. Since this need was established, engagement has been undertaken with the trustees of the burial ground by both Cadent and Highways England (as set out paragraphs 8.3.2, 9.12.1 and Chapter 9 of the Consultation Report</p>

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		<p>i) Explain the anticipated effects of the Proposed Development on the Gardens of Peace.</p> <p>ii) Explain where such effects have been assessed and mitigated in the application documents and how this is secured in the draft Development Consent Order (draft DCO) [APP-015].</p> <p>For the Gardens of Peace Muslim Cemetery:</p> <p>iii) Set out in more detail specifically why Work No.29 [APP-006] (diversion of high-pressure gas pipeline) and its timescale would detrimentally affect the future operation of the cemetery and its targeted opening date of 2022.</p> <p>iv) Explain why it is said that the Proposed Development must be amended and provide details of the amendment you seek.</p>	<p>(APP-005)) and the response to Relevant Representation RR-024-6 (REP1-002).</p> <p>The existing high pressure gas pipeline passes through the eastern end of the Gardens of Peace cemetery. The proposed diversion would run alongside and connects into the existing high pressure gas pipeline within the cemetery site. Excavations will be necessary to receive the pipeline where it is tunnelled beneath the A12 and where a connection will be needed to the existing pipeline. Cadent has identified an area for working space which will be needed temporarily until the connection is completed. Once the pipeline has been diverted, the land within the cemetery will be restored to the reasonable satisfaction of the owners of the Gardens of Peace Muslim Cemetery as required by article 36(6) of Part 5 of the draft DCO (APP-015). All of Cadent's works will lie underground with no infrastructure at the surface. Cadent requires an easement either side of its pipeline to protect the works from interference and to enable any future maintenance and replacement of the pipeline. Cadent has advised the trustees of the Gardens of Peace that works at or near the surface can be constructed, including access roads and laying of services across the pipeline. Impacts arising from Cadent's temporary works have been discussed with the trustees and mitigation</p>

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			<p>agreed, including the provision of access to the workshop and provision of a temporary hard surface to replace those car parking spaces temporarily lost. During the proposed six month pipeline construction period, the maintenance access to the workshops and soil storage area will be unavailable. A temporary soil storage area has been proposed near the main entrance. This entrance will also need to be used for access to the workshops.</p> <p>ii) Paragraphs 13.10.29 to 13.10.39 in the ES Chapter 13 (People and Communities) (APP-035) provide an assessment of the land take and amenity impacts of the Scheme on the Gardens of Peace during the construction and operation of the pipeline diversion.</p> <p>With regard to land take, although impacts from construction works will be temporary, they are expected to cause disruption and inconvenience to the burial site and are considered to be a minor adverse effect during construction reducing to neutral during operation.</p> <p>With regard to amenity, slight adverse and not significant effects are anticipated during construction of the Scheme, including the pipeline diversion, as there will be visual impacts. However, noise and air quality impacts are expected to be suitably mitigated through the measures set out within paragraph 13.9.2. Slight adverse and not</p>

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			<p>significant effects will remain during the operational phase of the Scheme due to visual impacts however, landscape planting will reduce these effects as set out in Table 9.13 (the Gardens of Peace are referred to as receptor 10, Residents of Oak Farm) in Chapter 9 (Landscape and Visual) of the ES (APP-031). Mitigation measures are outlined in paragraph 13.9.2 of Chapter 13 (People and Communities) (APP-035), the Outline CEMP (APP-096) and the REAC (APP-097). Production of a CEMP reflecting the mitigation measures set out in the REAC is secured in Requirement 4, of Schedule 2 of the draft DCO (APP-015).</p> <p>Once the works to install the gas main diversion are completed, the land would be restored to the reasonable satisfaction of the owner of the land under article 35 of the draft DCO (APP-015).</p>
GQ1.8	Outline Construction Environmental Management Plan (All Relevant Planning Authorities)	<p>i) Comment on the adequacy of the outline CEMP.</p> <p>ii) Comment on those plans listed in Paragraph 4.4.3 of the outline CEMP [APP096] which the Applicant has stated may or may not form part of the final CEMP to be submitted under Requirement 4 of the draft DCO [APP-015].</p>	N/A – as directed at all relevant planning authorities

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		<p>[N.B – The ExA has asked specific questions elsewhere in respect to an Arboricultural Method Statement, the Archaeological Control Plan, the Dust, Noise and Nuisance Management Plan, the Surface Water Management Plan (SWMP) and the General Ecology Plan. Parties may wish to reserve responses to those questions]</p>	
GQ1.9	Description of Works (Applicant)	<p>Section 2.4 of Chapter 2 of the ES [APP-026] is entitled 'scheme description'. While some of the Works are prescriptive as to what they would comprise, others are either very limited in detail or not explained at all. This is particularly the case for Works Nos. 11 to 32. Schedule 1 of the draft DCO [APP-015] does not provide these answers.</p> <p>The ExA wishes to have a greater understanding of the Works proposed in the draft DCO in respect of their need, what they would comprise, and an explanation as to why they are made necessary by the Proposed Development.</p>	<p>As indicated in section 2.4.3 of Chapter 2 of the ES (APP-026), the 'key works elements' are outlined rather than a detailed description of each component of the Scheme. This description should be read in conjunction with other submitted application documents, such as Schedule 1 of the draft DCO (APP-015), Works Plans (APP-006), Scheme Layout Plans (APP-010), Streets, Rights of Way and Access Plans (APP-007) and Engineering Drawings and Sections (APP-011). This is commensurate with the approach taken for other DCO schemes submitted by Highways England and an addendum to Chapter 2 of the ES is not considered to be expedient.</p> <p>However, for the sake of clarity, Work nos. 11 to 32 are required for the following reasons:</p>

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1. General				
		Provide an addendum report to Chapter 2 of the ES in which this is set out in more detail.	Work no.	Need:
			11 – New cantilever gantry or similar signage	To comply with DMRB and to announce the new loop road
			12 – Improvements to the existing M25 motorway northbound off-slip	To enable traffic using on the roundabout to head northwards.
			13 to 16 – alterations or provision of new accesses/egresses	Either to facilitate the ongoing maintenance of proposed infrastructure (e.g. drainage, CCTV) or to maintain landowners/statutory undertakers access to their land/assets
			17 and 18 – Deposit of surplus construction materials	To facilitate the reuse of materials on site.

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			19A to 21B – Drainage works	To ensure that the run-off discharge rates are not increased by the road infrastructure and remain at current greenfield rates.
			23A to 23D – Realignment of watercourses	There are two watercourses (Ingrebourne River and Weald Brook) within the Scheme boundary, which would be crossed by the proposed highway works. To facilitate the scheme, some sections are to be straightened up (e.g. Work No. 23 A). Therefore, other works introduce a more natural sinuous shape (e.g. Work No. 23A, Work No. 23B) to mitigate the effects of this re-alignment, and preserve the fluvial environment, ecology and habitats. Work No. 23D is required to compensate for the introduction of the proposed

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				grove culvert extension (Work No. 2).
			24A to 28 – Environmental mitigation and compensation	Mitigation measures to provide new flood compensation areas, an ecological mitigation area (Work No. 26) and new ponds for Great Crested Newts (Work Nos 27 and 28).
			29 – 30 – Utility diversions	To avoid conflict with their assets and to facilitate the construction of the scheme, statutory undertakers have requested these diversion works (Work No. 29).
			31 – Ducting and cabling – existing cabinet	New ducting will be required for to link the new gantry to a telecommunication cabinet.
			32 – Accommodation works	To provide a replacement hole 2 to Maylands Golf Course.

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GQ1.10	Work No. 29 (Applicant)	i) Explain how the signing off of Work No.29 is secured in the draft DCO [APP015]. ii) Comment on TfL's RR [RR-028] in which it requests to be consulted on the detailed design works.	i) Highways England is unclear of the meaning of the reference to the 'signing off' of Work No. 29 (diversion of high pressure gas pipeline) in the question. There is no process in the Requirements for the detailed design to be approved by the Secretary of State and nor would such a process be usual or appropriate. The construction of Work No. 29 will be subject to the approval of Cadent pursuant to its own standards and requirements. ii) See Highways England's response to RR-028 (REP1-002). With regards to detailed design, Highways England agrees in principle that TfL should be consulted on matters of detailed design in so far as these relate to assets that are to be inherited by TfL or which will interface with TfL's assets or functions. Highways England does not agree that the authorised development should not commence until TfL has given its approval.
GQ1.11	View on Application (Forestry Commission)	In its response to Procedural Deadline A [PDA-001], the Applicant provides an email dated 27 November 2020 in which it is stated that the Forestry Commission have no outstanding issues and has that there is no necessity to undertake a Statement of Common Ground (SoCG) with the Applicant.	N/A – as directed to the Forestry Commission.

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		i) Confirm this in writing. ii) Set out whether Crown consent is to be given for the CA Freehold of land identified in the Land plans [APP-005].	
GQ1.12	Climate Effects (Applicant)	<p>Table 14.13 of Chapter 14 of the ES [APP-036] states that carbon emission from the Proposed Development would increase by 358 tonnes of carbon dioxide emissions (tCO₂e) to 2022 against a 'do something' scenario and by 4,877 tCO₂e to 2037. Paragraph 14.1.10.9 states these increases would be minor.</p> <p>i) Explain whether modelling has been undertaken to compare the Proposed Development against a 'do nothing' scenario.</p> <p>ii) Explain why the modelling was limited only to 2037 and not beyond.</p> <p>iii) Tables 14.9 and 14.10 set out the construction and operation emissions mitigation measures. Set out precisely where these are explained in further detail, the effect they would have in reducing climate effects and how they are secured in the draft DCO [APP-015].</p>	<p>i) Modelling has been undertaken in line with the methodology set out in DMRB LA114 (para 3.10), which describes the baseline as a Do-Minimum rather than Do-Nothing scenario. Table 14.13 in ES Chapter 14 (Climate) (APP-036) shows the effect of the Scheme by comparing emissions in the Do-Something scenario with the Do-Minimum for the opening year and design year.</p> <p>ii) DMRB HA207/07 (para 3.7) states that the scenarios for assessment are the opening year and design year, which is 2037 in the case of M25 junction 28. It should be noted that as emissions factor data for different vehicle types (as provided in DEFRA's Emissions Factors Toolkit (EFT)) are only available to 2030, there is a great deal of uncertainty in modelling emissions for future years beyond this forecast year.</p> <p>iii) Mitigation measures are included in the REAC (APP-097), Table 1.1, Tables 1.2 and 1.3 (commitments C1.1-1.3, page 35 and C2.1-2.4, pages 56 and 57). Measures aim to minimise emissions by reducing the volumes of materials</p>

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		<p>iv) Paragraph 14.2.13.1 explains that monitoring and evaluation of the Proposed Development's 'major assets' resilience to climate change be part of regular asset inspections to inform climate change adaptation decision-making in the future. Explain how this is secured in the draft DCO.</p>	<p>used and waste generated, the distance construction materials are transported, the volumes of wastes required to be removed off site and the associated travel journeys made by workers, as well as reducing the amount of energy and water consumed by the construction activities, as well as the introduction of low-carbon alternative materials and plant to be considered and confirmed during the detail design and construction stages.</p> <p>The climate effects mitigation measures outlined in the REAC are secured by requirement 4 of Schedule 2 of the draft DCO (APP-015).</p> <p>iv) Mitigation measures regarding regular asset inspections are included in the REAC (APP-097), Table 1.4 (commitments C3.1 and C3.2) which will need to be incorporated into the Handover Environmental Management Plan (HEMP) once the Scheme is completed. The HEMP will be prepared by the Principal Contractor at the completion of the construction works and include the inspection regime of the drainage infrastructure and clearance of sediment traps as outlined in the REAC (APP-097, Table 1.4 (commitments C3.1 and C3.2)). In addition to this the monitoring and evaluation the Scheme's major assets resilience to climate change shall be part of regular asset inspections to inform climate change adaptation decision-making in the future. The</p>

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			climate mitigation measures are outlined in the REAC and secured by Requirement 4, in Schedule 2 of the draft DCO (APP-015).
GQ1.13	Climate Effects (Applicant)	<p>i) Confirm that both the construction stage and opening year will still fall within the period of the third Carbon Budget[1] (2018 to 2022)</p> <p>ii) If not, confirm what assessment has been carried out for the Proposed Development against the fourth Carbon Budget [2] (2023 to 2027).</p> <p>iii) Explain how the Proposed Development contributes to, or offsets, the target carbon dioxide emissions (CO₂e) figure within the fourth Carbon Budget.</p> <p>[1] Third carbon budget as defined in The Climate Change Act 2008 (Credit Limit) Order 2016: https://www.legislation.gov.uk/ukxi/2016/786/introduction/made</p> <p>[2] Fourth Carbon Budget as defined in The Carbon Budget Order 2011:</p>	<p>i) At the time that the assessment was carried out, the construction period and opening year fell within the third carbon budget period. Construction is now expected to commence in spring 2022 and the opening year planned for 2024 which is in the fourth carbon budget period.</p> <p>The third carbon budget period is the timeframe which has been assessed in the traffic modelling and vehicle emissions modelling undertaken in line with DMRB HA207/07. The methodology in DMRB LA114 requires the same temporal scope to be used (i.e. for the opening and design years). Traffic modelling and air quality assessment has not been carried out for opening year in 2024, meaning that a quantitative assessment of operational emissions in the context of the fourth carbon budget is not possible. However, as construction and opening year emissions contributed only 0.0015% to the third carbon budget, the contribution would be of a similarly small order of magnitude for the fourth budget. The conclusions of the assessment, as set out in Chapter 14 (Climate) of the ES (APP-036), are that the climate effects of the Scheme are not significant. These conclusions are in line with the Government policy</p>

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		https://www.legislation.gov.uk/ukxi/2011/1603/made	<p>set out in the NPS NN and would not change if construction and opening occurred in the fourth, rather than the third, budget period.</p> <p>ii) See response above.</p> <p>iii) See response above.</p>
GQ1.14	Climate Effects (Applicant)	<p>Explain whether the phasing out of sales of new petrol and diesel vehicles by 2030 to accelerate the transition to electric vehicles would affect the assessment set out in Chapter 14 of the ES [APP-036].</p>	<p>The effect of phasing out new petrol and diesel vehicles by 2030 would not have a material impact on the conclusions of the assessment of the CO₂ emissions from vehicles presented in the ES, although it is likely to reduce emissions figures compared to those presented in the ES.</p> <p>The assessment in Chapter 14 (Climate) of the ES (APP-036) uses information on operational CO₂ emissions from vehicles taken from Chapter 5 of the ES (Air quality) (APP-027). The operational vehicle emissions are calculated based on the traffic data available from the Scheme traffic model and emissions factors from DEFRA's Emissions Factors Toolkit (EFT). The EFT provides emissions factors for the years up to 2030 and the data for future years are based on the DfT's fleet projections. The latter includes information on the composition of the fleet and the expected uptake of lower emitting vehicles, informed by vehicle licensing statistics.</p>

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			<p>The fleet projections in the version of the EFT used for the air quality assessment (v8, released in 2017, documented at paragraph 5.5.15 of Chapter 5 (Air quality) of the ES (APP-027)) were based on DfT's projections from 2015. At this time, the UK Government had not committed to a future ban on, and phasing out of, sales of new petrol and diesel vehicles, and the DEFRA emissions factors used in the assessment do not reflect the expected faster uptake of electric or hybrid vehicles in the future.</p> <p>It is likely, therefore, that the calculated total CO₂ emissions for future years both with and without the Scheme have been overestimated; with a greater overestimate for the 2037 design year than for the 2022 opening year. The difference in total CO₂ emissions with and without the Scheme in future years may also have been overestimated, although the change with the Scheme in place is expected to be less than +0.1% in the opening year, and +0.5% in the design year.</p> <p>It is considered that the effect of the Scheme on climate would still be insignificant in light of the phasing out of new petrol and diesel vehicles, as this conclusion is drawn from Government policy in the NPS NN.</p>

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GQ1.15	Lower Thames Crossing (Applicant)	<p>The Lower Thames Crossing Nationally Significant Infrastructure Project (LTC) was submitted for Acceptance on 23 October 2020 and subsequently withdrawn on 20 November 2020. At the time of writing, it is the ExA's understanding that the application is to be resubmitted for Acceptance in early 2021. The ExA will need to be certain that the Proposed Development was not designed to meet potential traffic increases from a scheme which does not yet benefit from a DCO.</p> <p>i) Provide a response and explain whether the LTC scheme has had any bearing on the scope and assessment in the ES [APP-026 to APP-088].</p> <p>ii) Provide a statement confirming, if it is the case, that should the Secretary of State (SoS) grant the Order, the Proposed Development would proceed irrespective of whether LTC is to be resubmitted and / or consent was withheld for it</p>	<p>i) See Highways England's response to the London Borough of Havering's RR-17-11 (REP1-002) submitted at Deadline 1.</p> <p>An assessment of cumulative environmental effects between the M25 junction 28 scheme and other development, including Lower Thames Crossing (LTC), has been undertaken in Chapter 15 (Assessment of Cumulative Effects) of the ES (APP-037). The assessment follows the methodology outlined in the Planning Inspectorate's Advice Note 17. LTC was identified as a project which had the potential to result in cumulative environmental effects in conjunction with the Scheme.</p> <p>The cumulative effects assessment was based on the conclusions of the individual preceding topic chapters of the ES with regard to the Scheme (APP-026 to APP-036), and the latest environmental information available with regard to the LTC scheme, as of the 28 February 2020 (the cumulative effects assessment cut-off date). As the LTC DCO application has yet to be accepted by the Planning Inspectorate, the assessment was primarily based on the publicly available documents, which were the Preliminary Environmental Information Report (PEIR), and the materials</p>

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			<p>forming the LTC's January 2020 supplementary consultation.</p> <p>ii) Highways England can confirm that the M25 junction 28 Scheme will proceed irrespective of whether LTC is to be resubmitted and / or consent is withheld for it.</p>
GQ1.16	Notification of Change Request (Applicant)	<p>In its response to Procedural Deadline A [PDA-001], the Applicant stated that it was intending to make a Change Request to:</p> <ul style="list-style-type: none"> - Remove Work No.17. - Replace Work No.18 from the storage of materials to an environmental bund. - Undertake works to Maylands Golf Course. - Amend the lateral limits of deviation for the high-pressure gas pipeline. <p>The ExA will expect the change request to be supported by draft Land plans, Work plans and other plans in advance of the ExA's decision as to whether or not to accept such changes. The ExA will further expect a detailed explanation of the changes and a statement as to whether they would have any bearing on the scope and assessment in the ES [APP-026 to APP-088].</p>	<p>Highways England can confirm its intention to provide amended land plans, works plans and other required plans at Deadline 3a relevant to proposed changes 1-4. Highways England can also confirm its intention to provide a report detailing the impacts of those changes including an assessment of the likely environmental effects of each change in comparison to those already reported in the ES (APP-026 to APP-088).</p>

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		Confirm a statement to this effect would be forthcoming.	

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AQ1.1	Baseline Assessment (Applicant)	<p>Figure 5.2 of the Air Quality Figures accompanying Chapter 5 of the ES [APP-040] presents receptors sensitive to construction dust and highlights the ancient woodland surrounding the site. However, some of the highlighted ancient woodlands are outside of the construction dust study area so it is unclear if these are included as receptors or not. Furthermore, Figure 5.2 does not illustrate other ecological receptors, such as Local Nature Reserves (LNR) and Local Wildlife Sites (LWS) that are within the study area. These receptors are shown on Figure 7.3 [APP-042].</p> <p>In addition to information provided within Chapter 5 of the ES [APP-027], clarify where receptors sensitive to construction dust and other ecological receptors that have been assessed are with respect to the Proposed Development, provide a figure that contains the following:</p> <ul style="list-style-type: none"> - The Order limits. - The construction and dust air quality assessment study areas. 	<p>The air quality assessment was undertaken in accordance with the guidance set out in the Design Manual for Roads and Bridges (DMRB) that was published at the time of assessment (HA 207/07), as stated at paragraph 5.4.1 of Chapter 5 (Air quality) of the ES (APP-027). The study area for the construction dust assessment is set out in line with paragraph 3.45 of HA 207/07 (and paragraph 5.4.2, APP-027), which requires the locations of sensitive receptors to be identified within 200 m of a construction site. The locations of ancient woodland outside of the study area for construction dust, as shown in Figure 5.2, are not therefore included as sensitive receptors for the purposes of the construction dust assessment.</p> <p>Recent updates have been made to the DMRB guidance since the assessment for the environmental assessment was undertaken. The updated DMRB guidance for air quality (LA105) requires a broader range of ecological receptors to be included in an assessment including local nature reserves, local wildlife sites, nature improvement areas, ancient woodland and veteran trees (paragraph 2.25, LA105). Figure 5.2 has been amended to show the Order limits; the construction dust study area; sensitive human receptors; and sensitive ecological receptors including those additional receptors listed above and is provided as Figure 5.9 in the updated Chapter 5 Environmental Statement (ES) Figures document (TR010029/APP/6.2(2)) at Deadline 2.</p>

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		- Relevant sensitive human and ecological receptors.	
AQ1.2	Baseline Assessment (Applicant)	<p>Chapter 5 of the ES [APP-027] makes no reference to consultation with Statutory Consultees, stakeholders or IPs in regard to the baseline data. However, paragraphs 5.7.25 and 5.7.26 state that some receptors (listed in paragraph 5.7.25) have been incorporated into the assessment at the request of stakeholders and that no additional ecological sites were requested for assessment by Local Authorities.</p> <p>Confirm whether the baseline data has been agreed on with the relevant Statutory Consultees.</p>	<p>The baseline data were discussed with the relevant Statutory Consultees. Highways England requested the baseline data from London Borough of Havering and Brentwood Borough Council at the meeting on 11 April 2019 as detailed in the SoCGs with London Borough of Havering (REP1-004) and Brentwood Borough Council (REP1-005).</p> <p>Baseline air quality data for use in the air quality assessment were supplied from both London Borough of Havering and Brentwood Borough Council and agreed as outlined in sections 4.1.1. of the respective SoCGs (REP1-004 and REP1-005).</p>
AQ1.3	Methodology (Applicant)	<p>The Air Quality assessment [APP-027] and [APP-052] is based on the Design Manual for Roads and Bridges (DMRB) HA 207/07 guidance and "associated Interim Advice Notes"; Interim Advice Note (IAN) 170/12 V3 is stated, but it is unclear whether other IANs have been used.</p>	<p>Paragraph 5.5.1 of Chapter 5 (Air quality) of the ES (APP-027) states that associated Interim Advice Notes (IANs) are used in the air quality assessment. The IANs are referenced within section 5.5 of the ES (APP-027) at paragraphs 5.5.15, 5.5.23, 5.5.25, 5.5.28 and 5.5.29. However, for ease of reference the IANs used in the air quality assessment are listed in full below:</p>

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		State what other Interim Advice Notes have been used as guidance for the Air Quality assessment, besides IAN 170/12.	<ul style="list-style-type: none"> • IAN 170/12 v3 - Updated air quality advice on the assessment of future NOx and NO2 projections for users of DMRB Volume 11, Section 3, Part 1 Air Quality (HA207/07); • IAN 174/13 - Updated advice for evaluating significant local air quality effects for users of DMRB Volume 11, Section 3, Part 1 Air Quality (HA207/07); • IAN 175/13 - Updated advice on risk assessment related to compliance with the EU Directive on ambient air quality and on the production of Scheme Air Quality Action Plans for users of DMRB Volume 11, Section 3, Part 1 Air Quality (HA207/07); and • IAN 185/15 - Updated traffic, air quality and noise advice on the assessment of link speeds and generation of traffic data into speed-bands for users of DMRB Volume 11, Section 3, Part 1 Air Quality (HA207/07) and Volume 11, Section 3, Part 7 Noise (HD213/11).
AQ1.4	Methodology (Applicant)	Explain whether the assessment methodology for air quality is based upon the most up to-date guidance contained within the DMRB, and what bearing it would have on the ES if it were not	<p>Highways England confirms that the assessment methodology for air quality is based upon the most up-to-date guidance contained within the DMRB at the time of assessment.</p> <p>As stated in paragraph 5.5.1 of Chapter 5 (Air quality) of the ES (APP-027), the air quality assessment was undertaken following the guidance given in the DMRB HA 207/07. This was the most</p>

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			<p>up to date guidance at the time of assessment. Since the air quality assessment was undertaken, the DMRB guidance has been updated, and guidance document LA105 issued in November 2019 now replaces HA 207/07.</p> <p>A sensitivity test was undertaken to consider whether there would be any change to the effects on air quality outlined in the ES as a result of the updates in guidance (APP-050). The results for air quality are presented in section 3.2 and summarised in Table 3.1 of ES Appendix 4.1 (APP-050). This test concluded that for human health receptors there would be no change to the effects presented in the ES. A further assessment was undertaken for ecological receptors which were not previously included in the assessment and the test concluded that overall there would not be a significant adverse effect (Table 3.1, APP-050).</p>
AQ1.5	Methodology (Applicant)	<p>Section 5.1 of the Air Quality Appendix [APP-052], concludes that no significant particulates (PM2.5) effects are likely based on the consideration of a monitoring station in Rainham (located approximately 10km from the Proposed Development) and therefore no assessment of PM2.5 has been conducted.</p> <p>Clarify why it is considered that the monitoring</p>	<p>The Rainham roadside continuous monitoring station is the only monitoring station within both the London Borough of Havering and Brentwood Borough Council areas which measures PM_{2.5} concentrations, and is therefore the closest monitoring station to the Scheme which can be used to give an indication of PM_{2.5} concentrations in the study area. Annual mean concentrations from this monitoring station, taken between 2014 and 2018, ranged from 11 to 12 µg/m³. This is comfortably below the air quality objective of 25 µg/m³. Away from the road, PM_{2.5}</p>

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		<p>station at Rainham is representative of all of the receptors within the air quality study area, and confirm why it is considered that this is an adequate reason for not assessing the impact of increased PM_{2.5} on receptors within the air quality study area.</p>	<p>concentrations are likely to have been lower. The measured concentrations are not dissimilar from those measured at other monitoring sites in the national monitoring network, which typically vary between 5 and 15 µg/m³ at urban areas (page 22, Air Pollution in the UK 2019, Defra, September 2020).</p> <p>The reasons for not assessing the impact of increased PM_{2.5} on receptors within the air quality study area are provided in paragraph 5.1.2 in Appendix 5.1 (APP-052). This reasoning is further supported by the results of the assessment of PM₁₀ concentrations. Table 5.12 of Appendix 5.1 (APP-052) shows the largest increase in annual mean PM₁₀ concentrations (of which PM_{2.5} concentrations are a subset) at any receptor with the Scheme in the opening year is 0.2 µg/m³, an effect which is termed imperceptible. If the change in PM₁₀ concentrations is assumed to apply equally to the change in PM_{2.5} concentrations, then there would be no impact on achieving the air quality objective for PM_{2.5} as a result of the Scheme.</p>
AQ1.6	Methodology (Applicant)	<p>Air quality modelling has been undertaken based on IAN 170/12 v3 and is detailed in Appendix 5.1 [APP-052]. The Applicant has not explained why the monitoring stations shown on Figure 5.1 [APP-040], especially those within the Brentwood Air Quality Management Area (AQMA) which are exceeding the nitrogen dioxide (NO₂) 40ug/m³</p>	<p>As stated in paragraph 5.5.1 of Chapter 5 of the ES (APP-027) the air quality assessment was undertaken in accordance with the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 1 HA 207/07 Air Quality and the relevant IANs including IAN 170/12 v3 which provided advice on future projections of NO_x and NO₂ rather than on receptor selection.</p>

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		<p>(micrograms per cubic metre) limit have not been modelled for the 2022 operation year.</p> <p>Explain why the air quality monitoring stations shown on Figure 5.1 have not been included within the air quality model for the operation year of 2022, considering these receptors are within the Havering and Brentwood AQMA's.</p>	<p>Monitoring sites, as shown on Figure 5.1 (APP-040), are not defined as a sensitive receptor for future year modelling. Sensitive receptors for the purposes of air quality assessment are given in paragraph 5.7.23 of Chapter 5 (Air quality) of the ES (APP-027), and include housing, schools and hospitals for the comparison with human health air quality criteria.</p> <p>Paragraph 3.36 of HA 207/07 states model results must be compared with measured concentrations and adjusted as necessary. For this reason, the monitoring sites within the air quality study area have been included in the assessment of the base year, rather than the opening year. The results at these sites are presented in section 5.5 of the Air Quality Appendix 5.1 (APP-052) in Tables 5.4, 5.5 and 5.7.</p>
AQ1.7	Methodology (Applicant)	<p>Paragraph 5.7.25 of Chapter 5 of the ES [APP-027] states that Maylands Golf Club will be included as a receptor, and Maylands Golf Club is stated to be receptor R79 in Table 5.1 of the Air Quality Appendix [APP-052]. However, R79 does not appear on Figure 5.8 [APP-040]. Moreover, the coordinates stated for R79 appear to be within the Order limits of the Proposed Development, and therefore is unlikely to be an area of use by the golf club once construction</p>	<p>As noted in the response to AQ1.8 below, the results at receptors R47 (Holiday Inn hotel, Brook Street) and R79 (Maylands Golf Club) were compared with the short-term air quality objectives for NO₂ or PM₁₀ rather than the long-term (annual mean) objectives. It is for this reason they are not depicted on Figure 5.8 in Chapter 5 (APP-040), which shows the receptors and the changes in annual mean NO₂ concentrations. A revised figure to include receptors R47 and R79 is provided as Figure 5.10 in the updated Chapter 5 ES Figures (TR10029/APP/6.2(2)) submitted at Deadline 2.</p>

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		<p>has commenced. It is also noted that receptor R47 is not depicted on Figure 5.8.</p> <p>Explain the anomalies and provide the exact location of R79 and R47 on a figure which also includes the Proposed Development's Order limits.</p>	<p>The receptor placement for R79 was on the edge of the Order limits at the time of assessment. However, following a revision to the boundary of the Order limits since the air quality assessment was undertaken this receptor is now located approximately 36 m within the Order limits. The results at this receptor are still considered to be representative of the effect on air quality at the Maylands Golf Club but are likely to be conservative given the proximity of the receptor to the Scheme.</p>
AQ1.8	Methodology (Applicant)	<p>Table 5.8 of the Air Quality Appendix [APP-052] states that R47 and R79 are selected for comparison with the 1-hour mean NO₂ air quality objective, and / or 24-hour mean PM₁₀ UK National Air Quality Strategy (AQS) objective.</p> <p>Explain why these two receptors were chosen over other receptors</p>	<p>Table 5.1 of the Air Quality Appendix 5.1 (APP-052) provides information on the receptors included in the air quality assessment. As noted in the table, receptor R47 is identified as the Holiday Inn hotel on Brook Street, while receptor R79 is the Maylands Golf Club. As such, the results at both of these receptors should not be compared with the annual mean AQS objectives for NO₂ or PM₁₀, given that people would only be present at these locations for a few hours or days, a much shorter time period than a year. Consequently, receptors R47 and R79 should only be compared with the short-term objectives. The results at all the other receptors included in the assessment should be compared with both the long-term (annual mean) and short-term (1-hour mean or 24-hour mean) objectives.</p>

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AQ1.9	Methodology (Applicant)	<p>The construction air quality assessment in Chapter 5 of the ES [APP-027] omits a methodology detailing how the magnitude of impact and the significance of effect are categorised.</p> <p>Explain in detail how the assessment of construction impacts, with regards to the emission of dust to nearby receptors, has been undertaken in terms of categorising the magnitude of impacts and significance of effect.</p>	<p>As stated in paragraph 5.5.4 of Chapter 5 (Air quality) of the ES (APP-027) the assessment for effects on air quality during construction was undertaken in accordance with the DMRB. As stated in paragraph 3.45 of the DMRB HA207/07 "<i>the locations of any sensitive receptors within 200 m of a construction site should be clearly identified, such as housing, schools, hospitals or designated species or habitats within a Designated Site, so that mitigation measures to reduce dust emissions can be rigorously applied</i>". The assessment was therefore carried out by identifying the sensitive receptors listed above within the 200 m study area for construction dust. There is no requirement in the DMRB to categorise the magnitude of impacts and significance of effect, as the effects of any dust generated during construction should be mitigated, with appropriate mitigation measures as outlined in Table 1.3 ref AQ2.1 in the Register of Environmental Actions and Commitments (REAC) (APP-097), which will be incorporated into the CEMP which is secured by Requirement 4 in the draft DCO (APP-015).</p>
AQ1.10	Assessment of Effects (Applicant)	<p>Provide a dust assessment for each of the construction sequences. For example, the quantity / volume of dust to be produced by the early works, site mobilisation, utilities diversions and construction phases 1 to 5 as described in</p>	<p>The dust assessment for the Scheme has been carried out in accordance with the DMRB as explained at paragraph 5.5.4 of the ES (APP-027). The DMRB requires a qualitative rather than a quantitative assessment, as does the Institute of Air Quality Management guidance (referred to in AQ.1.18) which uses a risk based approach. A qualitative dust assessment is standard</p>

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		<p>paragraphs 2.6.15 to 2.6.24 of Chapter 2 of the ES [APP-026].</p>	<p>practice and was carried out as described in the response to AQ1.9. The potential impacts of dust emissions are detailed at section 5.8 of the ES. Once appropriate mitigation measures are applied, as described at paragraph 5.9.1 of the ES, there should not be any residual significant adverse effects as stated at paragraph 5.11.1 of the ES.</p>
AQ1.11	Assessment of Effects (Applicant)	<p>A methodology for determining the impact magnitude and significance of effect from dust arisings on human and ecological receptors is omitted from the assessment. Furthermore, the conclusion in paragraph 5.10.1 of Chapter 5 of the ES [APP-027] states that, "Any adverse air quality effects due to construction will be temporary and can be suitably minimised by the application of standard and appropriate mitigation measures. On this basis, there is unlikely to be a significant effect on air quality due to the construction of the Scheme.</p> <p>However, no description of the magnitude of impact or likely significant effect (LSE) prior to the implementation of mitigation measures is stated. Additionally, for receptors R6, R71, R72, R73 and R74, Figure 5.8 [APP-040] located in the middle of the new junction layout, and which</p>	<p>As stated in paragraph 5.5.4 of Chapter 5 of the ES (APP-027) the assessment for effects on air quality during construction was undertaken in accordance with the DMRB. The methodology requires a qualitative assessment to be undertaken taking into account the nature of the construction activity and the location of sensitive receptors. There is no requirement to categorise the magnitude of impacts and significance of effect prior to implementation of mitigation. The effects of any dust generated during construction should be mitigated, as described at paragraph 5.9.1 of Chapter 5 of the ES, with appropriate mitigation measures incorporated into the CEMP.</p> <p>Even in the Institute of Air Quality Management (IAQM) guidance document referred to in written question AQ1.18, it states that "<i>IAQM recommends that significance is only assigned to the effect after considering the construction activity with mitigation. It is, therefore, important that the mitigation measures are defined in a form suitable for implementation by way of a planning condition or legal obligation...and are included</i></p>

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		<p>could be subject to increased dust emissions throughout the two-year construction phase, it is unclear how the conclusion of no LSEs has been reached for these receptors.</p> <p>Furthermore, an increase in dust emissions has potential to also increase PM10 levels, but this has not been factored into the assessment.</p> <p>Justify the conclusion of no LSEs for receptors R6, R71, R72, R73 and R74, Figure 5.8 [APP-040] located in the middle of the new junction layout, with regard to potentially being subject to dust emission and consequently a potential increase in PM10 levels for the entire duration of the construction phase.</p>	<p><i>in a Dust Management Plan (DMP) ...or Construction Environmental Management Plan.</i>" (9.1, REF ExA[3]).</p> <p>The CEMP is secured through Requirement 4 of the draft DCO (APP-015). Emissions of dust can potentially increase PM₁₀ concentrations, however measured concentrations at monitoring stations near to the Scheme have shown that there are no exceedances of air quality objectives (paragraph 5.7.20 of the ES, APP-027). In the same way as for dust emissions, with the application of appropriate mitigation measures, emissions of PM₁₀ would be minimised, with no significant adverse effect at any receptor, including those located near to the junction (receptors R6, R71, R72, R73 and R74).</p>
AQ1.12	Assessment of Effects (Applicant)	<p>The ExA notes the air quality monitoring data for the year 2015 at monitoring sites CP7, HE01 and HE22 are 46.9, 58.0 and 45.4 NO₂ ug/m³ respectively, as presented in Tables 5.6 and 5.7 of Chapter 5 of the ES [APP-027]. It is also noted that the closest human receptors R26 and R69, which appear to be located in close proximity to CP7, HE01 and HE22, have a modelled 2015 NO₂ baseline data stated to be 37.9 and 36.2</p>	<p>Monitoring sites CP7 and HE22 are located in close proximity to junction 28 (Figure 5.1 APP-040), and are thus not representative of concentrations at receptors R29 (which we believe is the receptor in question rather than R26 as quoted) and R69 on the A1023 Brook Street, which are located approximately 150 m away from these monitoring sites, and away from the junction. Although monitoring site HE01 is located in closer proximity to receptors R29 and R69, there is an additional local authority monitoring site BRW6 which can be</p>

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		<p>ug/m3 respectively.</p> <p>Explain why the modelled NO2 values for 2015 differ by nearly 10ug/m3 from the monitored NO2 data at the same location.</p>	<p>considered more representative of these two receptors, as it is not only located at a distance of only 0.9 m from the façade of a property on Brook Street (Table A.1, 2019 Air Quality Annual Status Report, Brentwood Borough Council), but also the monitoring site has been at this location for a full annual period over many years. The measured NO₂ concentration at BRW6 in the 2015 base year is 38.1 µg/m³ (Table 5.12, APP-027), which closely matches the 2015 modelled concentrations of 37.9 µg/m³ and 36.2 µg/m³ at receptors R29 and R69 respectively (Table 5.10, APP-052).</p>
AQ1.13	Assessment of Effects (Applicant)	<p>Provide a response to the air quality concerns raised by the London Borough of Havering in its RR [RR-017], which notes that increase in traffic levels around the Gallows Corner junction is highly likely to lead to a deterioration in air quality within the local authority AQMA and which requests traffic modelling of Gallows Corner and the local road network.</p>	<p>Highways England has provided a response to each of the concerns, raised by London Borough of Havering, in turn within the response to RR-017, submitted at Deadline 1 (REP1-004).</p>
AQ1.14	Cumulative Impacts (Applicant)	<p>With regard to Figures 5.2 and 15.1 contained within the Air Quality Figures [APP-040] and Assessment of Cumulative Figures [APP-048] respectively, state which other developments in conjunction with the Proposed Development</p>	<p>As stated in paragraph 5.11.1 of Chapter 5 of the ES (APP-027), a number of developments were included in the cumulative dust assessment. These developments are detailed at Table 15.4 of Chapter 15 of the ES (APP-037) and include the proposed cycleway on Brook Street, Land east of Nags Head Lane,</p>

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		<p>have been included within the cumulative dust assessment, and provide a further figure(s) that identifies the receptors, human and ecological, that have potential to be affected by cumulative dust affects.</p>	<p>Gardens of Peace (formerly known as Land at Oak Farm), as well as various parcels of land marked for wind developments that could potentially affect receptors within the air quality study area for construction, if this takes place over the same period. As noted in Table 15.7 of Chapter 15 of the ES (APP-037), there is the potential that construction of these developments may overlap, however, with appropriate mitigation measures in place as detailed at paragraph 5.9.1 of Chapter 5 of the ES, any adverse effects resulting from construction dust would be minimised such that there would not be any significant residual effect on the receptors affected by these proposals.</p> <p>A figure has been prepared identifying the receptors that have the potential to be affected by cumulative dust effects. This is provided as Figure 5.11, in the updated Chapter 5 ES Figures document submitted at Deadline 2 (TR10029/APP/6.2(2)).</p>
AQ1.15	Cumulative Impacts (Applicant)	Provide an explanation of the cumulative construction dust impact assessment methodology	<p>The assessment for cumulative construction dust impacts has been undertaken by identifying developments which could potentially affect receptors within the construction dust study area for the Scheme, i.e. those receptors which are within both the construction dust study area for the Scheme, and within 200 m of the construction site for another development This is described in paragraph 5.11.1 of Chapter 5 of the ES (APP-027).</p>

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AQ1.16	Cumulative Impacts (Applicant)	<p>Paragraph 5.11.12 of Chapter 5 of the ES [APP-027] states “additional traffic from specific committed developments was taken into account within the traffic model” but no further information on the developments are provided. Furthermore, the traffic model forecasts developments (as shown in Figure 5-2 of the Transport Assessment [APP-098]) that are outside of the study area of the air quality assessments, and these developments differ from those stated in the Assessment of Cumulative Effect in Chapter 15 of the ES [APP-037] and Figure 15.1 [APP-048].</p> <p>Provide a list and a figure that depicts the location of the Proposed Development and the other developments that have been used in the traffic model and the local operational air quality cumulative assessment.</p>	<p>The traffic forecasting and modelling for the Scheme, on which the local operational air quality cumulative assessment is based, have been completed in accordance with Department for Transport (DfT) transport analysis guidance (TAG). The cumulative assessment includes proposed developments and schemes in the vicinity of the Scheme which are categorised as near certain or more than likely. The developments are listed in the uncertainty log that is contained in the Appendix to this document (TR010029/EXAM/9.27), Appendix A and shown on Figure 5-2 of the Transport Assessment Report (APP-098). The proposed developments and schemes included in the uncertainty log were agreed with the relevant Local Authorities prior to the traffic modelling for the Scheme being undertaken. Consequently, the local operational air quality cumulative assessment is consistent with the cumulative traffic modelling.</p> <p>The developments listed in the Assessment of Cumulative Effects in Table 15.4 of Chapter 15 of the ES (APP-037) and shown in Figure 15.1 (APP-048) include some additional developments that are not included in the agreed uncertainty log that was used for the traffic forecasting and modelling and the local operational air quality cumulative assessment for the Scheme. The reasoning behind using different developments in the Assessment of Cumulative Effect is described in paragraphs 15.4.2 and 15.4.3 of Chapter 15 of the ES. The list of</p>

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			<p>developments that are identified is based upon thresholds and spatial areas which take account the nature and location of the Scheme and the study areas for the individual environmental topics (outlined in Table 15.1 in Chapter 15). The list has been defined recognising that larger, more significant developments will have wider ranging environmental effects than smaller and more local developments.</p> <p>Paragraph 15.4.5 of Chapter 15 of the ES outlines that developments included in the traffic model are considered 'Regionally Significant projects' and only developments in the traffic model within 3 km of the DCO boundary are included in the Chapter 15 Assessment of Cumulative Effects. This is because the traffic model and local operational air quality cumulative assessment incorporates data from a much wider geographic scale where cumulative effects with the Scheme are unlikely to occur. 'Major' (1.5 km from the DCO boundary) and 'Minor' (within or adjacent to DCO boundary) developments are considered in the ES Assessment of Cumulative Effects and include the 'additional' developments that are not considered in the traffic model and the local operational air quality cumulative assessment.</p>

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AQ1.17	Cumulative Impacts (Applicant)	State how the Proposed Development in conjunction with the other developments depicted on Figure 15.1 of the Assessment of Cumulative Effects Figures [APP-048] may affect the local air quality with regards to the Havering and Brentwood AQMAs.	As stated in paragraph 5.11.2 of Chapter 5 (Air quality) of the ES (APP-027), additional traffic from specific committed developments was taken into account within the traffic modelling, meaning that the air quality assessment during operation already takes into consideration cumulative effects, including the effect on receptors within the London Borough of Havering and Brentwood Borough AQMAs.
AQ1.18	Mitigation and Monitoring (Applicant)	<p>State whether mitigation measures specific to demolition, earthworks, construction, and track out, such as those stated within the Institute of Air Quality Management: Guidance on the assessment of dust from demolition and construction[3] , will be utilised to minimise and mitigate dust arisings during the construction phase.</p> <p>[3] https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf</p>	<p>The dust assessment for the Scheme has been carried out in accordance with the DMRB as stated in paragraph 5.5.4 of Chapter 5 (Air quality) of the ES (APP-027), rather than guidance issued by the Institute of Air Quality Management (IAQM), as is a Highways England project.</p> <p>Nonetheless, details of appropriate mitigation measures to control dust during construction would be specified within contract documentation and incorporated into the Construction Environmental Management Plan (CEMP) in a similar procedure to that outlined in Step 3 'Site Specific Mitigation' of the IAQM guidance (ExA's ref [3]). The local authority will be consulted on the mitigation measures to be included in the CEMP, which is secured through Requirement 4, in Schedule 2 of the draft DCO (APP-015).</p>

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AQ1.19	Mitigation and Monitoring (Applicant)	<p>Paragraph 5.13.1 of Chapter 5 of the ES [APP-027] states that as the Proposed Development "is not expected to have any adverse significant effects on air quality, no monitoring is required".</p> <p>i) Considering the air quality construction assessment's conclusion of no significant effects is dependent on the successful implementation of mitigation measures; state whether the air quality construction mitigation measures will be monitored to ensure their successfulness.</p> <p>ii) If no monitoring of the mitigation measures is to take place, provide a robust reason as to why this is the case."</p>	<p>During construction, there may be a need for monitoring, as noted at paragraph 5.9.2 of the ES (APP-027). The methodology and locations for monitoring surveys would be discussed with the local planning authorities, as noted in Table 1.2 at row AQ1.1 of the Register for Environmental Actions and Commitments (REAC) (APP-097). The REAC will be secured through Requirement 4, in Schedule 2 of the draft DCO (APP-015).</p>

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BHR 1.1	General Ecology Plan (Applicant)	<p>Paragraph 4.4.3 of the outline CEMP [APP-096] indicates that an Environmental Control Plan (ECP) for General Ecology may or may not form part of the final CEMP to be submitted under Requirement 5 of the draft DCO [APP-015].</p> <p>Explain the circumstances in which, and the reasons why, this document would not form part of the final CEMP.</p>	<p>Highways England has updated Requirement 4 in Schedule 2 of the draft DCO (TR010029/APP/3.1(1)), as submitted at this Deadline 2, to include the list of Environmental Control Plans (ECPs) that must be included in the Construction Environmental Management Plan (CEMP) and this includes a requirement to prepare an Ecological Habitats and Species Plan.</p> <p>Highways England is also in the process of updating the Outline CEMP (APP-096), including amends to make it clear that an ECP for ecology (to cover protection of habitats and species) will form part of the final CEMP and this is the Ecological Habitats and Species Plan referred to in Requirement 4. Following this amendment, there will be no circumstances where an ECP for ecology does not form part of the final CEMP. The updated Outline CEMP will be submitted at Deadline 3a.</p>
BHR 1.2	Baseline Assessment – Great Crested Newts (Natural England)	<p>Ordnance Survey (OS) maps were used to identify all ponds within 250m of the Proposed Development for confirmation during field surveys, in order to establish if the land within and immediately surrounding the Proposed Development could be used as terrestrial habitat for great crested newts (GCNs). In Chapter 7 of the ES [APP-029], it states that GCNs typically use suitable terrestrial habitat up to 500m from a</p>	<p>Natural England was consulted on the findings of the Preliminary Environmental Information Report for the Scheme (which included results from initial ecological surveys) and reviewed the methodology and assessment within Chapter 7 (Biodiversity) of the ES (APP-029). The Statement of Common Ground between Highways England and Natural England submitted at Deadline 1 (REP1-011) indicates agreement with the methodology of surveys and assessment, including those for GCN, as detailed in Chapter 7 of the Environmental Statement (APP-029).</p>

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		<p>breeding pond, but they have followed research that notes a decrease in GCNs abundance beyond a distance of 250m from a breeding pond and because of the presence of the M25 and A12 corridors.</p> <p>Ponds were scoped out of further survey where no potential impacts were identified due to the distance between the pond and Proposed Development works.</p> <p>Confirm Natural England (NE) were consulted on these findings and that they were content with this approach.</p>	
BHR 1.3	Assessment of Effects (Applicant)	Set out the reversibility (e.g. reversible / irreversible), frequency and timing of impacts on ecological features resulting from the Proposed Development.	<p>A copy of Table 7.21: 'Summary of residual effects on biodiversity resources' taken from the biodiversity assessment, Chapter 7 of the Environmental Statement (ES) (APP-029) is provided in an Appendix to this response (TR010029/EXAM/9.27) under Appendix B.</p> <p>Reversibility has been added to the categorisation of each impact and any residual effects. Frequency and timing of impacts on ecological features resulting from the Scheme has been added only where this is relevant to the type of impact.</p>

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BHR 1.4	Assessment of Effects (Applicant)	<p>Air quality has been considered as part of the ecological assessment of effects in the Biodiversity chapter. It is assumed in the ES that impacts on designated sites due to changes in air quality are unlikely to extend more than 200 m from the Affected Road Network (ARN). Reference is made to the Air Quality Assessment, Chapter 5 [APP-027] for further information regarding the ARN.</p> <p>Air quality immediately adjacent to the new loop road or realigned slip roads may decrease and there may be impacts on existing and replacement habitats within close proximity to the new road but no cross referencing is made directly to the Air Quality assessment in Chapter 5 of the ES [APP-027] (paragraphs 7.8.18, 7.8.24 and 7.8.25)</p> <p>Confirm how the findings within the Air Quality assessment affect existing and replacement habitats in close proximity to the Proposed Development.</p>	<p>As noted, the air quality assessment of the Scheme is presented in Chapter 5 (Air quality) of the Environmental Statement (ES) (APP-027). The methodology and assessment criteria are in accordance with DMRB HA207/07 and the relevant IANs: IAN170/12, IAN174/13, IAN 175/13, which were the guidelines in place at the time the assessment was compiled. This methodology does not trigger any requirement for assessment of impacts to ecological receptors outside of the nature conservation sites listed at paragraph 3.13 of HA207/07, i.e. Special Areas of Conservation, Special Protection Areas, Sites of Special Scientific Interest and Ramsar sites. None of these types of site lie within the air quality study area. Therefore, Chapter 5 makes no detailed assessment of changes in air quality relating to retained or replaced habitats adjacent to the road and no cross referencing between Chapter 5 (Air quality) (APP-027) and Chapter 7 (Biodiversity) (APP-029) is made.</p> <p>The DMRB Sensitivity Test (APP-050), considers whether any of the recent updates to DMRB methodology (published after the assessment carried out for the ES) affect the outcome of those assessments. The updated DMRB air quality assessment guidance (LA 105) requires assessment of impacts of changes in air quality on a broader range of ecological receptors, including local nature reserves, local wildlife sites, nature improvement areas, ancient woodland and veteran trees</p>

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			<p>(paragraph 2.25, LA 105). With the exception of the commercial and residential premises at Grove Farm, the habitats retained or replaced around the new loop road form part of a non-statutory designated site, Ingrebourne Valley Site of Metropolitan Importance for Nature Conservation (SMI).</p> <p>Anticipated changes in air quality, and an assessment of the effects of these changes on habitats within Ingrebourne Valley SMI, veteran trees and ancient woodland within 200 m the affected road network, are set out in the DMRB Sensitivity Test at Appendix A.2 (APP-050). All the ecological receptors considered in the assessment in Appendix A.2 lie in proximity to existing road infrastructure and data shows that the nitrogen deposition rates at all the receptor points assessed exceeded the critical load in the base year due to background nitrogen deposition rates. For the majority of the receptor points assessed (including those for veteran trees and ancient woodland), nitrogen deposition rates are lower in the opening year than in the base year. The only receptor points to experience slightly higher rates than base is immediately adjacent to the southern section of the new loop, between the loop road and realigned slip road of the A12 road. These points all lie within Ingrebourne Valley SMI. These areas will be grassland habitats planted following construction. The assessment concludes that whilst there may be a slight adverse</p>

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			effect on these habitats, the localised area of habitat is a very small proportion of the whole SMI. Any slight changes to these grassland habitats as a result of changes in air quality (see DMRB Sensitivity Test (APP-050), Appendix A.2 for further information) would not affect the overall integrity of the SMI and no significant effect on the SMI is anticipated in relation to changes in air quality.
BHR 1.5	Assessment of Effects (Natural England)	<p>The Reptile Survey [APP-066] states that the survey did not cover the entire area covered by the Order limits because of access restrictions. However, it considers that the optimal habitats to be affected by the Proposed Development were assessed.</p> <p>Provide a response as to the accuracy and acceptability of this assessment.</p>	N/A – as directed at Natural England
BHR 1.6	Mitigation and Monitoring (Applicant)	<p>To mitigate the impact of the Proposed Development on the adjacent Maylands Golf Club, paragraph 7.8.60 of Chapter 7 of the ES [APP-029] states that “it is necessary to redesign a section of the course in proximity to pond P2, including a new green and fairway created south (down slope) of P2. This would be created downslope to avoid any potential for fertiliser to</p>	<p>Accommodation works to provide replacement facilities for Maylands Golf Course are listed as Work No. 32 in the draft DCO (APP-015).</p> <p>A commitment to carry out these works as part of the construction of the Scheme will be added to the Register of Environmental Actions and Commitments (REAC) (APP-097) under the People and Communities section.</p>

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		<p>enter P2. The design should include the creation of rough grassland/scrub habitat on existing green and fairway areas that will become redundant to result in no net loss of foraging and sheltering opportunities for great crested newt in connection with the golf course mitigation.”</p> <p>Confirm where this work is secured within the draft DCO and which work number the mitigations works falls within.</p>	<p>Mitigation works required for great crested newts are already detailed in the REAC in Table 1.1, page 10 (APP-097).</p> <p>The commitments in the REAC are secured through Requirement 4(2), in Schedule 2 of the draft DCO (APP-015).</p>
BHR 1.7	Mitigation and Monitoring (Applicant)	<p>The Proposed Development includes lighting along the loop road and crosses Weald Brook twice. Paragraph 7.8.74 of Chapter 7 of the ES [APP-029] states that these features could affect bat foraging routes and access to foraging habitat within the loop road. The ES does not refer to a lighting strategy and the Proposed Development's effects of lighting on biodiversity.</p> <p>Explain what assessment has been made with respect to the impact of lighting on bat foraging routes and habitat and any mitigation measures that might be considered necessary.</p>	<p>Bat foraging and commuting routes were identified through site survey work set out in Chapter 7, biodiversity assessment (APP-029), paragraphs 7.7.105 to 7.7.112. The potential impacts of the Scheme on these bat foraging and commuting routes are identified in paragraphs 7.8.74 and 7.8.75 (APP-029). The creation of new structures (the loop road) and inclusion of lighting would alter the way bats use the current landscape and could cause bats to permanently avoid areas close to the new loop road. The impacts of lighting were therefore assessed as part of a broader change in the landscape resulting from the construction of the loop road.</p> <p>In order to mitigate and compensate for the change in foraging areas and potential commuting routes used by bats, measures are set out in Chapter 7 (Biodiversity) of the ES (APP-029),</p>

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			<p>paragraphs 7.8.75, 7.9.54 and 7.9.55 and captured in the Register of Environmental Actions and Commitments (REAC, APP-097) Table 1.1. These are summarised below:</p> <ul style="list-style-type: none"> • Operational lighting will be designed in accordance with best practice guidelines taking into consideration the presence of commuting and foraging bats and other wildlife, including measures to avoid and minimise light spill onto adjacent habitat, particularly woodland and the Weald Brook (ES (APP-029) paragraph 7.9.55; REAC (APP-097), Table 1.1, page 11). • Embedded design of widespan bridges over Weald Brook of sufficient size to allow bats to fly underneath the new loop road (ES (APP-029) paragraph 7.8.75; REAC (APP-097), Table 1.1, page 7 and 15). The underneath of bridges over the river will not be lit. • Creation and reinstatement of habitats which will provide foraging habitat for bats. Appropriate management of these habitats, including sections of Weald Brook, for use by foraging bats (ES (APP-029) paragraph 7.9.54; REAC (APP-097), Table 1.1, page 11). • Monitoring the success of habitat reinstatement and creation for foraging bats, to include pre-construction, during construction and post construction surveys (biodiversity

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			assessment, Chapter 7, (APP-029), paragraph 7.13.1; REAC (APP-097), Table 1.2 ref. BD1.2).
BHR 1.8	Typographical Error (Applicant)	<p>The ExA notes that page 9 of the Habitats Regulations Assessment No Significant Effects Report (HRA NSER) [APP-093] contains an apparent typographical error in which text is missing.</p> <p>Investigate and update.</p>	<p>Unfortunately, it appears that an error occurred from conversion between file formats (from word document to pdf) resulting in the text displaying incorrectly and missing letters over the whole of page 9 of the Habitats Regulations Assessment (HRA NSER) (APP-093). An amended version of the HRA NSER (TR010029/APP/6.9(2)), which will replace APP-093, is being issued with Highways England's responses to the ExA's First Written Questions to correct and clarify this matter. Previously missing text on page 9 is not shown as 'tracked changes' (TR010029/EXAM/9.29).</p>
BHR 1.9	Description of Development (Applicant)	<p>The HRA NSER [APP-093] omits within its description the diversion of other utilities infrastructure within the highway boundary, including water supply, telecommunications and a sewer, and protection work to an existing fuel pipeline. All such works are included within ES description of works [APP-026].</p> <p>Explain the omission.</p>	<p>Paragraph 1.2.3 of the HRA NSER (APP-093) provides an overview of what was considered to be the main works elements of the Scheme as relevant to the assessment and provides cross references to Chapter 2 of the ES (APP-026) for the full description. The utilities diversions within the highway boundary referred to in BHR-1.9 are not considered to be key elements of the works so were not included in the summary in the HRA NSER (APP-093).</p> <p>All of the works listed in Chapter 2 of the ES (APP-026), including the proposed utility diversion works within the highway boundary, have been included in the consideration of the HRA</p>

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			NSER. This remains unchanged in the amended version of the HRA NSER (TR010029/APP/6.9(2)), which will replace APP-093 and is being issued with Highways England's responses to the ExA's First Written Questions.
BHR 1.10	Description of Development (Application)	<p>Work No.31 is missing from the description of works in the ES [APP-026] and in the HRA NSER [APP-093].</p> <p>i) Explain the omission.</p> <p>ii) Explain whether and how it has been considered as part of the HRA NSER.</p>	<p>i) The description of development in Chapter 2 of the ES (APP-026) was not intended to be exhaustive but to include the 'key works elements'. Work No. 31 comprises minor works to facilitate the connection of the new gantry to an existing communications cabinet.</p> <p>ii) Work No. 31 comprises very minor works to connect a proposed sign (Work No. 10) to existing motorway communications cabinet. These connections will be within the existing cabinet with no excavation or other ground-breaking works required. These works have no bearing on the conclusions of the HRA NSER (APP-093). However, for clarity, the amended version of APP-093, issued with Highways England's responses to ExA's First Written Questions, contains revised versions of Figure 1 (Affected Road Network) and Figure 2 (European Designated Sites), which have been updated to show the 2 km study area taken from the whole DCO boundary including Work No. 31. The conclusions of the HRA NSER (APP-093) remain unchanged.</p>

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BHR 1.11	Methodology (Applicant)	<p>Benfleet and Southend Special Protection Area (SPA) and Benfleet and Southend Ramsar site are shown on HRA NSER [APP-093] Appendix A Figure 2 (European designated sites) but are not referenced elsewhere in the HRA NSER. These sites do not appear to have been included as part of the Habitats Regulations Assessment (HRA) screening because of their distance from the Proposed Development.</p> <p>Clarify why these sites have been omitted from the HRA screening process</p>	<p>Figure 2 of HRA NSER (APP-093) shows the DCO boundary in an expanded figure frame to show the hydrological linkage to the River Thames (and on to the designations Thames Estuary Marshes SPA and Ramsar site). This linkage is explained in the HRA NSER (APP-093) paragraph 3.1.3. Benfleet and Southend Special Protection Area (SPA) and Benfleet and Southend Ramsar site have been shown for completeness because they fall within the figure frame. There is no hydrological linkage to the Benfleet designations, and they are beyond the other screening buffers (as outlined in the methods section of the HRA NSER (APP-093), paragraphs 2.2.1 to 2.2.3). Therefore, they are outside the scope of the assessment and were not considered at screening.</p> <p>For clarity, the amended version of the HRA NSER (APP-093), issued as part of Highways England's responses to the ExA's First Written Questions, contains a revised version of Figure 2, which has been updated to highlight the hydrological linkage pathway to the River Thames.</p>
BHR 1.12	In-Combination Effects (Applicant)	<p>In the HRA NSER [APP-093], references are made to 'cumulative' rather than in combination effects and there is no direct reference to effects on European sites in combination effects other than in the conclusion in paragraph 3.3.3. 22</p>	<p>Use of 'cumulative' was an error and has been amended to 'in combination' where it relates specifically to the in combination effects in HRA terms in section 3.3 of the amended version of APP-093 issued as part of Highways England's response to the ExA's First Written Questions. The term 'cumulative' is now only</p>

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		<p>developments were identified with potential for in-combination effects of which three were identified as potentially having cumulative (in-combination) effects on biodiversity. Nineteen of these sites were screened out from the in-combination assessment.</p> <p>Explain the basis for screening the other projects out, and confirm that their references to 'cumulative' effects should be to 'in-combination' effects'.</p>	<p>used where it is cross-referencing the cumulative effects assessment in Chapter 15 of the ES (APP-037) or in other contexts where it does not relate to the in combination assessment.</p> <p>The projects identified and listed in Table 3.1 of the HRA NSER (APP-093) are all local to the DCO boundary. A brief summary of how effects could combine between these projects and the Scheme is provided for completeness. However, this is essentially immaterial to HRA screening process since there are no European sites within proximity to the DCO boundary and therefore no pathway for any local effects to combine upon. The other projects were screened out in terms of 'in combination' effects since there are no local European sites which could be affected by the project either alone or in combination with other projects.</p> <p>The only identified effect pathway is to the Thames Estuary and Marshes SPA and Ramsar site (35 km and 36 km respectively downstream). This is considered in paragraph 3.3.3 of the HRA NSER (APP-093). The downstream watercourse effect pathway for the Scheme has been discounted so the identified additional projects will not alter the decision that this effect pathway can be screened out both alone and in combination.</p>

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BHR 1.13	In-Combination Effects (Applicant)	<p>In the HRA NSER [APP-093], it states that sites were identified by their scale, proximity, and overlapping period of construction relative to the Proposed Development. The HRA NSER states that no in-combination LSEs have been identified and the risk of both construction and operational phase effects has been discounted for the reasons set out in section 3.3 and in the conclusions in section 4. It is not made clear from the HRA NSER how the in-combination effects of the sites identified were assessed by the Applicant.</p> <p>Table 3.1 states that the LTC will have a 'slight adverse to neutral' effect in combination with the Proposed Development improvements but does not explain how this conclusion has been reached. It is stated that the LTC would affect similar habitats so there is potential for in-combination effects during construction.</p> <p>i) Explain in more detail how the in-combination effects for the developments identified in Table 3.1 of the HRA NSER have been assessed.</p>	<p>i) The projects identified for the in combination assessment are listed in Table 3.1 of the HRA NSER (APP-093). A brief summary of how effects could combine between these projects and the Scheme is provided in that table for completeness. However, how effects could act in combination near to the Scheme is immaterial to HRA in combination screening process since there are no European sites within proximity to the DCO boundary and therefore no pathway for any local effects to combine upon.</p> <p>The only identified effect pathway is to the Thames Estuary and Marshes SPA and Ramsar site (35 km and 36 km respectively downstream). This is considered in paragraph 3.3.3 of the HRA NSER (APP-093). Effectively the downstream watercourse effect pathway for the Scheme has been discounted so the identified additional projects will not alter the conclusion that this effect pathway can be screened out both along and in combination. There are therefore no in-combination effects for the developments identified in Table 3.1 as there are no European sites within the screening distance buffers used (2 km, 200 m and 30 km (designated for bats), as described in the HRA NSER (APP-093) paragraphs 2.2.2 and 2.2.3) and downstream in combination effects have been discounted.</p>

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		<p>ii) Clarify how the conclusion that the LTC will have a 'slight adverse to neutral' effect on European sites in combination with the Proposed Development was reached.</p>	<p>iii) The reference to 'slight adverse to neutral' effect of LTC was text added incorrectly and is not relevant to European sites. That wording has been removed from the amended version of the HRA NSER (APP-093) issued as part of Highways England's response to the ExA's First Written Questions.</p>
BHR 1.14	Screening Matrices (Applicant)	<p>The Applicant submitted its screening matrices at Procedural Deadline B in Appendix A of the HRA screening matrices document [PDB-001]. The Thames Estuary and Marshes Ramsar site matrix provided has omitted details from the designated features set out in the site description on the NE website[4].</p> <p>The ExA considers that the Applicant should revise the features set out in the matrix in Appendix A to reflect all of the designated features as shown on the NE website for the Thames Estuary and Marshes Ramsar site, to include the nationally important invertebrate species occurring on the site and the missing bird species (under birds occurring at levels of national importance: Little egret and Ruff (peak counts in spring/autumn); Common shelduck (peak counts in winter).</p>	<p>The Natural England web page for Thames Estuary and Marshes Ramsar has links to Ramsar Information Sheets at both the Ramsar Sites Information Service (https://rsis.ramsar.org/ris/1025) and Joint Nature Conservation Committee (JNCC) (https://jncc.gov.uk/jncc-assets/RIS/UK11069.pdf). The Ramsar Information Service version is dated (in the footer) 13/09/2007. The JNCC version is dated (in the footer) 13/08/2008.</p> <p>Appendix A.4 of the HRA screening matrices document (PDB-001) takes information directly from the version on the Ramsar Information Service Thames Estuary and Marshes Ramsar site information sheet (https://rsis.ramsar.org/RISapp/files/RISrep/GB1025RIS.pdf)</p> <p>The HRA screening matrices document (PDB-001) has been updated to include all the features in the JNCC version (2008) and likely effects of the Scheme on these features. This updated version is resubmitted as requested at Deadline 2. The overall conclusions of the HRA NSER (APP-093) are unchanged.</p>

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3. Biodiversity and Habitats Regulations			
		<p>The ExA also considers that the Applicant should also show the likely effects of the Proposed Development on these missing features as set out for the other features in the matrix, to be submitted in a revised version of the screening matrices document.</p> <p>Provide a response.</p> <p>[4] https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK11069&SiteName=thames&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=</p>	
BHR 1.15	Screening Matrices (Applicant)	<p>In the HRA NSER [APP-093], the ExA notes that the older Joint Nature Conservation Committee designated site information has been used rather than the more current information on the NE website. Appendix B provides the qualifying features / interests of the Thames Estuary and Marshes SPA and Appendix C provides the Ramsar Information Sheet (RIS) details for the Thames Estuary and Marshes Ramsar site.</p>	<p>As indicated in the response to BHR 1.14, there are two versions of the Ramsar information sheet, a version provided by the Ramsar Information Service (https://rsis.ramsar.org/ris/1025) dated (in the footer) 13/09/2007 and a version on the JNCC website (https://jncc.gov.uk/jncc-assets/RIS/UK11069.pdf) dated 13/08/2008. The version provided in section C.1 of HRA NSER (APP-093), was the 2007 Ramsar Information Service version. The amended version of the HRA NSER (APP-093), issued as part of Highways England's responses to the ExA's First Written Questions (submitted at Deadline 2), has been amended to</p>

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		<p>Confirm that the HRA has considered all of the qualifying features according to the latest updated version of the RIS for the Thames Estuary and Marshes Ramsar site published on the NE website, and provide an updated assessment if not.</p>	<p>include the 2008 JNCC version. The 'Key features of the European Site including the primary reasons for selection and any other qualifying interests' cell in Table C.1 of the HRA NSER (APP-093) has been amended accordingly. The overall conclusions of the HRA NSER (APP-093) remain unchanged.</p> <p>Highways England has checked, and the SPA form used for Thames Estuary and Marshes SPA is the version dated 12 December 2015, which is the most recent version available on the JNCC website. No amendments to this have been made.</p> <p>The HRA screening matrices document (PDB-001) has been updated to include all of the features in the JNCC version (2008) of the Ramsar Information Sheet and is resubmitted as requested at Deadline 2. The overall conclusions of the HRA NSER (APP-093) remain unchanged.</p>
BHR 1.16	References (Applicant)	<p>Footnotes have not been provided as references to support the evidence in the HRA NSER [APP-093], Chapter 7 of the ES [APP-029] or other application documents. The footnotes should refer to the specific paragraph numbers of the application documents where the evidence can be found.</p> <p>Provide these footnotes.</p>	<p>Specific cross references to the Scheme description and other relevant sections of the Environmental Statement have been added as (tracked changes) footnotes in the amended version of the HRA NSER APP-093 issued with Highways England's responses to the ExA's First Written Questions at Deadline 2.</p>

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BHR 1.17	Response to HRA NSER (Natural England) (Other Interested Parties)	i) Provide a response to the HRA NSER [APP-093] having specific regard to: <ul style="list-style-type: none"> - An adequate evidence plan was used at the Pre-application stage. - Whether the correct qualifying features have been identified for the two European sites considered. - The appropriateness of the methodology and conclusions of the Applicant's HRA in-combination effects assessment. - The appropriateness of the methodology used for the HRA and whether there is agreement with the conclusions in the HRA NSER of no LSE on any European site. ii) Confirm that a SoCG will be signed with the Applicant which will confirm the above.	The Statement of Common Ground between Highways England and Natural England submitted at Deadline 1 (REP1-011) acknowledges Natural England's agreement with the conclusions of the HRA NSER (APP-093). The minor amendments to the HRA NSER (APP-093) submitted at Deadline 2 will not alter the conclusions presented in the HRA NSER that was agreed with Natural England.
BHR 1.18	Updated Guidance (Applicant)	The Department of the Environment, Food and Rural Affairs (DEFRA) published a policy paper on 1 January 2021[5] relating to changes to the Habitats Regulations 2017 following the United Kingdom's (UK) departure from the European	The policy paper explains the changes made to the Conservation of Habitats and Species Regulations 2017 (as amended) (the 2017 Regulations) by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The Conservation of Habitats and Species (Amendment) (EU

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		<p>Union. Explain whether this paper has any bearing on, or implications for the Proposed Development.</p> <p>[5] https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017</p>	<p>Exit) Regulations 2019 largely relate to transferring functions from the European Commission to the appropriate authorities in England and Wales to ensure the 2017 Regulations continued to work after the UK's exit from the EU. The changes have no bearing or implications on the conclusions of the HRA NSER (APP-093).</p> <p>Footnote references to this amendment have been made to paragraphs 1.1.2 and 1.1.3 of the amended version of the HRA NSER (APP-093) issued at Deadline 2.</p> <p>References to Natura 2000 Site have been changed to European Site in tables B.1, C.1 and D.1. in line with the advice referenced in question 1.18 which indicates that UK sites no longer form part of the European Natura 2000 network.</p>

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CA 1.1	<i>CA Updates</i> (Applicant)	The ExA notes Appendix B of the Statement of Reasons (SoR) [APP-019] in respect to progress of negotiations with parties affected by CA. The Applicant is requested to provide regular updates as to the position in respect to signed agreements with all Affected Persons (AP) during the Examination.	Highways England has submitted the Compulsory Acquisition Schedule (REP1-015) at Deadline 1 and will update the Schedule during the examination as set out in the examination programme (Annex A) of the Rule 8 letter. Progress on negotiations is set out under the status of agreement column of the Compulsory Acquisition Schedule.
CA 1.2	<i>Protective Provisions</i> (All Statutory Undertakers)	<p>A number of Statutory Undertakers have raised concerns regarding Protective Provisions.</p> <p>i) If there are substantive concerns with the wording of Protective Provisions as set out in the draft DCO [APP-015] provide a clean and tracked changed version of the Protected Provisions required together with an explanation for the need for the change. Or;</p> <p>ii) If the changes are not substantive, set out where there are differences of opinion and what changes would be required.</p>	N/A – as directed to the statutory undertakers.
CA 1.3	<i>CA Objections</i> (Applicant)	Annex B to these questions sets out the APs who have written to object to CA of their land. The	The Compulsory Acquisition (CA) Schedule (REP1-015) submitted at Deadline 1 replicates Annex B to the ExA written questions. This CA schedule has been updated for the Deadline 2 submission alongside Highways England's responses to the

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		Applicant is requested to update the table on the objection.	<p>ExA written questions. The schedule will be updated at further deadlines during the examination to provide the ExA with an update on the status of objections from landowners and an update on progress with agreeing protective provisions and other agreements.</p> <p>Highways England trusts that this will suffice in ensuring that the ExA is kept up to date during the examination.</p>
CA 1.4	<i>Availability of Funding (Applicant)</i>	<p>The Applicant is reminded that the Department for Communities and Local Government (as it then was) Guidance related to procedures for CA (September 2013)[6] states that: "Applicants should be able to demonstrate that adequate funding is likely to be available to enable compulsory acquisition within the statutory period following the order being made, and that the resource implications of a possible acquisition resulting from blight notice have been taken account of.</p> <p>The Funding Statement [APP-020] indicates that the estimated costs of the Proposed Development would be £124m. The figure includes an allowance for compensation payments relating to the CA of land interests in, and rights over, land</p>	<p>Paragraph 2.1.1 of the Funding Statement (APP-020) states that the most likely estimate of the cost of the Scheme is £124 million.</p> <p>The land cost estimate is integrated in the Scheme estimate and is based upon the latest available information detailing the full cost of acquiring the necessary land and rights, and of compensating landowners in accordance with the compensation code. The estimate reflects the cost of purchasing land by agreement following the exercise of compulsory powers and of compensating landowners from whom no land is taken but are affected by diminution in the value of their property by the subsequent use of the road once complete. The estimate includes all heads of claim including, where appropriate, market value of land taken, severance and injurious affection to retained land and compensation for disturbance (including reasonable</p>

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		<p>and the temporary possession (TP) and use of land. However, it is not clear what proportion of those costs includes CA matters and whether it is sufficient.</p> <p>Confirm the CA costs separately from the project costs and explain how the figure for CA costs was arrived at.</p>	<p>fees) plus statutory loss payments. Highways England surveyors' fees are also included in this estimate.</p> <p>The estimate is reviewed on a six-monthly basis, and these reviews provide the best/worst/most likely position to ensure that the anticipated costs remain within allocated budget. It should be noted that the estimate provides the valuer's opinion of the likely full land cost, but that it is only an estimate at this stage, and it must be borne in mind that it is based on current available information and can only be a matter of opinion.</p> <p>Estimates for compensation and land acquisition costs have been informed by land referencing activities, through professional surveyors from the Valuation Office Agency (VOA) used regularly by Highways England for surveying and valuation purposes, and from information received from consultation and engagement with parties who have interest in the land. Highways England is satisfied that the costs estimated for land acquisition is sufficient.</p> <p>Highways England provided details of how the Scheme would be funded in Section 3 of the Funding Statement (APP-020). Paragraphs 3.1.2 to 3.1.10 refers to the government's commitment to fully fund the Scheme as part of the Road Investment Strategy 2015 – 2020 (2016).</p>

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CA 1.5	<i>Availability of Funding (Applicant)</i>	<p>The Funding Statement [APP-020] sets out that funding would be underwritten by the Government as set out in the Department of Transport's "Road Investment Strategy for the 2015/16 to 2019/20 Road Period" [7], which was updated in March 2020 for the period 2020-2025. The ExA notes that an updated Delivery Plan from the Applicant is stated as not yet being available. However, the UK has been subjected to a significant and costly pandemic and the ExA requires confirmation that the stated £27.5bn for road improvements remains available.</p> <p>In light of recent events, confirm to the best of available knowledge, that the funds remain available for the Proposed Development.</p> <p>[N.B – the ExA is aware the SoS for Transport is both the underwriter and the competent authority for this Proposed Development and that they will need to satisfy themselves of the funding before considering whether to grant consent. Nevertheless, the question remains valid for information purposes and transparency for Interested Parties].</p>	<p>Since the submission of the application, and also the start of the pandemic, Highways England has published an updated Delivery Plan for the period (2020-2025) on 21 August 2020.</p> <p>The Delivery Plan (2020-2025) sets out in detail how Highways England will deliver its strategic outcomes and measure success. Page 36 of this Delivery Plan lists M25 junction 28 as a 'Scheme open for traffic during RP2' along with a reference in Annex B on page 75 to the anticipated start of works and when the Scheme is expected to be open for traffic. Relevant extracts are included in Appendix C (TR010029/EXAM/9.27) to the responses to the EXAWQ.</p> <p>Accordingly, Highways England confirms that the Scheme remains in its programme of works and the funding remains available.</p> <p>The Secretary of State has recently made development consent orders for other schemes identified in the Delivery Plan, such as the A38 Derby Junctions Development Consent Order 2021 and the A1 Birtley to Coal House Development Consent Order 2021 (referred to on pages 17 and 18 of the Delivery Plan as schemes 'open for traffic during RP2' in the same manner as the Scheme).</p>

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		<p>[7] https://www.gov.uk/government/publications/road-investment-strategy-for-the-2015-to-2020-road-period"</p>	
CA 1.6	<p><i>Public Interest vs. Private Loss</i> (Applicant)</p>	<p>The SoR [APP-019] states that there is a compelling case in the public interest for the CA.</p> <p>i) Set out what assessment, if any, has been made of the effect upon individual APs and their private loss that would result from the exercise of CA powers in each case.</p>	<p>i) The land over which compulsory acquisition powers are sought as set out in the draft DCO (APP-015) is the minimum necessary to ensure the delivery of the Scheme. Highways England does not assess each individual AP and their private loss. Section 4 of the Statement of Reasons (APP-019) sets out how Highways England has identified persons with an interest in land. Highways England has carried out diligent inquiry to identify all such persons. Persons with an interest in land have been listed in the Book of Reference (AS-021) and have been consulted about the Scheme in accordance with section 42 of the Planning Act 2008. An exercise was carried out on a plot by plot basis to determine that the exercise of CA powers could be justified in each case.</p> <p>Chapter 13 (People and Communities) (APP-035) of the ES includes an assessment of impacts on private dwellings and local businesses as a result of land take and changes to access. The assessment of impacts on these receptors has followed guidance provided in DMRB Volume 11 Section 3</p>

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		<p>ii) Demonstrate within the application that the public benefits of the Proposed Development outweigh any residual adverse effects including private loss suffered by individual landowners and occupiers.</p>	<p>Part 6 - Land Use. This guidance includes an assessment of impacts from land take and severance/changes to access for individual landowners and occupiers.</p> <p>ii) As set out in Section 5 of the SoR, Highways England has had regard to the relevant compulsory acquisition guidance, including the DCLG's 'Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land' (the CA Guidance) in developing its case for compulsory acquisition, including the general consideration that the proposed interference with the rights of those with an interest in the land is for a legitimate purpose, is necessary and proportionate (see paragraphs 8 to 10 of the CA Guidance).</p> <p>Highways England has also sought to minimise the private loss suffered by individual landowners and occupiers by seeking to acquire land through agreement where possible. Section 5.7 of the SoR (APP-019) sets out the approach taken by Highways England to acquiring interests in land by agreement, while Appendix B of the SoR and the Compulsory Acquisition Schedule (REP1-015) submitted at Deadline 1, sets out the progress made in negotiations to date. Highways England will continue to update the</p>

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		<p>iii) Demonstrate how such a conclusion has been reached and how the balancing exercise between public benefit and private loss has been carried out.</p>	<p>Compulsory Acquisition Schedule throughout the examination in order to keep the ExA up to date.</p> <p>The Case for the Scheme and Schedule of Accordance with National Policy Statement (APP-095) sets out the monetised and non-monetised benefits of the Scheme (see sections 4.4 and 4.5). In the absence of compulsory powers, it would not be possible to proceed with the Scheme, accordingly, the public benefits of the Scheme would not be realised.</p> <p>iii) As a result of the above process of challenge and scrutiny, balancing the requirement for each individual plot against its anticipated impacts on the existing landowners and occupiers, Highways England is satisfied that the powers of compulsory acquisition and temporary possession sought in the draft DCO are necessary, proportionate and justified. As noted in Highways England's response to CA1.7 below, section 6 of the SoR (APP-019) specifically covers how human rights have been taken into account in balancing public benefit and private loss. In relation to both Article 1 and Article 8 European Convention on Human Rights, there is a compelling case in the public interest for the compulsory acquisition powers included in the draft DCO, which is sufficient to justify the interference with rights. Section 5.4 of the SoR, with reference to the Case for the Scheme and Schedule of Accordance with National Policy Statement</p>

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			(APP-095), sets out how the compelling case in the public interest for compulsory acquisition is met and demonstrates that there would be substantial public benefits arising from the implementation of the Scheme, providing more reliable journey times, improvements in safety and reduced congestion.
CA 1.7	<i>Human Rights</i> (Applicant)	<p>The SoR [APP-019] includes a section on human rights.</p> <p>i) Explain how it is demonstrated that interference with human rights in this case would be proportionate and justified.</p> <p>ii) Explain how the proportionality test has been undertaken and explain how this approach has been undertaken in relation to individual plots.</p>	<p>i) Paragraph 6.2.1 of the Statement of Reasons (APP-019) confirms that the Scheme will have an impact on individuals but considers that the significant public benefits that will arise from the Scheme as set out in this Statement of Reasons and in the Case for the Scheme and Schedule of Accordance with National Policy Statement (APP-095)) outweigh the harm to those individuals.</p> <p>Section 6 of the Statement of Reasons (APP-019) specifically covers how human rights have been taken into account in balancing public benefit and private loss. In relation to both Article 1 and Article 8 European Convention on Human Rights, there is a compelling case in the public interest for the compulsory acquisition powers included in the draft DCO, which is sufficient to justify the interference with rights.</p> <p>Paragraph 6.2.2 of the Statement of Reasons further confirms that the land proposed to be acquired is the</p>

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			<p>minimum land-take required to construct, operate, maintain and mitigate the Scheme and is therefore necessary to achieve the objectives of the Scheme. Highways England has sought to achieve a balance between minimising land take and securing sufficient land to ensure delivery of the Scheme, noting that the detailed design of the Scheme has yet to be developed. In that context, the limits of the land to be acquired or used has been drawn as tightly as possible so as to avoid unnecessary land take. In that way, the proposed land take is proportionate, justified and necessary.</p> <p>ii) In relation to a proportionality test for individual plots, during the preparation of the application, the land requirements for the Scheme were informed by discussions between Highways England legal, design, land referencing, land, and DCO/planning teams. This culminated in Appendix A (Details of the purpose for which compulsory acquisition and temporary possession powers are sought) of the Statement of Reasons (APP-019). Each plot was reviewed individually to minimise land take based on a consideration of land use, the practical engineering requirements and the need to ensure that, where possible, the proposed mitigation is embedded directly into the design to ensure its delivery and long term maintenance along with the individual impacts that would occur at the local level.</p>

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			<p>Consideration was also given to reasonable alternatives. Further details of the reasonable alternatives in relation to the selection of the preferred route (Scheme) as a whole can be found in Chapter 3 of the ES (APP-026). Also reasonable alternatives were considered to the main elements of the Scheme, such the diversion of the Cadent Gas pipeline (see Chapters 8 and 9 of the Consultation Report (APP-022)) and the golf course accommodation works (Chapter 10 of the Consultation Report) (APP-022).</p> <p>This process of checks and balances carried out by Highways England was also informed by responses to the statutory and supplementary consultation along with engagement with directly affected landowners. The land requirements were refined throughout the development of the Scheme, and wherever possible Highways England sought to mitigate the effects of the Scheme on landowners. One of the clearest illustrations of this refinement and seeking to only include land that is absolutely required to deliver the Scheme is a comparison of the DCO boundary at statutory consultation and supplementary consultation (presented in the Supplementary Consultation brochure – pages 184 and 185 of the Annex F of the Consultation Report (APP-025) and then the submitted DCO Scheme (as indicated on the Location Plan (APP-004)). This</p>

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			<p>engagement with landowners is ongoing with the refinement of the proposed land acquisition in plot 1/8 and the extension of permanent acquisition powers in plot 1/11 to provide an environmental bund (which is amongst the changes that currently form part of the non-statutory targeted consultation which ends on 4 February 2021). Subject to the outcome of the consultation process, any changes to the Scheme will be subject to a change request to the ExA to be made at Deadline 3a (18 February 2021).</p> <p>Accordingly, the proportionality test of the need for the land, the extent of private loss and the consideration of reasonable alternatives have been considered. The overall balance between the need for and public benefits of the Scheme is concluded in Section 5.8 of the Statement of Reasons (APP-019).</p>
CA 1.8	<i>Maylands Golf Course Plots 1/12, 1/13, 1/14, 3/21 and 3/22</i> (Applicant)	The Book of Reference (BoR) [AS-021] identifies plots 1/12, 1/13, 1/14, 3/2, 3/21 and 3/22 as being part of Maylands Golf Course. The Land plans [APP-005] and the Works plans [APP-006] identify varied powers and proposed works over these plots but it is not clear how such works correspond with one another and it is difficult to deduce which plot is required for what works without	A plan has been prepared that shows the land plots to be acquired overlaid with the relevant extract of the Works (APP-006) for Maylands Golf Course. This plan is submitted in an Appendix (TR010029/EXAM/9,27) to Highways England's response to ExA written questions at Deadline 2.

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		<p>considerable cross-referencing. The ExA would find it beneficial if a visual plan combining the Works plans and Land plan plots for Maylands Golf Course could be submitted.</p> <p>Provide a response.</p>	
CA 1.9	<p>CA <i>Freehold Powers Maylands Golf Course</i> (Applicant)</p>	<p>Chapter 13 of the ES [APP-035] states that plots 1/13 and 3/22 are required for ecological mitigation.</p> <p>Confirm that CA freehold powers are sought over these plots as opposed to CA new rights is in connection with Work No.29 (diversion of high-pressure gas pipeline).</p>	<p>Table A.1.1 shows that neither plot 1/13 nor plot 3/22 relate to Work No. 29 (diversion of high-pressure gas pipeline).</p> <p>Highways England confirms that plots 1/13 and 3/22 are required for ecological mitigation and permanent acquisition of these plots is required to secure the appropriate long-term management of habitats required to reduce the adverse effects of the Scheme. As set out in the Statement of Reasons (APP-019), at Appendix A, Table A.1.1, both of these plots are required for Work No. 25 which comprises:</p> <p><i>“Environmental works, including the construction of ecological compensation areas, approximately 90,000 square metres in area, on land situated to the west and northwest of Work No. 6, as shown respectively on sheets 1 and 3 of the works plans”.</i></p>
CA 1.10	<p>CA <i>Freehold Powers Plot 1/10,</i></p>	<p>In its RR [RR-020], Glebelands Estates Limited raise concerns regarding the extent of land required for CA freehold on its plots 1/10, 1/12, 3/20 and 3/22. The ExA notes particularly that the</p>	<p>i) See Highways England response to RR-20-7 (REP1-002).</p> <p>ii) Plot 3/20 is required for the following works:</p>

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	1/12, 3/20 and 3/22 (Applicant)	<p>size of plots 1/10 and 3/20 for the works specified in Table A.1.1 of the SoR [APP-019] and as indicated on the Works plans [APP-006] and Scheme Layout plans [APP-010] appears considerably large.</p> <p>i) Justify the extent of land required for the above plots.</p> <p>ii) Explain why plot 3/20 is required for CA freehold for Work No.17 in respect for the deposit of construction materials when Work No.18, also for the deposit of materials is only required for TP on plot 1/11.</p> <p>iii) Respond to Glebelands Estates Limited's comments in its RR that "HE could achieve its objectives in an alternative less intrusive manner by reducing the extent of the landtake....[by]...taking less land or alternatively ...[increase] temporary powers.</p> <p>[N.B – the ExA is aware of the Applicant's request at Procedural Deadline A [PDA-001] of its intention to submit a change request which would delete Work No.17 from the Application. However, until such a change is formally requested, the</p>	<ul style="list-style-type: none"> • Work No. 24A: New flood compensation area • Work No. 25: Environmental works, including construction of ecological compensation areas • Work No. 27: New pond for environmental mitigation purposes • Work No. 28: New pond for environmental mitigation purposes • Work No. 29: Diversion of an existing underground Cadent high pressure (33 bar) gas pipeline • Work No. 32: Accommodation works to provide replacement facilities for Maylands Golf Course <p>Plot 3/20 is required for the above environmental mitigation works as well as for the deposit of construction materials (Work No. 17). Therefore, permanent acquisition of Plot 3/20 is required to secure the appropriate long-term management of habitats required to reduce the adverse effects of the Scheme as outlined in Environmental Statement and more generally in Highways England's response to RR-20-07 (REP1-002). Plot 1/11 is sought for temporary possession only as the works for this plot involve the provision of a construction compound and deposit of surplus construction materials, both which are temporary in nature and so the land could be given back to the</p>

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		question remains relevant. In any event, the Applicant has stated that there would be no change to the powers required over plot 3/20].	landowner. As noted by the ExA in their question, Highways England is proposing some changes to the Scheme that currently forms part of the non-statutory targeted consultation (which ends on 4 February 2021). The proposed change to Work No. 18 (if accepted by the ExA) would have an impact on the land powers being sought. Highways England will provide further information as part of the change request to be submitted at Deadline 3a. iii) See Highways England response RR-20-8 (REP1-002).
CA 1.11	<i>CA Freehold Powers Plot 3/5 (Applicant)</i>	Appendix A Table A.1.1 of the SoR [APP-019] indicates that the CA freehold is required for plot 3/5 in connection with Works Nos.7, 8 and 10 in respect to M25 northbound carriageway works, on slip realignment and signage. However, the Works plans [APP- 006] indicate that these works concern only the northbound carriageway (with the exception of Work No.10) yet CA is required for the southbound carriageway as well. Explain why the southbound carriageway forms part of the request for CA freehold powers.	Acquisition of title for all land within the existing Highways England's highway boundary is to 'cleanse' the title of any issues remaining from previous acquisitions or sales of individual parcels. The ExA will note that part of the highway works limit of deviation (shaded pink on Sheet 3 of the Works Plans (APP-006)) extends into the southbound carriageway at two points, within plot 3/5. The ExA will also note that Part 1 in Schedule 4 to the draft DCO (APP-015) confirms the classification of part of the M25 southbound carriageway as a special road. As set out in the Book of Reference (AS-009) this land is already owned by Highways England, subject to rights, including unknown category 3 rights. As set out in the Statement of Reasons (APP-019), Highways England has taken the approach

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			<p>of seeking powers over plots of land that it already owns. This approach is well precedented on other Highways England schemes and has been taken to ensure that Highways England holds all of the necessary rights to implement its Scheme without impediment. This approach ensures that further steps to clear the title would not be necessary if an unknown or unregistered owner later asserts an interest in the land which Highways England believes it owns.</p>
CA 1.12	<p>CA <i>Freehold Powers Plots 4/2 to 4/11</i> (Applicant)</p>	<p>These plots are shown as required for the CA freehold. They are illustrated on Sheet 4 of the Land plans [APP-005]. The Applicant states at various points in the SoR [APP-019] that the plots are required to either:</p> <ul style="list-style-type: none"> - Ensure any rights inconsistent with the Proposed Development can be removed (plots 4/2, 4/3, 4/4, 4/5, 4/6, 4/7a, 4/9 and 4/11); and - To rationalise into the Applicant's ownership (plots 4/7, 4/8 and 4/10). <p>The Works plans [APP-006] show that there are no works proposed to take place on these plots and as such, they have no connection with the Proposed Development.</p>	<p>i) Section 122 of the Planning Act 2008 permits the Secretary of State to authorise the compulsory acquisition of land in a DCO if the Secretary of State is satisfied that the following relevant conditions can be met:</p> <ul style="list-style-type: none"> • Either the land is required for the development to which the development consent relates, or it is required to facilitate "<i>or is incidental</i>" to that development; and • There is a compelling case in the public interest to acquire the land compulsorily. <p>The ExA will note that land that is "incidental" to the proposed development may be lawfully subject to compulsory powers. As set out in the Statement of Reasons (APP-019) in relation to whether the land is required to facilitate or is incidental to the proposed development, the</p>

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		<p>The ExA does not consider the inclusion of plots 4/2 to 4/11 are related to the Proposed Development. The ExA is concerned that the Applicant may be attempting to use the powers in the Planning Act 2008 (PA2008) unlawfully to 'tidy up' its other land interests by removing rights and rationalising ownership. The ExA is concerned that the request for CA freehold of these plots are unjustified.</p> <ul style="list-style-type: none"> i) Explain and justify why the inclusion of plots 4/2 to 4/11 meets the tests in the PA2008 given that no works are proposed for these plots. ii) Explain how the CA of plots 4/2 to 4/11 are necessary to implement the Proposed Development. iii) Explain why the rights of plots 4/2, 4/3, 4/4, 4/5, 4/6, 4/7a, 4/9 and 4/11 are inconsistent with the Proposed Development. iv) Explain why plots 4/7, 4/8 and 4/10 need rationalising. v) If the SoS were not convinced that the inclusion of these plots were justified, explain whether 	<p>Secretary of State will need to be satisfied that the development could only be carried out to a satisfactory standard if the land in question were to be compulsorily acquired and that the land to be taken is no more than is reasonably necessary for the purpose and that it is proportionate.</p> <p>Plots 4/2 to 4/11 form part of the M25 (approaching the main part of the Scheme) and will be subject to ancillary works, relating to the gantries and signage. As set out in the Book of Reference (AS-009) these plots are already owned by Highways England. Their inclusion within the Order limits is therefore reasonably necessary and proportionate.</p> <ul style="list-style-type: none"> ii) As set out above, and in more detail in the Statement for Reasons (APP-019), the Secretary of State must satisfy themselves that the land is "<i>incidental to</i>" the development. Ancillary works form part of the Proposed Development as set out in Schedule 1 of the draft DCO (APP-015). Highways England may already have powers to carry out such works under its existing powers, but the extinguishment of (known and unknown) third party rights will ensure that further steps to clear title would not be necessary later on if a party asserts an interest in land which Highways England believes it owns.

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		<p>deleting the plots from CA would have any bearing on the delivery of the Proposed Development.</p> <p>[N.B – if the Applicant subsequently accepts that the CA freehold of plots 4/2 to 4/11 are not justified by the PA2008, the ExA requests that plots 4/2 to 4/11 are removed from the Land plans [APP-005] and the draft DCO [APP-015] at Deadline 2.</p>	<p>iii) The rights impacting these plots are set out in Part 3 to the Book of Reference (AS-009). However, the benefit of compulsory powers is that any third party rights not known to Highways England may also be extinguished. This ensures that further steps are not required to clear the title if an unknown or unregistered owner comes forward. Third parties who have such rights extinguished may be eligible for compensation (see article 29 of the draft DCO (APP-015)).</p> <p>iv) Plots 4/7, 4/8 and 4/10 either contain unknown third party rights (Plots 4/7 and 4/8) or are partially in unknown ownership (Plots 4/10). As stated above, in order to ensure that further steps are not required to clear the title if an unknown or unregistered owner comes forward, Highways England is seeking to cleanse the title.</p> <p>v) Ancillary works (as provided for in Schedule 1 of the draft DCO (APP-015)) are required over this area for the purposes of the Scheme, which is why it is appropriate for these plots to be included within the Order and carried out thereunder.</p>
CA 1.13	<i>CA Freehold Powers</i>	Should the ExA and the SoS be satisfied with the justification provided by the Applicant in response to WQ1 CA 1.12, plots 4/2, 4/4 and 4/9 are	i) The Compulsory Acquisition Schedule (REP1-015), submitted at Deadline 1, sets out the status of agreement with Network Rail, Essex County Council and the London

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	<p><i>Plot 4/2, 4/4 and 4/9 (Applicant)</i></p>	<p>indicated in the BoR [AS-021] as being co-owned by Network Rail, Essex County Council and the London Borough of Havering respectively.</p> <p>i) Provide evidence that those parties have consented to its land being CA for the freehold.</p> <p>ii) Explain how the draft DCO [AS-015] ensures those parties would be able to continue to operate and manage the railway line.</p>	<p>Borough of Havering. This document will be updated during the examination to provide an update on discussions with these parties.</p> <p>Network Rail's interest in Plot 4/2 relates to the railway, which is excluded from the scope of Highways England's compulsory acquisition powers (see Book of Reference (APP-021) and the description of plot 4/2). The Book of Reference (AS-009) provides the following description of plot 4/2:</p> <p><i>All interests and rights excluding railway in 935 square metres, or thereabouts, of motorway (London Orbital Motorway (M25)) under bridge carrying railway (Shenfield to Liverpool Street) situated to the north east of 25 Nags Head Lane, Brentwood</i></p> <p>Highways England has made clear in its Book of Reference that the railway is excluded from its powers of compulsory acquisition. The Scheme does not interfere with the operation or management of the railway line and discussions are ongoing between Highways England and Network Rail to make this clear.</p> <p>Essex County Council has confirmed to Highways England that they do not control any land within the red line</p>

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			<p>boundary. Highways England now intends to remove this party from the Book of Reference.</p> <p>The London Borough of Havering (LBH) are identified as highway authority of plot 4/9 in the Book of Reference. The Scheme will not interfere with LBH's role as highway authority and there is no freehold within plot 4/9 for Highways England is in discussion with the London Borough of Havering with a view to providing its consent to plot 4/9 being included within the compulsory acquisition powers.</p> <p>ii) The Scheme has no bearing on the operation or management of the railway line.</p>
CA 1.14	CA <i>Freehold Powers Plots 4/2, 4/3, 4/4, 4/5 and 4/9</i> (Statutory Undertakers)	Provide a response to the Applicant's request to CA the freehold of plots 4/2, 4/3, 4/4, 4/5 and 4/9.	N/A – as directed at the Statutory Undertakers.

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CA 1.15	CA Freehold Powers Plot 4/6 (Applicant)	<p>Plot 4/6 is indicated in the BoR [AS-021] as having an unknown owner of the bridleway which underpasses the motorway.</p> <p>Explain what measures have been undertaken to identify the owner of the plot.</p>	<p>Plot 4/6 includes the motorway and a bridge carrying a bridleway and this area is registered to Highways England under HM Land Registry title number "EX957900". As this title includes no reference to exclusion and there are no contrary titles which overlap, Highways England owns the whole of this plot. At the point of submission of the application, it was unclear as to who was responsible for maintaining the bridleway over the bridge due to this not being a designated accessway, as a result of this an unknown entry was added in respect of the bridleway in the Book of Reference (AS-009).</p> <p>A review of the council data was undertaken to determine if it fell under either London Borough of Havering's or Essex County Council's maintenance. Highways England's land referencing specialists determined that there was insufficient evidence to confirm whether it fell under either local authority's responsibility.</p> <p>As a result, a site visit was undertaken and an unknown notice was placed before and post submission, with no responses received.</p> <p>Highways England has contacted the Forestry Commission to ascertain whether it maintains the bridleway due to it being close to Tyler's Wood (that is run by the Forestry Commission) to the west of the motorway. Any changes arising from this correspondence will be reflected in the Book of Reference and</p>

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			associated Schedule of Changes to be submitted at Deadline 3a.
CA 1.16	<i>CA Rights Plot 1/8</i> (Applicant)	<p>In its RR [RR-024], the Gardens of Peace states that the extent of land of plot 1/8 sought for CA of new rights “is excessive and can be redesigned to have a lesser impact on Gardens of Peace’s land, or, be moved entirely off Gardens of Peace’s land to minimise the disruptions caused by the Scheme’s and allow for the proper running of their intended use.</p> <p>i) Set out what alternatives were considered to the use the Gardens of Peace land.</p> <p>ii) Respond to the criticism regarding the extent of land required.</p>	<p>i) As outlined in the Statement of Reasons (APP-019) paragraph 4.14.1, after statutory consultation, it was identified that land would be required south of the A12 to facilitate the gas main diversion within Plot 1/8. Cadent investigated options for the gas pipeline diversion. Six potential route options were identified and assessed. Two options did not require works in the cemetery land, but these options were considered to be unacceptable for technical and construction reasons and were discounted by Cadent. The corridor within which the gas main diversion could take place was subject to a supplementary consultation undertaken 4 November to 2 December 2019 (see Chapter 9 of the Consultation Report (APP-022)). Highways England understands that Cadent discussed the options for crossing the cemetery with the trustees including meeting on site and the trustees advised that their preference was for the route at the eastern end of the cemetery. Following the selection of the preferred route, meetings were held with the trustees to update them on the design and associated easement requirements.</p> <p>ii) As part of the proposed change request, proposed change 4 is seeking to reduce the extent of permanent acquisition of rights for Plot 1/8 with the remainder of Plot 1/8 required for temporary</p>

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			possession only. If this change is accepted by the ExA, the extent of land required for permanent rights will be reduced. This will minimise further the effects of the Scheme on the Gardens of Peace land and its intended use. Highways England understands that the trustees are content with this proposal.
CA 1.17	<i>Crown Land Plots 4/5, 4/6 and 4/7 (Applicant, DEFRA, Forestry Commission)</i>	The BoR [AS-021] indicates that the Crown, administered by the Forestry Commission, holds interests in plots 4/5, 4/6 and 4/7. The PA2008 does not authorise CA for Crown land. The SoS can only authorise the CA of these plots with the consent of the relevant Crown authorities. Set out whether, and if so when, Crown consent would be forthcoming.	<p>In relation to Plots 4/5, 4/6 and 4/7, as shown on the Land Plans (APP-005), discussions are continuing with DEFRA and Highways England is looking to obtain a certificate of consent from DEFRA as early as practicable.</p> <p>The reason for the inclusion of Plots 4/5, 4/6 and 4/7 is that acquisition of title for all land within the existing Highways England highway boundary is to 'cleanse' the title of any issues remaining from previous acquisitions or sales of individual parcels.</p>
CA 1.18	<i>Temporary Possession Powers Plots 1/9, 1/11, 3/2, 3/16, 3/18</i>	<p>The Land plans [APP-005] indicate plots 1/9, 1,11, 3/2, 3/16, 3/18 and 3/21 are required for TP. Table A.1.3 of the SoR [APP-019] lists the reasons as follows:</p> <ul style="list-style-type: none"> - Plot 1/9: Connection with Work No.29 (diversion of high-pressure gas pipeline) 	Temporary possession of plots 1/9, 1/11, 3/2, 3/16, 3/18 and 3/21 is sought where the land will be used to build the Scheme but returned to its original owners after construction is complete. The reasons for the need for temporary possession is set out in the Statement of Reasons (APP-019). Up to approximately 12 hectares of land will be taken temporarily. Temporary construction compounds and works areas have been identified to ensure the delivery of the Scheme with minimum disruption to

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	<p><i>and 3/21 (Applicant)</i></p>	<p>- Plot 1/11: Connection with all works and Work No.18 for the deposit of surplus materials.</p> <p>- Plot 3/2: Connection with Works Nos.7, 8 and 10 for improvements and realignment of M25 northbound.</p> <p>- Plot 3/16: Connection with Works Nos.8, 14 and 17 realignment works for M25 on slip road, new access and deposit of surplus materials.</p> <p>- Plot 3/18: Connection with Work No.17 for the deposit of surplus materials.</p> <p>- Plot 3/21: Connection with Works Nos.17 and 25 for the deposit of surplus materials and environmental works.</p> <p>The ExA notes that the land take area required for TP exceeds the area for their respective works by some margin and it is not convinced such an area is justified.</p> <p>Provide a response.</p>	<p>stakeholders and users of the existing highway network, whilst ensuring the temporary land acquisition is proportionate and only comprises that needed to undertake the works. The land taken temporarily will be returned to its original landowners after construction has been completed in a condition that is to their reasonable satisfaction.</p> <p>With regard to each specific plot and the need for temporary possession:</p> <ul style="list-style-type: none"> Plot 1/9 is no longer required for the construction associated with the high pressure gas pipeline (Work No. 29) and therefore will be removed from the updated Book of Reference and from the revised Land Plans at Deadline 3a. Plot 1/11 is required for temporary possession to accommodate the main construction compound and associated works including the deposit of surplus materials (Work No. 18). The construction compound is shown on Figure 2.2 in the Environmental Statement Figures (APP-039). Work No. 18 is proposed to be reconfigured into an environmental bund as part of the proposed changes being requested at Deadline 3a. If accepted, part of Plot 1/11 would need to be permanently acquired to enable the long term maintenance of the

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			<p>bund. However, the remainder of Plot 1/11 will still need to be subject to temporary possession powers due to the need to retain a construction compound in this plot albeit reconfigured as a consequence of the proposed change, with associated access requirements.</p> <ul style="list-style-type: none"> • Plot 3/2 is required for temporary possession in connection with Work Nos. 7, 8 and 10. The southern part of Plot 3/2 is required in order to carry out the realignment of the watercourse and the extension of a culvert close to Plot 3/9. The northern part of Plot 3/2 is required in connection with existing drainage, construction of the berm and other ancillary works all of which may require access over Plot 3/2. Part of Plot 3/2 includes the green of hole 5 of the Maylands golf course. Highways England is reviewing its requirements in respect of this plot with a view to avoiding any impacts on the golf course. • Plot 3/16 is required for temporary possession in connection with Work Nos. 8, 14 and 17 for the following reasons. <ul style="list-style-type: none"> ○ To establish an area for the depositing of surplus construction materials (Work no. 17), albeit Highways England is proposing to delete this work pursuant to its forthcoming change request.

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			<ul style="list-style-type: none"> ○ The eastern section of Plot 3/16 is necessary to access and construct Work Nos. 8 and 14, as well as access to plot 3/2 to construct a proposed culvert extension and other drainage infrastructure. ○ The western part of plot 3/16, as well as plot 3/18, are necessary to enable a crossing east-west over the Weald Brook to Work No. 25 and other works are situated to the west of Weald Brook, in a section north of the loop, and at this stage it is prudent to identify plot 3.16 and 3.18 for a potential construction haul route (east-west) in this part of the site (north of the loop). It may be impractical to reach either plot 3/20 or 3/16 (and 3/18) after the loop is constructed, or while it is being constructed, and an additional connection in this area is beneficial. ○ In order to install bird and bat boxes in the retained woodland. ● Plot 3/21 is required for temporary possession in connection with Work Nos.17 and 25, to facilitate the deposit of surplus materials and environmental works. If Highways England's change request is accepted as regards Work No. 17 then it may be that temporary

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			<p>possession rights over this Plot are not needed. Highways England is reviewing the position.</p> <p>The limits of the land for temporary possession have been drawn as tightly as thought possible so as to minimise land take, whilst providing sufficient flexibility to allow the Scheme to be built in a timely and efficient way. As the detailed design of the Scheme evolves Highways England recognises that it may be that the amount of temporary possession land sought could be reduced.</p>
CA 1.19	<i>Protective Provisions</i> (Network Rail, Cadent Gas, Environment Agency, National Grid Electricity / National Grid Gas)	<p>It is stated in the respective RRs [RR-002], [RR-006], [RR-009], [RR-022] that adequate Protective Provisions are required in the draft DCO [APP-015]. To date, these have not yet been agreed with the Applicant.</p> <p>The ExA requires a regular update to this position. If, by Deadline 5, Tuesday 13 April 2021, Protective Provisions have not been agreed, the ExA requests the relevant Statutory Undertaker's preferred wording, clean and tracked changed, together with an explanation of where the difference(s) of opinion lie(s).</p>	N/A – as directed to Network Rail, Cadent Gas, Environment Agency, National Grid Electricity / National Grid Gas.

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CA 1.20	<i>Protective Provisions for Eastern Power Networks</i> (Applicant)	<p>In its RR [RR-008], Eastern Power Networks states that it objects to the Proposed Development as the relocation of the power lines “will be detrimental to the carrying on of its undertaking. No alternative land, rights and apparatus for those proposed to be acquired under the above Order are in place.” From its wording, it appears agreed Protective Provisions wording would not resolve the objection.</p> <p>Provide a response.</p>	<p>See Highways England response to RR-008-02 (REP1-002) which is copied again below.</p> <p>Highways England and Eastern Power Networks have been discussing the matters raised by Eastern Power Networks in its Relevant Representation. The parties are actively engaged in the negotiation of an agreement to address the concerns raised.</p> <p>Highways England has been in detailed discussions with UKPN (as parent company to EPN) throughout the preliminary design for the Scheme and the need to divert an existing 11kV overhead electric line. This is identified in draft DCO (APP-015) as Work No. 30. Land has been identified for the proposed diversion as shown on sheets 2 and 3 of the Land Plans (APP-005) as being either land or rights to be permanently acquired in land to accommodate the UKPN diversion.</p> <p>Article 9 of the draft DCO also allows the benefit of the Order to be transferred or leased to others by Highways England. The consent of the Secretary of State is required for a transfer or grant, except where it is made to specified companies in relation to certain utility diversion works, including UKPN for the purposes of Work No. 30 on the basis that it is appropriate for UKPN to be able to carry out those works. Highways England has agreed to amend the definition of UKPN in the draft DCO to</p>

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			<p>refer to Eastern Power Networks in the next version of the draft DCO submitted to the Examining Authority.</p> <p>UKPN also has other apparatus within the highway or land to be acquired by Highways England for the Scheme. Diversions of these assets are not included as a separate scheduled work within the draft DCO, but are authorised by general powers within the draft DCO. To the extent any other diversions may be required, there are protective provisions included within Part 1 of Schedule 9 to the draft DCO for the protection of electricity undertakers apparatus and to ensure their continued ability to carry out their functions despite the interference with their rights / apparatus required to facilitate the Scheme.</p> <p>Accordingly, it is not the case that no alternative land has been provided in the draft DCO for this diversion and Highways England anticipates that Protective Provisions will resolve EPN's objection.</p>
CA 1.21	<i>Protective Provisions for the Environment Agency (Applicant)</i>	<p>In its RR [RR-009], the Environment Agency (EA) states that the wording in Part 3, Schedule 9 of the draft DCO [APP-015] reflects its standard wording with some deviations and that such changes will unlikely be acceptable to it.</p> <p>Explain why such changes have been made.</p>	<p>Highways England is seeking a set of protective provisions that reflect the terms offered and agreed by the Environment Agency (EA) on other, similar schemes. Any changes made to the EA's standard wording have been based upon the variations the EA has agreed elsewhere. These are matters still under discussion between the parties and Highways England hopes to reach an agreement prior to the close of examination.</p>

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CA 1.22	<i>Book of Reference</i> (Applicant)	Respond to, and if necessary, update the BoR [AS-021] in respect to the concerns raised by TfL in its RR [RR-028] on the ownership of the local highway network.	<p>Highways England has been in discussions with TfL regarding the concerns they raised in RR-028. See Highways England response to RR-028-3 (REP1-002).</p> <p>The Book of Reference will be updated to reflect outcome of discussions raised by TfL during the course of the examination including a Schedule of Changes.</p>
CA 1.23	<i>Notification of Potential Change Request</i> (Applicant, Glebelands Estate, Thames Water Utilities, Cadent Gas)	In its response to Procedural Deadline A [PDA-001], the Applicant stated that it was intending to make a Change Request which will, amongst other things, amend Work No.18 from the storage of materials to an environmental bund. This would involve a change of plot 1/11 from TP to the CA freehold. For the purposes of the PA2008, this would amount to a request for additional land to which Regulations 4 to 19 of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 would apply. The ExA requests a statement from the parties as to the state of negotiations and any draft or signed agreement as part of the evidence base for this request, which may have a bearing on how Regulations 4 to 19 apply.	Highways England is engaging with each of the landowners and occupiers affected by the proposed change namely: Glebelands, Thames Water Utilities Ltd and Cadent Gas. A statement on regulations 4-19 will accompany Highways England's formal change request. A formal request for consent to the inclusion of the powers of compulsory acquisition in the draft DCO from the relevant land interests relating to this change, is being sought.

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		Confirm a statement to this effect would be forthcoming.	

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5. Draft Development Consent Order (draft DCO)			
Articles			
DCO 1.1	<i>Part 1, Article 2 (Various definitions)</i> (Applicant)	<p>The ExA notes an inconsistent approach to document identification. For example, the “environmental statement” is identified as meaning “the document of that description...” where others e.g. “the engineering drawings and sections” is identified as meaning “the drawings and sections...”.</p> <p>Consider a consistent approach and alter to read “the document of that description...”</p>	Highways England has made amendments to the document definitions for consistency in the updated version of the draft DCO to be submitted at Deadline 2.
DCO 1.2	<i>Part 1, Article 2 Definition of “Commence”</i> (Applicant)	<p>The Explanatory Memorandum (EM) [APP-016] states that it is envisaged that works which are de-minimis and have minimal potential for adverse effects are excluded from the definition of commence. It is not clear from the draft DCO [APP-015] that the works excluded from the definition of commence are limited in this way.</p> <p>Provide a response.</p>	<p>The activities excluded from the definition of ‘commence’ do not include the works themselves and merely comprise investigative, remedial and site mobilisation / preparatory works.</p> <p>The activities excluded from the definition of ‘commence’ are limited. Highways England has further reviewed the activities mentioned and in the draft of the draft DCO submitted at Deadline 2 some have been removed or amended..</p> <p>These are small scale activities in the context of this nationally significant infrastructure project. Highways England does not consider that these activities are likely to generate significant environmental effects. In this regard, Highways England notes</p>

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			<p>the Planning Inspectorate's following comments in Advice Note 15 regarding the use of the term 'commence' within Development Consent Orders:</p> <p><i>"In some decisions the Secretary of State has removed definitions of 'commence' and/or 'preliminary works' which could have allowed for a range of site preparation works (such as demolition or de-vegetation) to take place before the relevant planning authority had approved details of measures to protect the environment under the Requirements"</i>.</p> <p>The definitions were removed because the Secretary of State considered them to be inappropriate, particularly where such advance works were themselves likely to have significant environmental effects, for example, in terms of noise or impacts on protected species or archaeological remains.'</p> <p>Highways England considers that the wording of this definition is therefore consistent with this advice.</p> <p>Highways England has sought to strike this balance by providing that works which are likely to have only minor environmental effects, and which can be commenced expeditiously (without the need for the requirements to be discharged formally). Highways England's position is that it would be disproportionate to delay the timely implementation of the Scheme by requiring such</p>

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			<p>works to be subject to the formal discharge of requirements process.</p> <p>The approach to drafting adopted by Highways England is also consistent with DCO precedent. This approach is reflected in other recently made DCOs such as the M42 Junction 6 DCO 2020 and Southampton to London Pipeline DCO 2020.</p> <p>For these reasons, Highways England considers that meaning and intention of the definition is sufficiently clear, and the exclusions are sufficiently limited.</p>
DCO 1.3	<p><i>Part 1, Article 2 Definition of "Commence"</i> (Applicant)</p>	<p>Archaeological investigations and mitigations are excluded from the definition of "commence". The ExA is concerned that such works could undermine the purpose of Schedule 2, Requirement 9 if such unregulated works had a detrimental effect on any potential archaeological remains discovered which the Requirement is seeking to protect.</p> <p>i) Justify why archaeological investigations are excluded from commencement works.</p> <p>ii) Explain how archaeological investigations would be regulated in the draft DCO. Or;</p>	<p>Archaeological works are generally undertaken in advance of those works considered "<i>after commencement</i>" as they are usually done during pre-commencement and activities such as site clearance, vegetation removal, and/or compound development.</p> <p>Archaeological investigations and mitigations are excluded from the definition of 'commence' because in the context of this Scheme they are minor in nature and not likely to have any significant effects. These are small scale activities in the context of this nationally significant infrastructure project. Any further archaeological works would need to be carried out in accordance with a Written Scheme of Investigation (WSI) approved under Requirement 9 as part of an Archaeological</p>

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		iii) Include “archaeological investigation works” within Schedule 2, Requirement 9 or control these works in another way.	<p>Management Plan (AMP) to be approved under Requirement 4 as part of the CEMP.</p> <p>By these means the substantive archaeological works will be controlled pursuant to the DCO.</p>
DCO 1.4	<i>Part 1, Article 2 Definition of “Commence”</i> (Applicant)	<p>Ecological surveys, mitigation and habitat creation works are excluded from the definition of “commence”. The ExA is concerned that such works could undermine the purpose of Schedule 2, Requirements 4 and 5 if such unregulated works had a detrimental effect on species and habitats which the Requirements are seeking to protect, particularly as site clearance works are also stated as being outside of commencement works.</p> <p>i) Justify why these works are excluded from commencement works.</p> <p>ii) Explain how ecological works, mitigation and habitat creation would be regulated in the draft DCO. Or;</p> <p>iii) Include “ecological surveys, mitigation and habitat creation” within Schedule 2,</p>	<p>i) These are small scale activities in the context of this nationally significant infrastructure project. However, to meet the ExA’s concern Highways England has removed from the definition reference to mitigation and habitat creation works. Reference has been added to amphibian fencing and pre-construction ecological mitigation under licenses instead. The reference to ecological surveys remains as they are not likely to generate significant environmental effect and are necessary to determine what ecological works will be required. This is consistent with the Planning Inspectorate’s comments in Advice Note 15 regarding the use of the term ‘commence’ within Development Consent Orders.</p> <p>ii) Ecological survey work and the erection of amphibian fencing are minor works without significant environmental effects which do not need to be regulated in the DCO. Pre-construction ecological mitigation under licenses would be regulated by the terms of the licences under which the work would be carried out and as such do not need to be regulated in the DCO.</p>

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		Requirements 4 and / or 5 or control these works in another way.	iii) These matters (in so far as not pre-commencement works) will be matters regulated under the CEMP. See the outline CEMP (APP-096) paragraph 4.4.3 that refers to the need for a general ecology plan required for the scheme.
DCO 1.5	<i>Part 1, Article 2</i> <i>Definition of "Commencement"</i> (Applicant)	The ExA considers that works excluded from the definition of commencement should not permit works outside those assessed in the ES. Consider whether pre-commencement works should be limited to those assessed in the ES.	Highways England has reviewed this definition and in the dDCO submitted at this deadline (Deadline 2) all of the activities mentioned in the definition are activities that are not likely to have any significant environmental effects.
DCO 1.6	<i>Part 1, Article 2</i> <i>Definition of "Maintain"</i> (Applicant)	The ExA notes the Applicant's explanation for the definition of "maintain" as set out in the EM [APP-016]. While the ExA accepts the need for the Applicant to undertake maintenance works, the ExA is concerned with the wording "insofar as such activities are unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement". As currently worded, the ExA is concerned that maintenance activities could exceed the Rochdale Envelope of the ES.	The definition of 'maintain' in the dDCO (APP-015) is not exactly as quoted in this DCO question. The definition in the dDCO is: <i>"in relation to any part of the authorised development includes to inspect, repair, adjust, alter, improve, landscape, preserve, remove, reconstruct, refurbish or replace, provided such works do not give rise to any materially new or materially different environmental effects to those identified in the environmental statement, and any derivative of "maintain" is to be construed accordingly;"</i> Please note Highways England seeks to amend the definition of "maintain" as shown in the revised draft DCO submitted at

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		<p>i) Explain what is meant by “materially new or materially different”.</p> <p>ii) Who would be the arbiter or assessor to determine whether such maintenance works were or were not “materially new or materially different”, and how would this be secured in the draft DCO [APP-015].</p> <p>iii) Explain whether the relevant planning authority would have any role in checking whether maintenance works, individually or collectively, would be “materially new or materially different” and how would this be secured in the draft DCO.</p> <p>iv) Explain how the definition as worded would prevent the renewal, reconstruction or replacement of the entirety of the authorised works.</p> <p>The ExA recommends the Applicant insert suitable wording in the draft DCO to ensure maintenance works do not allow point iv) above from occurring. "</p>	<p>Deadline 2, to include decommissioning in response to comments from Cadent Gas Limited.</p> <p>In response to i), an effect which is ‘materially new’ relates to an effect which was not reported in the Environmental Statement (ES) certified by the Secretary of State, but which is significant in EIA terms. An effect which is ‘materially different’ relates to an effect which was reported in the ES but in respect of which there is a change in the significance attributed to the effect from that reported in the ES. This was noted in the letter from Department of Transport in respect of A19/A184 Testo’s Junction Alteration Order in respect of discussions over the term ‘materially different that <i>“the recommended wording would allow the necessary scope for changes that are better for the environment providing such changes do not result in significant effects that have not already been previously identified and assessed in the Environmental Statement.”</i></p> <p>This form of wording was identified in the A19 / A184 Testos Junction Improvement Order 2018 to be the preferred wording of the Secretary of State and preceded in a number of made Orders, including the recently made A38 Derby Junctions DCO 2021.</p> <p>ii) Just as it is for Highways England to ensure that it is building the project within the physical and environmental limits set by the DCO, it would be for Highways England to consider and</p>

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			<p>determine whether a particular maintenance activity would result in a materially new or materially different effect and, where appropriate, Highways England would consult with relevant bodies to ensure compliance with any legal requirements. It is a criminal offence to breach the terms of a DCO and so there would be a strong incentive on Highways England to stay clearly within its terms.</p> <p>iii) The relevant planning authority would have no formal role in checking whether maintenance works, individually or collectively would be materially new or materially different. It would be upon Highways England to ensure that any proposed maintenance activity complies with the terms of the DCO and/or legislative requirements and it would therefore need to make an informed and responsible determination about whether a particular maintenance activity (individually or collectively) would result in a materially new or materially different effect to that reported in the ES.</p> <p>iv) Highways England does not believe that the definition of “maintain” as drafted would allow for the renewal, reconstruction or replacement of the entirety of the authorised works. Plainly this is a highly unlikely scenario but the proviso in the definition of “maintain”, that any maintenance works must not give rise to any materially new or materially different environmental effects</p>

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			to those assessed in the ES, would apply so as to preclude Highways England from doing so.
DCO 1.7	<i>Part 1, Article 2</i> <i>Absence of "Secretary of State" definition"</i> (Applicant)	Explain whether a definition for the "Secretary of State" should be imposed to mean "the Secretary of State for Transport".	Highways England has included a definition of the Secretary of State in the updated version of the draft DCO to be submitted at Deadline 2.
DCO 1.8	<i>Part 2, Article 6</i> <i>Planning Permission</i> (Applicant)	<p>This Article as worded would permit the undertaker to obviate the need to apply to change the DCO through s153 of the PA2008. The ExA does not find this is justified.</p> <p>Provide an explanation or justification for this Article or amend accordingly."</p>	<p>Highways England believes it is necessary to include this provision to ensure it is clear that where it needs to obtain any other planning permission relating to the project, the implementation of that planning permission will not constitute a breach of the terms of this Order. This article has become standard for recently consented Development Consent Orders (DCOs) (see, for example, article 8 of the Tees Combined Cycle Power Plant Order 2019, article 11 of the M42 Junction 6 Development Consent Order 2020 and article 40 of the Southampton to London Pipeline Development Consent Order 2020).</p> <p>The DCO process provides for two types of development to be consented: the Nationally Significant Infrastructure Project itself, which can only be consented by way of a DCO, and associated</p>

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			<p>development required to support the construction or operation of the principal development, or to mitigate its impacts. It is possible for works of associated development to be consented through alternative regimes such as the Town and Country Planning Act 1990. If planning permission for such associated development is obtained, then compliance with that planning permission is not taken to be a breach of the terms of the DCO.</p>
DCO 1.9	<i>Part 2, Article 7 Limits of Deviation</i> (Applicant)	<p>The EM [APP-016] states that the ability to deviate within the prescribed limits of deviation is important to ensure that, if the precise 'as-built' alignments or elevations are slightly different to those indicatively shown on the Works plans, then no question arises as to whether or not the Works are permitted by the Order.</p> <p>The ExA is concerned with that explanation, as it does not explain or justify why these vertical limits have been set at 1m, 1.5m in connection with Work No.18 and 2m for Work No.17. The ExA is unclear why additional flexibility is required to that already incorporated with the limits of the deviation as indicated on the Works plans [APP-006] or whether the limits requested represent "a proportionate degree of flexibility".</p>	<p>i) Highways England has carefully considered the degree of flexibility that it requires to undertake the Scheme. In identifying the vertical limits of deviation in article 7 Highways England has, as far as possible, sought to provide appropriate allowance/flexibility in defining those limits. The LoD reflect the current level of design and the complexity of the Scheme. The site is heavily constrained in engineering terms, in particular by existing infrastructure, water features and geometric standards. The Scheme also involves a complex interface between the proposed loop road and the realigned A12 off slip and flexibility would be appropriate to accommodate any changes in detailed design. As such the LoDs proposed are to enable the Scheme to be constructed within the constraints and so that they do not frustrate the Scheme.</p> <p>The approach taken by Highways England is well precedented for other schemes, whether consented by way of DCO, Transport and Works Order, or private or hybrid bill (for example</p>

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		<p>i) Justify the need for additional 1m / 1.5m / 2m of additional limits of deviation.</p> <p>ii) Explain what process is in place for the SoS to determine whether exceeding the vertical limits would not give rise to any materially new or materially worse adverse environmental effects.</p> <p>[N.B – the ExA is aware of the Applicant's request at Procedural Deadline A [PDA-001] of its intention to submit a change request which would delete Work No.17 from the application. However, until such a change is formally requested, the question remains relevant.]</p>	<p>in the recently made A38 Derby Junctions Development Consent Order 2021 and The A585 Windy Harbour to Skippool Highway Development Consent Order 2020 and The A30 Chiverton to Carland Cross Development Consent Order 2020). It provides the required certainty within the dDCO whilst, at the same time, providing Highways England with the necessary and required flexibility to be able to build and deliver this NSIP. Without this flexibility, Highways England would be unduly constrained to deliver the Scheme.</p> <p>A 2 m Limit of Deviation has been identified as necessary for sections of Work Number 6 and Work Numbers 17, while Work Number.18 has a 1.5 m LoD. These are necessary to accommodate additional earthworks material generated to be used within the Scheme rather than being disposed off site. This would reduce the materials and waste being disposed off site and reduce the lorry movements on the local road network. These limits are appropriate because to go beyond them is likely to generate adverse environmental effects as regards to those Works.</p> <p>The changes which are currently proposed to Work Numbers 17 and 18 aims to rationalise this approach and provide additional environmental benefits.</p>

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			<p>All of the LoDs included within the draft DCO have been environmentally assessed and this is set out within the ES (see paragraph 2.4.2 of Chapters 1 to 4 of the ES (APP-26)).</p> <p>ii) there is no formal process in place for the Secretary of State to make determinations under the exception provision in article 7 and Highways England does not consider that there needs to be. This approach has been accepted in the context of previously made DCOs and Highways England has not sought to depart from this approach (see most recently The Southampton to London Pipeline Development Consent Order 2020, The A303 (Amesbury to Berwick Down) Development Consent Order 2020 and The A38 Derby Junctions Development Consent Order 2021).</p> <p>In terms of the process that would be followed, in the first instance it would be incumbent upon Highways England to satisfy itself that a deviation in excess of the limits in article 7(1) would not give rise to any materially new or materially different environmental effects from those reported in the ES and to compile such evidence as may be necessary to demonstrate this fact to the Secretary of State. The product of that work would be packaged up in a submission to the Secretary of State, who would need to consider (in consultation with the relevant planning authority) whether he agrees with the view that the environmental effects of the deviation would not give rise to</p>

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			<p>effects which are materially new or materially different to those set out in the ES, such that he can issue a certificate under the article.</p> <p>As noted, where this article has been included in previously made DCOs, Highways England is not aware that a specific process for referrals to the Secretary of State has been defined in the DCO. This is for a good reason. It enables the Secretary of State to consider such requests on a case-by-case basis and in a manner which is proportionate to the case under consideration.</p>
DCO 1.10	<i>Part 2, Article 9 Transfer of benefits etc (Applicant)</i>	<p>The ExA is concerned that this power is too broad and should at least be subject to approval before any such transfer to grant took place. TfL in its RR [RR-028] expresses similar concerns.</p> <p>i) Explain the circumstances in which Article 7 is likely to apply.</p> <p>ii) Explain why it is considered unnecessary to obtain the consent of the SoS prior to a transfer or grant to the specified companies.</p> <p>iii) Respond to the comments raised by TfL in its RR on this matter.</p>	<p>i) The circumstances in which article 9 (we take it that this is the article that was intended to be referred to) is likely to apply are where the transfer or grant of the benefit of the Order would enable a statutory undertaker, whose apparatus is required to be diverted, to do so the works itself, or for a statutory body to undertake works that would usually fall within its remit. For those organisations known to require works the specific works have been identified at article 9(4) but for others, this article enables the transfer or grant to take place provided that the consent of the Secretary of State is obtained.</p> <p>ii) Further to the explanation given at paragraph 5.30 of the explanatory memorandum (APP-016) the removal of the need for later consent by the Secretary of State prior to the transfer or</p>

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		<p>iv) As the CA and TP powers can be transferred to these bodies without consent, explain how the SoS can be satisfied that the future companies would have sufficient funds to meet these costs.</p>	<p>grant to the specified companies of the benefits of the order is justified by the fact that such consent is sought for the purposes of this application for development consent. Accordingly interested parties, the Examining Authority and ultimately the Secretary of State will have had an opportunity to consider the appropriateness of this power to transfer the benefit of the order as part of this application and therefore avoid an unnecessary administrative burden at a later stage. Further the bodies referenced in 9(4) are all reputable and either public bodies or regulated utility companies. This provision is preceded in a number of DCOs including the recently made The A30 Chiverton to Carland Cross Development Consent Order 2020 and The A38 Derby Junctions Development Consent Order 2021.</p> <p>iii) Highways England has responded to the comments raised by TfL in its RR on this matter – please see Response to RR-028 (REP1-002).</p> <p>iv) The bodies listed are two well-known Statutory Undertakers and the Environment Agency. This is a precautionary provision as the named bodies already have wide ranging powers, including statutory powers to compulsorily acquire land or interests in / rights over land to carry out their functions. As set out above this approach to drafting is well preceded.</p>

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DCO 1.11	<i>Part 3, Article 13 Temporary alteration, diversion and restrictions of the use of streets (Applicant)</i>	<p>The ExA considers the powers conveyed in this Article are broad and imprecise.</p> <p>i) Explain why the power is necessary for this specific project.</p> <p>ii) Set out in a Schedule which streets this power would apply to.</p> <p>iii) In any event, justify why the power is appropriate and proportionate having regard to the impacts on pedestrians and others of authorising temporary working sites in these streets.</p>	<p>i) The power in article 13 is necessary as it would offer Highways England flexibility to undertake any necessary alterations, diversions, restrictions without going through the process of temporary possession before doing so. Also, to use the street as a temporary working site is often less disruptive, and has less of an environmental impact, than taking possession of a private individual's land to lay out a work site. This is particularly the case for minor activities, such as the storage of plant, apparatus and vehicles. If these are not stored on streets, then additional land would have to be occupied instead.</p> <p>Such temporary work sites would require the consent of the street authority under article 13(4) and be regulated through requirements, for example the CEMP and this has been assessed in the Environmental Statement.</p> <p>Highways England has proposed an amendment to this article within its updated draft DCO submitted at this Deadline 2 (TR010029/APP/3.1(1)). The change is one to clarify that this article also includes closures. This reference to 'closures' and 'stopping up' are standard terms within this article and whilst Highways England considers 'restrictions' to include temporary closures it is helpful to now include reference to restrictions to avoid any uncertainty and for consistency with other made DCOs.</p>

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			<p>ii) 13(1) would apply to any street even those outside of Order limits and 13(2) applies to any part of a street within the Order limits being the following:</p> <ul style="list-style-type: none"> i. Parts of M25 ii. Parts of A12 iii. Small extents of Brook Street iv. Small extents of Woodstock Avenue v. Small extents of Willow Way vi. Small Extents of Maylands Way vii. Small extents of The Parade <p>iii) The use of this power is appropriate and necessary for the actions required. See response to l) above which explains why it is less disruptive and the appropriate safeguards in 13 (3) and (4) ensure that it is proportionate. The draft DCO provides Highways England with power to take temporary possession of all land within the Order limits under articles 35 and 36.</p>
DCO 1.12	<i>Part 3, Article 11 and 16 Schedule 4,</i>	In its RR [RR-028], TfL have a raised a number of concerns primarily regarding evidence to justify why TfL should assume ownership of the proposed A12 off slip road, and the confusing	As set out in response to Relevant Representation RR-028 (REP1-002) Highways England is currently in ongoing discussions with TfL regarding the proposed ownership and maintenance responsibilities of new infrastructure. The existing

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	<i>Part 1 GLA Roads</i> (Applicant)	<p>nature of Article 11(4) and to what in particular it refers to. TfL go on to say that a separate agreement will be required to deal with ongoing responsibilities between TfL and the Applicant.</p> <p>Provide a response.</p>	<p>A12 eastbound off-slip is currently part of the TfL network, not the strategic road network and Highways England considers it appropriate to replicate the existing position.</p>
DCO 1.13	<i>Part 4, Article 23 Trees and hedgerows</i> (Applicant)	<p>The ExA is concerned regarding the Applicant's overall approach to tree felling and management. The ExA considers the Article is imprecise and ambiguous. The ExA considers that where it is known that specific trees need to be removed, they should be listed in a Schedule and this Article should be amended to refer to the Schedule. The SoS raised similar concerns in their consideration of the A63 Castle Hill Improvement Scheme [SI:2020 No.556]. Furthermore, an additional paragraph should also be added to this Article to the effect that any other trees should only be removed once the prior consent has been obtained.</p> <p>i) Justify the powers in the current drafting having regard to the SoS's previous concerns at the use of such wide powers.</p>	<p>i) This power is a well presented general power and is included in numerous orders. The effect of the proposals on trees is described in detail in the Arboricultural Impact Assessment (APP-063) which the SoS will have taken into account in determining whether to make the Order. That being the case it would not be appropriate for restrictions on the felling or lopping of trees to stand in the way of the Scheme being delivered in a timely and efficient manner. Where a tree or group of trees is subject to a TPO then again the SoS will have taken that into account in his determination of the application. The draft DCO would operate in a similar nature to a Planning Permission overriding any restriction in a Tree Preservation Order (TPO). In addition, the power would ensure a future TPO does not stand in the way of the delivery of this nationally significant scheme.</p> <p>ii) It would allow Highways England to do this provided any part of the tree overhangs land within the Order limits</p> <p>Highways England also notes that this power has become standard for recently consented Development Consent Orders,</p>

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		ii) Explain whether the term “cut back its roots” would only apply to roots within the Order limits. Or; iii) Amend the wording in this Article accordingly to address the concerns raised.	see for example article 17(1) of the A303 (Amesbury to Berwick Down) Development Consent Order 2020, article 39(1) of the M42 Junction 6 Development Consent Order 2020 and article 35(1) of the A19 Downhill Lane Junction Development Consent Order 2020. iii) There are commitments in the REAC (APP-097) Table 1.1, pages 8, 9, 17 and 29 to ensure that trees within the Order limits are protected as appropriate according to the Tree Protection Plans, Appendix C of the AIA (APP-063).
DCO 1.14	<i>Part 5, Article 28 compulsory Acquisition of rights and imposition of restrictive covenants Applicant)</i>	The ExA wants to be assured that this Article would not enable the creation of undefined new rights or restrictive covenants and must ensure that either a Schedule detailing each of these rights or restrictions is included in the draft DCO [APP-015], or the description of each right and restriction is clearly set out in the BoR [AS-021]. Provide this reassurance or amend accordingly.	Although this is well precedented in Great Yarmouth Third River Crossing Development Consent Order 2020, Lake Lothing (Lowestoft) Third Crossing Order 2020 and Carland Cross DCO 2020 and the A303 Stonehenge DCO 2020, Highways England is considering further its position as regards restrictive covenants and whether they may be appropriate as regard any land within the Order limits
DCO 1.15	<i>Part 5, Article 29 Compulsory</i>	The ExA is concerned the powers conveyed by this Article are too wide in granting powers to	The paragraph from the SoS decision on M4 motorway is in reference to article 22 of that Order which is headed ‘compulsory acquisition of rights’. It is unclear if the ExA intended to ask a

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	<i>acquisition and extinguishment of rights</i> (Applicant)	<p>create new rights and restrictive covenants over all the Order Land.</p> <p>Paragraph 62 of the M4 Motorway (Junctions 3 to 12) (Smart Motorway) [SI:2016 No.863] of the SoS's decision states: "The SoS considers that it is appropriate to remove the power to impose restrictive covenants and related provisions as he does not consider that it is appropriate to give such a general power over any of the Order land as defined ... in the absence of a specific and clear justification for conferring such a wide-ranging power in the circumstances of the proposed development and without an indication of how the power would be used".</p> <p>i) Justify the power as worded; Or;</p> <p>ii) Amend to reflect the M4 Motorway (Junctions 3 to 12) (Smart Motorway) DCO) as previously approved by the SoS.</p>	question on article 29 or 28 of the draft DCO for the Scheme. We respectfully ask the ExA to clarify the question.
DCO 1.16	<i>Part 5, Article 37 Crown</i>	As no power exists for any party "to take" Crown land, consider whether these words should be removed from the Article.	Highways England does not consider that an amendment to this article is necessary given that the words 'to take' in the context of this article also relates to the powers to take temporary possession of land in articles 25 and 36 of the dDCO (APP-015).

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	<i>rights</i> (Applicant)		Highways England notes that the words 'to take' is well precedented and appears in article 45 (Crown rights) of the recently made A38 Derby Junctions Development Consent Order 2021 and article 32 of the Southampton to London Pipeline Development Consent Order 2020.
DCO 1.17	<i>Part 5, Articles 38 and 39 Statutory undertakers and apparatus</i> (Applicant)	<p>Where a representation is made by a Statutory Undertaker under s127 of the PA2008 and has not been withdrawn, the SoS will be unable to authorise powers relating to Statutory Undertaker land unless satisfied of specified matters set out in s127. If the representation is not withdrawn by the end of the Examination, confirmation will be needed that the "expedience" test is met. The SoS will also be unable to authorise removal or repositioning of apparatus unless satisfied that the extinguishment or removal is necessary for the purpose of carrying out the development to which the order relates in accordance with s138 of the PA2008.</p> <p>In these circumstances, justify the powers conveyed by this Article.</p>	<p>Highways England continues to engage with Statutory Undertakers, including those who have made representations, and hopes to agree protective provisions or enter into agreements before the close of examination to allow withdrawal of their representations.</p> <p>Article 38 (Statutory undertakers) of the draft DCO (APP-015) permits Highways England to acquire land and rights, and to extinguish of rights belonging to statutory undertakers (within the Order land). subject to the Secretary of State's assessment under s127 of the PA2008. This power is justified on the basis that it permits the Scheme to be implemented. The power sought by Highways England is further limited in three respects.</p> <p>1. It is subject to the protective provisions which Highways England continues to negotiate with several statutory undertakers. The protective provisions are designed to protect the assets of statutory undertakers and to avoid serious detriment to the carrying on of their undertakings.</p>

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			<p>2. Article 38 is subject to article 28 and Schedule 6 to the draft DCO which limits the plots over which Highways England may create or extinguish rights.</p> <p>3. The power in article 38 does not extend to rights or apparatus in streets. This means that, within streets, statutory undertakers continue to receive the benefit of the provisions in Part 3 of the New Roads and Street Works Act 1991 subject to the dis-applications in article 10 of the draft order.</p> <p>Article 39 (Apparatus and rights of statutory undertakers in stopped up streets) is justified on the basis that it preserves the rights of statutory undertakers in streets. This Article is primarily concerned with protection of Statutory Undertakers Rights rather than conferring powers on Highways England. Without this article, there is a risk that statutory undertakers lose their rights to access their apparatus.</p>
DCO 1.18	<i>Part 5, Article 41 Special category land (Applicant)</i>	As currently drafted, the draft DCO [APP-015] provides that special parliamentary procedure should not apply (before authorising CA of land or rights in land being special category land) with the Applicant relying on s132 of the PA2008. In these circumstances, the SoS will need to be satisfied that certain conditions under s132 (2) are met.	<p>i) Section 7.2.10 of the Statement of Reasons (APP-019) sets out the justification as to how Highways England considers that the land will be no less advantageous and why it is considered that replacement open space is not provided.</p> <p>ii) In its forthcoming Change Request Highways England is not proposing to take rights over the entirety of Plot 1/8, but a lesser amount with the remainder to be subject to powers of temporary possession. The amount of land within Plot 1/8 still to be subject</p>

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		<p>i) Provide full details to the support the application of the relevant subsections in s132, for example:</p> <ul style="list-style-type: none"> - Where it is argued that land will be no less advantageous when burdened with the order right, identifying specifically the persons in whom it is vested and other persons, if any, entitled to rights of common or other rights, and clarifying the extent of public use of the land; and - where it is argued that any suitable open space land to be given in exchange is available only at prohibitive cost, identifying specifically those costs. <p>ii) Justify why such “so much of the special category land as is required...” when the BoR [AS-021] only lists plot 1/8 as falling within this category.</p>	<p>to the acquisition of rights is commensurate with progress made upon the detailed design of the high pressure gas pipeline within this Plot as in the response to GQ1.7.</p>
DCO 1.19	<i>Articles 18, 19, 22, 35 and Schedule 2 Requireme</i>	<p>In its RR [RR-028], TfL considers the consultation dates as specified to be too short. It has cited the Silvertown Tunnel Order [SI:2018 No.574] as evidence of the SoS accepting longer timescales.</p>	<p>Highways England considers these timescales to be appropriate for the actions required. They are in line with other recently consented Development Consent Orders.</p>

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	<i>nt 17</i> (Applicant)	Provide a response.	<p>TfL raised, in its RR, that the timescales were not sufficient, Highways England has provided a response to each of these in turn within its response to the RR (REP1-002).</p> <p>Since submission of the Response to RR, Highways England has considered TfL's comments further in respect of Schedule 2, requirement 17 and whilst Highways England considers any request for consultation in accordance with the DCO Requirements would be a final formality on issues about which TfL would already be aware Highways England proposes to amend the time period in line with other recently made DCOs, namely A63 (Castle Street Improvement, Hull) DCO 2020 and London to Southampton pipeline DCO 2020 to 21 days. Please see the updated draft DCO submitted at this Deadline 2 (TR010029/APP/3.1(1)).</p>
Schedules			
DCO 1.20	<i>Schedule 2</i> (Applicant)	The standard drafting for articles dealing with the discharge of requirement found in the Inspectorate's Advice Note 15 has not been used and the EM [APP-016] does not provide a reason for this.	<p>The requirements in Schedule 2 reflect the processes and procedures usually employed by Highways England when implementing a scheme such as this.</p> <p>Part 2 of Schedule 2 (Requirements 13-17) provides a clear procedure for the discharge of requirements by the Secretary of State. It sets out clear time limits for decisions to be made and makes provision for circumstances where the Secretary of State</p>

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		Respond particularly in respect to the 'deemed discharge' element.	<p>requires further information to be provided in relation to an application for the discharge of a requirement.</p> <p>The wording at Schedule 2, requirement 13(2),(3) of the draft DCO in respect of 'deemed discharge' has become standard for recently consented Development Consent Orders see, for example, Schedule 2, requirement 27(2),(3) of the M4 Motorway (Junctions 3 to 12) (Smart Motorway) Development Consent Order 2016, Schedule 2, requirement 15(2),(3) of the M42 Junction 6 Development Consent Order 2020 and Schedule 2, requirement 18(2),(3) of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020 and requirement 22(2) of the A303 Sparkford to Ilchester Dualling Development Consent Order 2021.</p> <p>It is necessary and reasonable to have such a provision to prevent any delay to the Scheme simply on the basis that no consultation response has been forthcoming. This applies only in respect of applications that do not give rise to any materially new or different environmental effects. Where these occur, the application is deemed to be refused in the absence of a response within the relevant time period (see requirement 13).</p>
DCO 1.21	<i>Schedule 2, Part 1 Interpretatio</i>	The "HEMP" is identified as meaning "Handover Environmental Management" (Plan) referred to in Schedule 10. No such document is before the	The reference to Schedule 10 in the definition of HEMP in the draft DCO was an error and has been removed in the updated version of the draft DCO submitted at deadline 2. The HEMP is

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5. Draft Development Consent Order (draft DCO)			
	<p><i>n</i> (Applicant)</p>	<p>ExA and the HEMP is not listed in Schedule. It is not clear whether the HEMP is a standalone document or to form art of the CEMP secured by Requirement 4.</p> <p>Rectify.</p>	<p>not listed in Schedule 10 as it will not exist at the time to Order is made.</p> <p>The HEMP functions as the equivalent of the Construction Environmental Management Plan (CEMP) for the operational period of the Scheme, i.e. post-construction. Its preparation is secured by Requirement 4 by the following paragraph references in the updated draft DCO submitted at deadline 2.</p> <p>Under Requirement 4(5) of the updated draft DCO, the CEMP must contain a process for the development of the HEMP. Under Requirement 4(1), the CEMP will be subject to consultation with the relevant planning authority and local highway authority. As the CEMP also requires written approval from the Secretary of the State he will need to be satisfied that the process for developing the HEMP is satisfactory.</p> <p>The HEMP is dependent on the development of the detailed design and the construction methodologies. The HEMP will also detail the operational requirements identified in Table 1.4 of the REAC (APP-097) and the aftercare requirements specified by the Principal Contractor to ensure appropriate monitoring and maintenance of the Scheme.</p> <p>The requirement for a HEMP in respect of this Scheme is consistent with other recent Highways England schemes that have been authorised by way of a DCO including the M42</p>

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			<p>Junction 6 Development Consent Order 2020, the A63 (Castle Street Improvement, Hull) Development Consent Order 2020, and the A303 (Amesbury to Berwick Down) Development Consent Order 2020.</p>
DCO 1.22	<p><i>Schedule 2, Part 1</i> (Applicant) (All Relevant Planning Authorities) (Transport for London)</p>	<p>Requirements 3 through 12 requires the SoS to be the determining authority for the discharge of the said Requirements.</p> <p>Explain why the Local Authorities would not have responsibility for the discharge of these Requirements.</p>	<p>As drafted, approvals are to be sought from the Secretary of State for Transport, following consultation with the local planning authority and / or other relevant third party. This is consistent with the processes and procedures employed by Highways England when implementing a scheme such as this.</p> <p>The Requirements reflect arrangements with the Department for Transport. In June 2016, the Department for Transport agreed to be the competent authority signing off compliance with the requirements for DCOs concerning the strategic road network. The process was established through the A14 Cambridge to Huntingdon Improvement scheme and M4 Motorway (Junctions 3 to 12) (Smart Motorway) scheme promotions and that model is now available for other Highways England DCO schemes, and there is now a specific team in the Department for Transport the purpose of which is to fulfil this function, hence the inclusion in the draft DCO of the same provisions.</p> <p>As the Secretary of State's internal team deals with Highways England schemes across the whole of England and is experienced in dealing with a wide variety of circumstances. It is</p>

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			<p>not reasonable to argue that this Scheme should be exempted from a national process without a very compelling reason; and Highways England does not consider such a compelling reason exists for this scheme.</p> <p>Schedule 2, requirement 17 of the draft DCO provides that, when submitting details to the Secretary of State for approval, Highways England must submit to the Secretary of State details of the consultation undertaken by Highways England pursuant to the requirements. Consequently, the Secretary of State will be fully informed of all consultation undertaken relating to the discharge of each requirement and will be in a position to decide whether or not to undertake separate consultation on a case-by-case basis.</p>
DCO 1.23	<i>Schedule 2, Requirements 3, 4, 5, 6 and 8 (Applicant)</i>	<p>In its RR [RR-028], TfL states that it should be a consultative body in discharging Requirements 3 (design); 4 (CEMP); 5 (LEMP); 6 (contaminated land) and 8 (drainage).</p> <p>i) In pursuance of WQ DCO 1.22 above, explain whether this would be necessary if the relevant planning authority and not the SoS were to be the determiner.</p>	<p>i) Where appropriate TfL is included as a consultee in the requirement. Hence there is a need to consult TfL as a relevant highway authority under Requirement 10. In the updated draft DCO they are included as the relevant highway authority to be consulted on the CEMP (Requirement 4). This approach would apply regardless of who the determining body is.</p> <p>ii) Highways England is currently in ongoing discussions with TfL regarding the proposed responsibilities of both organisations, in particular regarding ownership and maintenance responsibilities. This, in turn, will inform discussions on any consultation with TfL</p>

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		ii) Respond to the request and amend if applicable.	that may be appropriate within the requirements. See Response to RR-028 (REP1-002).
DCO 1.24	<i>Schedule 2, Requirement 3(1)</i> (Applicant)	<p>The ExA is concerned with the term “compatible”. This is a broad and wide definition which potentially allows significant departures from the design documents and thus to the ES to occur without examination. It is imprecise and not justified.</p> <p>Replace the word “compatible” with “in accordance”</p>	<p>Highways England considers that the use of the term ‘compatible’ in Requirement 3 (Detailed design) of the dDCO is appropriate. It is also precedented.</p> <p>Requirement 3 provides that the authorised development (i.e. the Scheme) must be designed in detail and carried out so that it is compatible with the preliminary scheme design shown on the works plans, the scheme layout plans and the engineering drawings and sections. This is subject to the ability of the Secretary of State, following consultation with the relevant planning authority, to approve variations to the detailed design of the Scheme, provided that any such variations do not give rise to any materially new or materially different environmental effects (i.e. environmental effects which have not been assessed in the environmental statement).</p> <p>Requirement 3 therefore provides Highways England with a proportionate level of flexibility in the detailed design of the Scheme, which is necessary and indeed appropriate in the delivery of complex major infrastructure projects. It is also in the public interest that Highways England is provided with a degree of flexibility, within the envelope of the environmental statement,</p>

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			<p>to develop the detailed design of the Scheme in the most appropriate manner.</p> <p>Moreover, the use of this term is included in other made development consent orders, for example, schedule 2, requirement 12(1) of the A30 Chiverton to Carland Cross Development Consent Order 2020, schedule 2, requirement 3(1) of the M42 Junction 6 Development Consent Order 2020 and schedule 2, requirement 12(1) of the A38 Derby Junctions Development Consent Order 2021.</p>
DCO 1.25	<p><i>Schedule 2, Requirements 4, 8, 9 and 10</i> (Applicant) (All relevant Planning Authorities)</p>	<p>Section 4.4 of the outline CEMP [APP-096] sets out those documents where “it is expected that some or all of the following [Environmental Control Plans] ECPs will be prepared, as appropriate, for the Scheme as part of the final CEMP”. The ExA considers this statement to be weak and non-committal and potentially allows for environmental plans to be avoided when discharging the Requirement 4. This is explored further in other questions.</p> <p>i) Explain why the HEMP does not form one of the listed documents in the outline CEMP yet is part of Requirement 4.</p>	<p>i) The HEMP functions as the equivalent of the CEMP for the operational period of the Scheme i.e. post-construction. It does not form part of the outline CEMP and will not form part of the final CEMP but will be a document prepared in the later stages of construction, prior to the operation of the Scheme. The HEMP is developed according to the process to be established in the CEMP (as secured by Requirement 4) and the REAC (APP-097) which will address the environmental matters set out in the approved CEMP that are relevant to the operation and maintenance of the authorised development. Figure 2.1 in the Outline CEMP (APP-096) illustrates the interdependencies between the Outline CEMP, CEMP and HEMP.</p> <p>ii) The Surface Water Management Plan (SuWMP) determines how the effects of the Scheme on the water environment is to be</p>

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		<p>ii) Explain why the SWMP is to be discharged against Requirement 4 and not Requirement 8.</p> <p>iii) Explain why the Archaeological Control Plan (ACP) is to be discharged against Requirement 4 and not Requirement 9.</p> <p>iv) Explain why the LEMP is to be discharged against Requirement 4 when it forms its own Requirement (Requirement 5).</p> <p>v) Consider listing in Requirement 4 those other documents which will form part of the suite of documents in the CEMP to be approved.</p> <p>vi) Explain whether such documents should be added to the list of Certified Documents in Schedule 10.</p>	<p>managed during construction. It is therefore more appropriate that the SuWMP forms part of the CEMP and the timing of its production be covered by Requirement 4. Requirement 8 is drafted to secure a properly functioning drainage system for the operation of the Scheme.</p> <p>iii) The ACP is a document which will ensure the construction related to mitigation measures and actions related to archaeology set out in the REAC are successfully implemented on site. An Outline Archaeological Management Plan (previously named as ACP) will be included in the revised version of the outline CEMP to be submitted at Deadline 3a as part of a set of environmental control plans in the Outline CEMP hence control via Requirement 4 as opposed to Requirement 9 although Highways England acknowledges that as an alternative approach Requirement 9 could be amended to achieve the same result.</p> <p>iv) The final version of the LEMP will be a standalone document substantially in accordance with the management objectives, targets and prescriptions set out in the Outline LEMP (APP-072) and reflecting the mitigation measures set out in the Register of Environmental Actions and Commitments (REAC) (APP-097). The production of the LEMP is secured through, and discharged under, Requirement 5 of the draft DCO (APP-015).</p>

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			<p>The updated Outline CEMP to be submitted at Deadline 3a will refer to the production of the LEMP as a standalone document as per Requirement 5 of the dDCO.</p> <p>v) Highways England has revised the wording of Requirement 4 in the dDCO submitted at Deadline 2 to list the plans which will form part of the suite of documents in the CEMP.</p> <p>vi) The certified documents at Schedule 10 to the DCO are documents forming part of the DCO application which will be certified by the Secretary of State should the Order granting development consent be made. The Outline CEMP and the Environmental Statement appendices (of which the outline LEMP is Appendix 7.16 (APP-072)) are listed in Schedule 10. Environmental Control Plans which will form part of the final CEMP (see Appendix F of the Outline CEMP (APP-096)) will be developed and implemented by the Principal Contractor during the detailed design and construction stages. Accordingly, it would not be appropriate for them to be listed in Schedule 10.</p>
DCO 1.26	<i>Schedule 2, Requirement 4(1)</i> (Applicant)	The ExA is concerned with the wording “substantially in accordance”. “Substantially” is an interpretive word which potentially allows significant departures from the Outline CEMP and thus the ES to occur without examination. It	<p>The use of the term “<i>substantially in accordance with</i>” in requirement 4 of the draft DCO is both proportionate and precedent</p> <p>Requirement 4(1) provides that the CEMP must be substantially in accordance with the Outline CEMP. As the CEMP is subject to approval of the Secretary of State, following consultation with the</p>

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		is imprecise and not justified. Delete the word "substantially".	<p>relevant planning authority, whether the CEMP submitted for approval is substantially in accordance with the outline CEMP will be a matter for the Secretary of State to take into account in approving the CEMP under the requirement.</p> <p>Requirement 4 therefore provides Highways England with a proportionate level of flexibility in the construction practices, which is necessary and indeed appropriate in the delivery of complex major infrastructure projects. It is also in the public interest that Highways England is provided with a degree of flexibility, within the envelope of the environmental statement, to construct the Scheme in the most appropriate manner.</p> <p>The wording at Schedule 2, requirement 4 of the draft DCO has become standard for recently consented Highways England development consent Orders (see, for example, Schedule 2, requirement 4(4) of the M42 Junction 6 Development Consent Order 2020, Schedule 2, requirement 4(1) of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020, and Schedule 2, requirement 4(6) of the A303 (Amesbury to Berwick Down) Development Consent Order 2020) and requirement 3(2) (A303 Sparkford to Ilchester Dualling Development Consent Order 2021).</p>
DCO 1.27	<i>Schedule 2, Requireme</i>	The HEMP appears to form part of the CEMP yet no such document is included with the outline	Requirement 4 does not require the HEMP to be in accordance with the CEMP (or the outline CEMP). It requires the HEMP to

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	<i>nt 4(4)</i> (Applicant)	CEMP [APP-096]. The ExA is concerned the Requirement as worded is flawed as the approved HEMP cannot be "in accordance" with a document that does not exist. Provide a response.	be developed in accordance with the process set out in the CEMP as approved by the SoS. Please see Highways England's response to written question DCO 1.21.
DCO 1.28	<i>Schedule 2, Requirements 5(2)</i> (Applicant)	<p>The ExA is concerned with the wording "must reflect". They are interpretive words which potentially allows significant departures from the Outline LEMP and thus the ES to occur without examination. It is imprecise and not justified.</p> <p>Replace "must reflect" with "must be in accordance with".</p>	<p>The use of the term "<i>must reflect</i>" in requirement 5 of the draft DCO is appropriate. It is also precedented.</p> <p>Requirement 5(2) provides that the landscaping scheme and LEMP must reflect the mitigation measures set out in the REAC. Under requirement 5(1), the landscaping scheme and LEMP is subject to approval of the Secretary of State, following consultation with the relevant planning authority. Accordingly, in approving the landscaping scheme and the LEMP the Secretary of State will determine whether they adequately reflect the mitigation measures in the REAC and are in substantial accordance with the Preliminary Environmental Design and the Outline LEMP.</p> <p>Requirement 5(2) therefore provides Highways England with a proportionate level of flexibility in the details of the landscaping of the Scheme, which is necessary and appropriate in the delivery of complex major infrastructure projects. It is also in the public interest that Highways England is provided with a degree of flexibility, within the envelope of the environmental statement,</p>

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			<p>to develop the landscaping of the Scheme in the most appropriate manner.</p> <p>In summary, the flexibility given to Highways England under requirement 5(2) is reasonable and proportionate as it is subject to consultation (that between the Secretary of State and the relevant planning authority).</p> <p>Moreover, the wording at Schedule 2, requirement 5(2) of the draft DCO has become standard for recently consented Development Consent Orders (see, for example, Schedule 2, requirement 5(2) of the M42 Junction 6 Development Consent Order 2020, Schedule 2, requirement 5(2) of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020, and Schedule 2, requirement 5(2) of the A19/A184 Testos Junction Alteration Development Consent Order 2018.</p>
DCO 1.29	<i>Schedule 2, Requirement 5(4)</i> (Applicant)	The ExA is concerned with the wording "...or other recognised codes of good practice" These words are uncontrolled and raises numerous questions on what the definition of "recognised" and "good practice" means and the appropriateness of such measures in dealing with landscaping works. It is imprecise and not justified.	<p>The wording of requirement 5 (4) (Landscaping) of the draft DCO is both proportionate and appropriate. It is also precedent.</p> <p>These words merely provide additional assurance that the works will be done in accordance with whatever British Standard or other codes of good practice apply at the relevant time.</p> <p>This wording has become standard for recently consented Development Consent Orders (see, for example, Schedule 2,</p>

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		Delete the tailpiece.	requirement 5(4) of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020 and Schedule 2, requirement 8(4) of the A303 (Amesbury to Berwick Down) Development Consent Order 2020 and requirement 6(3) of the A303 Sparkford to Ilchester Dualling Development Consent Order 2021).
DCO 1.30	<i>Schedule 2, Requirement 15(1)</i> (Applicant)	<p>In the interests of clarity and to ensure such information is available online, and as accepted by the SoS in the Southampton to London Pipeline Project [SI:2020 No.1099] substitute:</p> <p>The undertaker must, as soon as practicable following the making of this Order, establish and maintain in an electronic form suitable for inspection by members of the public a register of those requirements..." With:</p> <p>"The undertaker must, as soon as practicable following the making of this Order, establish and maintain in a form suitable for inspection by members of the public an online register of those requirements..."</p>	Highways England has included the requested wording in the updated version of the draft DCO to be submitted at Deadline 2.
DCO 1.31	<i>Articles 35, 36 and</i>	In its RR [RR-028], TfL states that it is concerned with the proposed arrangement of TfL taking ownership of the proposed A12 eastbound off	As set out in the response to RR-028 (REP1-002), Highways England is currently in ongoing discussions with TfL regarding

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	<i>Schedule 6 (Applicant)</i>	<p>slip road while the Applicant maintains permanent rights to construct, access and maintain works on it. TfL states that “the land referred to in Schedule 6 forming part of the Transport for London Road Network (TLRN) should be required for temporary possession only, given it is central to the local highway network and the safe operation of the same, save in relation to the permanent right needed for the diverted pipeline”.</p> <p>Provide a response.</p>	the proposed temporary use and compulsory acquisition of rights over TfL land.
DCO 1.32	<i>Schedule 10 Documents to be certified (Application)</i>	<p>Preliminary Environmental Design is listed as a certified document in Schedule 10, yet no such document is before the ExA. Schedule 2 Requirement 3 states that preliminary scheme design is shown on the Engineering Drawings and Sections, which is a document before the ExA. The ExA is therefore unclear why this is listed.</p> <p>For clarity, delete “Preliminary Environmental Design” from Schedule 10.</p>	<p>It is not correct that there is no Preliminary Environmental Design before the ExA. This can be found in the ES Chapter 1-4: Introductory Chapters Figures, Figure 2.2 (APP-039). As this forms part of the ES which is a certified document under Schedule 10 it need not be referred to separately in Schedule 10 and so has been deleted in the updated version of the dDCO submitted at Deadline 2.</p> <p>To clarify, the preliminary scheme design is distinct from the Preliminary Environmental Design. The preliminary scheme design is shown on the Engineering drawings and sections (APP-011), whereas the Preliminary Environmental Design</p>

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			shows the environmental mitigation and enhancement measures required to address the environmental impacts identified in the environmental assessment.

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6. Flood Risk, Drainage and Water			
FDW 1.1	<i>Baseline Assessment</i> (Applicant)	<p>Baseline information on surface water abstraction and surface water discharges are discussed in paragraphs 8.7.9 to 8.7.11 of Chapter 8 of the ES [APP-030]. It is noted that paragraph 8.7.9 states that the location of the one surface water abstraction is shown on Figure 8.1 of the Road Drainage and Water Environment Figures [APP-043], but this feature is not included on Figure 8.1</p> <p>Provide a figure that shows the location of the surface water abstraction as described in paragraph 8.7.9 of the ES.</p>	<p>Figure 8.1 (APP-043) has now been updated to include the surface water abstraction and surface water discharges. This will be submitted at Deadline 2 (TR010029/APP/6.2(2)).</p>
FDW 1.2	<i>Baseline Assessment</i> (Applicant)	<p>Confirm that baseline information has been agreed with stakeholders during consultation.</p>	<p>Highways England has presented baseline information to the EA as part of regular consultation and engagement on the Scheme. Specifically:</p> <ul style="list-style-type: none"> • Environmental Statement. Regular consultation at each stage of the Environmental Impact Assessment process (e.g. screening and scoping). Water baseline was captured and presented to the EA at each stage. • The Flood Risk Assessment (APP-090), which contains the baseline flood risk information for all sources of flooding.

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			<ul style="list-style-type: none"> The Water Framework Directive Assessment (WFD) (APP-091) which contains the baseline WFD information (see section 4.4), <p>The baseline sections of these documents have been reviewed and agreed by the EA. The Statement of Common Ground between the EA (APP-099) and Highways England also includes no outstanding issues on matters of baseline information.</p> <p>The same documents have been made available in consultation and engagement with local authorities. These organisations have generally deferred to the EA on matters of the water environment. Again, consultation and engagement documentation include no outstanding matters with these organisations regarding the validity of baseline information.</p>
FDW 1.3	<i>Methodology</i> (Applicant)	"Paragraph 8.7.8 of Chapter 8 of the ES [APP-030] states that ponds within the study area could be impacted by the Proposed Development and the impact to the ponds is discussed in Chapter 7 of the ES [APP-029]. The paragraph continues and states that the ponds are "are not connected by watercourses, they are not anticipated to be affected through the water environment" and therefore an assessment of the	Ponds were scoped in as part of the Scoping Opinion (APP-094) as, at the time, there was not enough information to discern their potential connectivity through the water environment, so they were scoped in by default. In compiling the ES Chapter 8 (Road Drainage and the Water Environment) (APP-030), more details of the Scheme and drainage design were available, allowing it to be confirmed that there is no connectivity to any ponds through the water environment. Thus, the water quality of the ponds within the study area could not be affected by the Scheme as there is no pathway in place and so an assessment of the

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		<p>ponds is omitted from Chapter 8 of the ES but is included within Chapter 7 of the ES.</p> <p>The ExA notes that Scoping Opinion Chapter 8 (Point ID 2) does not agree to scope out 'hydraulically isolated ponds' as no evidence within the Scoping Report adequately explained how these ponds wouldn't be impacted by potential changes to surface water or groundwater flows. The ExA does not consider the information within Chapter 8 of the ES to include sufficient evidence that shows these ponds will not be impacted by the Proposed Development. Furthermore, Chapter 7 of the ES and the GCN Survey [APP065] show that ponds within the Proposed Development's Order limits and those within a 250m radius of the Proposed Development provide habitat for GCNs. As such, the potential effect on water quality within the ponds could be detrimental to the GCNs. It is considered that the Applicant should provide a statement that assesses the potential impact to these pond habitats.</p> <p>Explain why an assessment of the potential effect the Proposed Development could have on</p>	<p>potential effects was not required. The ponds were included as part of the assessment for Biodiversity due to potential pathways other than the water environment.</p> <p>Following the latest drainage design information (as defined in the Drainage Strategy Report (APP-092)) and in line with standard practice methods such as the Source-Pathway-Receptor (S-P-R) principles no discharge to existing ponds through surface water or groundwater pathways is proposed for this Scheme. With no hydraulic pathway there is no impact anticipated from road runoff to ponds of ecological value once the Scheme is operational.</p> <p>As described in Chapter 7 (Biodiversity) (APP-029), great crested newt (GCN) populations are present within some ponds within 250m of the Scheme.</p> <p>During construction, when wider activities will be in operation that potentially could have an impact on the ponds (e.g. from earth-moving leading to sediments and other pollutants being mobilised), there will be a commitment to pollution control measures, as set out in the Register of Environmental Actions and Commitments (REAC) Table 1.1, page 13 (Road drainage and water environment) (APP-097) which will safeguard against pollution incidents. The final Construction Environmental Management Plan (CEMP), the preparation of which is secured by Requirement 4 in Schedule 2 of the draft DCO (APP-015),</p>

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		<p>water quality in ponds located within the study area has not been undertaken. In providing a response, the Applicant should make reference to Scoping Opinion Chapter 8 page 27 point ID 2 [APP-094], which did not agree that this matter could be scoped out of the ES."</p>	<p>must reflect the mitigation measures contained with the REAC. The final CEMP must be substantially in accordance with the Outline CEMP (APP-096). With these measures in place, no impact on the water quality of ponds where GCN are present is anticipated.</p> <p>During operation of the Scheme, as no potential pollution pathways to the GCN ponds have been identified, no impact on the GCN populations present in the area is anticipated in relation to water quality during operation of the Scheme.</p>
FDW 1.4	<i>Methodology</i> (Applicant)	<p>Chapter 7 of the ES [APP-029] and the GCN Survey [APP-065] state that GCNs are present in the ponds within the study area. Explain whether the Proposed Development has potential to impact the water quality of the ponds and the effect this could potentially have on the GCNs.</p>	<p>Please refer to response to FDW 1.3 above. During the operational stage of the Scheme, no potential pollution pathways to existing ponds have been identified. Therefore, no impact on the great crested newt (GCN) populations present in the area is anticipated in relation to water quality during operation of the Scheme.</p> <p>During construction, the potential for existing ponds in proximity to construction work when wider activities will be in operation that potentially could have an impact on the ponds (e.g. from earth-moving leading to sediments and other pollutants being mobilised) there is an increased risk of ponds to be impacted by pollution or silt run-off. To mitigate against any potential affects this may have on the ponds control measures have been</p>

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			identified, as set out in the REAC, and secured under Requirement 4 through the CEMP.
FDW 1.5	<i>Methodology</i> (Applicant)	If mitigation is to be implemented to prevent water quality impacts to the ponds inhabited by GCNs, state what these mitigation measures would be and how these are to be secured through the draft DCO [APP-015], or other legal mechanism.	<p>Please refer to responses FDW 1.3 and 1.4 above. During the operational phase of the Scheme no potential pollution pathways to existing ponds have been identified, therefore there is no impact on the great crested newt (GCN) populations present and no mitigation measures are required.</p> <p>During construction, there is potential for existing ponds in proximity to construction works to be impacted and the mitigation measures proposed are set out in the REAC. These will be secured by Requirement 4 in the draft DCO in the CEMP.</p>
FDW 1.6	<i>Assessment of Effects</i> (Applicant)	<p>The flood risk assessment study area, as defined within paragraph 8.4.2 of Chapter 8 of the ES [APP-030], states that the Proposed Development has potential to cause impacts beyond a 1km boundary from the Proposed Development, but does not state the actual extent of the study area.</p> <p>Explain the extent of the flood risk assessment study area and clarify how it was identified.</p>	<p>The flood risk study area is 1 km, consistent with the other water environment topics as specified in paragraph 8.4.1 of Chapter 8 (Road Drainage and the Water Environment) of the ES (APP-030). The 1 km boundary is set as an initial limit, based on the impacts associated with soluble pollutants and the fact that outfalls from a scheme that are within 1 km of each other should be assessed in combination, as described in DMRB (HD45/09, Annex I, A.17). The 1 km limit provides an initial baseline extent for the water environment, but on the understanding that it may need to be extended due to the size of water features and/or the likely sphere of influence of the Scheme.</p>

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			<p>The statement that there is potential for the Scheme to cause impacts beyond 1 km recognises that potentially an increase in flow in the river due to the Scheme will continue to flow downstream and therefore could cause an impact beyond the 1 km study area boundary. That statement aims to clarify that the flood modelling assessment should not be (and has not been) limited to the 1 km study area.</p> <p>The statement in the second sentence of paragraph 8.4.2 relating to the fluvial flood risk is referring specifically to the boundary of the flood risk river model. The river model extents are shown in Figure 3-1 of Appendix A to the FRA (APP-090).</p> <p>The Flood Risk Assessment, including the flood risk river model, has been reviewed and accepted by the EA and discussions are outlined in the SoCG with the EA (APP-099).</p>
FDW 1.7	<i>Assessment of Effects</i> (Applicant)	<p>Paragraphs 8.7.6 and 8.7.7 of Chapter 8 of the ES [APP-030] state that no vulnerable receptors were identified within the study area that are at risk of fluvial flooding and that the importance of fluvial flood risk is low.</p> <p>The ExA is not clear how these conclusions have been reached, as Figure 8.1 of the Road Drainage and the Water Environment Figures [APP-043] shows properties that are within Flood</p>	<p>The potential for impact on receptors is based on the standard principle for assessing risk, the source-pathway-receptor model. In the case of fluvial flood risk, there are vulnerable receptors within the study area, however these are in areas where there is no pathway for the Scheme to cause an impact (see section 2.4 of the FRA (APP-090)). Specifically, there are vulnerable receptors on Paine's Brook and on Ingrebourne River upstream of the A12 outside the Scheme boundary. However there is no pathway for changes in fluvial flooding to affect these receptors</p>

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		<p>Zones 2 and 3, and therefore could be impacted by fluvial flooding. Furthermore paragraphs 8.7.8 to 8.7.10 of Chapter 8 of the ES discuss surface water flood risk and state that there are areas of high surface water flood risk within the study area. The paragraphs also state that there are no vulnerable receptors that would be impacted, and that the existing drainage system reduces the surface water risk to an acceptable level along the road network. However, Figure 8.1 shows vulnerable receptors within the study area, and Figure 2.8 within the Flood Risk Assessment [APP-090] depicts large areas of the study area within a high risk of flooding from surface water.</p> <p>Clarify how the Applicant has reached the conclusion that no vulnerable receptor is likely to be impacted by fluvial or surface water flooding.</p>	<p>(e.g. Paine's Brook is a different catchment that joins the Ingrebourne River downstream of the Scheme; and the receptors associated with the Ingrebourne River are at a much higher elevation than the Scheme so will not be impacted by the allowable variations in flood levels that a scheme of this nature would be permitted to cause).</p> <p>Similarly, for surface water flooding not associated with rivers (which is assessed as fluvial flooding), impacts are localised because of the shallow fast flowing nature of surface water flooding. The areas where there are vulnerable receptors within the surface water flooding extent (not associated with fluvial flooding) are beyond the extent where the Scheme could affect these properties. The objective of the Scheme design is to have no adverse impact on surface water flood risk through appropriate drainage design. Any conceivable adverse impact will be minor and therefore would not affect receptors except those very close to the Scheme of which there are none.</p> <p>In line with the methodology set out in Table 8.2, Table 8.3 and Table 8.4 of Chapter 8 (Road Drainage and the Water Environment) of the ES (APP-030), the classification of importance for flooding does not affect the significance of effect, as the magnitude of impact is negligible, therefore the significance of effect will not be significant whatever the</p>

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			importance of the flood risk receptors are defined as (see Table 8.4 of the ES (APP-030)).
FDW 1.8	<i>Assessment of Effects</i> (Applicant)	Considering the methodology set out in Table 8.2, Table 8.3 and Table 8.4 of Chapter 8 of the ES [APP-030], explain how this methodology has been followed.	The methodology has been applied as set out in paragraphs 8.5.19 and 8.5.20 of Chapter 8 (Road Drainage and the Water Environment) of the ES (APP030), whereby importance has been assigned to the baseline features using the guidance and examples in Table 8.2. The magnitude of impact has been assigned to Scheme assets during construction and operation using the qualitative and quantitative examples outlined in Table 8.3. The overall significance of each asset is calculated using a combination of the levels of importance and impacts in Table 8.4.
FDW 1.9	<i>Assessment of Effects</i> (Applicant)	List the water environment attributes / receptors within the study area and explain: i) Their importance as set out in Table 8.2 of Chapter 8 of the ES [APP-030]. ii) The potential magnitude of impact to the water environment attribute / receptors, as set out in Table 8.3 of Chapter 8 of the ES.	As regards the water environment attributes / receptors within the study area see section 8.7 in ES Chapter 8 (Road Drainage and the Water Environment) (APP-030). i)The following paragraphs within APP-030 outline the importance of the receptors identified: Paragraph 8.7.4 (page 19) of APP-030 states for surface water attributes as follows: "...in line with the EA's aspiration for the status of this water body to reach 'good' status, the importance assigned to this water body is high. This applies to all

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		<p>iii) The significance of effect to the water environment attribute / receptor as set out in Table 8.4 of Chapter 8 of the ES</p>	<p><i>watercourses within the waterbody, including contributing tributaries.</i></p> <p>Paragraph 8.7.15 (page 22) of APP-030 states for groundwater attributes: <i>“Groundwater importance has been assigned as High given the Secondary A bedrock aquifers and Secondary A and Secondary (undifferentiated) superficial aquifers have the potential to be supporting the surface water network.”</i></p> <p>Paragraph 8.7.27 (page 24) of APP-030 states for fluvial flood risk: <i>“The importance of fluvial flood risk is Low.”</i></p> <p>Paragraph 8.7.30 of APP-030 states for surface water flood risk <i>“The importance of surface water flood risk is Low.”</i></p> <p>Paragraph 8.7.33 of APP-030 states for groundwater flood risk <i>“The importance of groundwater flood risk is Low.”</i></p> <p>ii) Table 8.12 sets out the effects of routine runoff on surface waters in line with the principles for the surface water assessment outlined in Table 8.3. Paragraph 8.10.24 sets out the potential magnitude of impact on flood risk which is also referenced in section 2.11 of the FRA (APP-090).</p> <p>iii) The significance of potential effects is calculated from the combination of the importance and magnitude of impact as shown in Table 8.4 which is a matrix taken directly from the guidance (DMRB, HD45/09). The significance of effect for each</p>

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			water topic is stated throughout section 8.10 Assessment of effects.
FDW 1.10	<i>Assessment of Effects</i> (Applicant)	In addition to the potential impacts set out in section 8.8 of Chapter 8 of the ES [APP030], indicate the magnitude of impact and / or the potential for significant effects to arise.	Sections 8.10.1 to 8.10.29 (including Tables 8.12 – 8.15) of APP-030 set out the magnitude of impact for the water topics and whether or not they are significant (i.e. the potential for significant effects to arise). These paragraphs and tables follow the guidance from the DMRB, HD45/09 that is summarised in the assessment methodology (section 8.5) in APP-030.
FDW 1.11	<i>Assessment of Effects</i> (Applicant)	<p>i) Clarify whether a worst-case scenario has been adopted when assessing the impacts of the Proposed Development on flooding, or changes to surface water flow.</p> <p>ii) If so, justify the adopted worst-case scenario assessed.</p>	In response to i) and ii), a worst-case scenario has not been adopted as this is not standard practice for flood risk assessment. Instead, the assessment and design for the Scheme has followed the guidance set out in DMRB HD45/09, HD33/16 for PCF Stage 3 and CG501 (see section 8.5 of the ES (APP-030)) and section 3.4 of the Drainage Strategy report (APP-092). Where appropriate in the assessment and design, precautionary parameters have been adopted to ensure that the impacts are not underestimated. Sensitivity tests have been undertaken to ensure that the conclusions of the assessment hold true under more extreme conditions, for example testing higher climate change allowances (see section 5.1.6 of Appendix A of the FRA (APP-090)).

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FDW1.1 2	<i>Cumulative Impacts</i> (Applicant)	Provide the assessment methodology used to conduct the cumulative assessment for the road drainage and water environment assessment, and state what other developments were included in the assessment.	<p>Paragraph 8.11.3 (page 45) of APP-030 sets out the cumulative methodology undertaken for road drainage and surface water environment. This is also supported and documented in APP-092 (Drainage Strategy Report) paragraphs 3.9.9 to 3.9.10 and APP-037, section 15.5.</p> <p>Paragraphs 8.11.9 to 8.11.11 (page 45-46) and Table 8.16 of APP-030 identifies the other developments considered and sets out the cumulative impacts that can arise from them on assets affected by the Scheme. This is also documented and supported in Assessment of Cumulative Assessment, Chapter 15 of the ES (see Table 15.7 of APP-037).</p>
FDW 1.13	<i>Mitigation and Monitoring</i> (Applicant)	<p>The ExA is not clear how the mitigation measures to reduce the impacts to the water environment, as described in section 8.9 of Chapter 8 of the ES [APP-030] and Table 1.1 of the REAC [APP-097] will be monitored. The Outline CEMP [APP-096] omits the Road Drainage and Water Environment chapter from Table 12.1 Environmental Monitoring Requirements.</p> <p>i) State whether the mitigation measures to reduce the impacts to the water environment, as</p>	<p>Taking each of the three points in turn, and with specific regard to the construction phase of the Scheme:</p> <p>i) Mitigation measures to reduce the impacts to the water environment will be monitored by the Principal Contractor. The REAC (APP-097) outlines the commitments to preparing both a Pollution Prevention Plan and a Surface Water Management Plan (SuWMP) (see bullets 7 and 12 on page 14 of the REAC) and these documents will set out how monitoring will be undertaken.</p> <p>Monitoring will comprise visual inspection of construction sites and receiving watercourses to assess the</p>

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		<p>described in Chapter 8 of the ES and Table 1.1 of the REAC [APP-097] will be monitored.</p> <p>ii) If the mitigation measures are to be monitored, state how they will be monitored, who will be responsible for the monitoring, and how the monitoring measures will be secured through the draft DCO [APP-015] or other legal mechanism.</p> <p>iii) If the measures are not monitored, justify why this is the case, considering the assessment's reliance on successful mitigation measures to conclude no LSEs to the road drainage and water environment receptors.</p>	<p>effectiveness of mitigation measures to limit pollution risk and identify pollution incidents, where needed to ensure compliance with environmental good practice (e.g. PPGs 1, 5 & 6) and legislation.</p> <p>These monitoring commitments will be confirmed in the updated Outline CEMP (APP-096, page 47) and contained in the Outline Surface Water Management Plan to be submitted at Deadline 3a.</p> <p>ii) See above.</p> <p>Monitoring will be secured through Requirement 4 of the draft DCO (APP-015).</p> <p>Please also note that monitoring of measures to mitigate the effect of the Scheme on the water environment during its operational phase are set out in the following documents:</p> <ul style="list-style-type: none"> • Outline LEMP (APP-072, Section 7) • Outline CEMP (APP-096, Table 12.1 – WFD Compliance Assessment). <p>iii) See responses to i) and ii) above.</p>

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FDW 1.14	<i>Surface Water Management Plan</i> (Applicant) (All relevant Planning Authorities)	<p>Although Chapters 8 [APP-030] and 16 [APP-038] of the ES and the REAC [APP-097] identify no significant effects from the Proposed Development on flooding and water, they nonetheless rely on the outline CEMP and in particular the submission of a SWMP to mitigate any potential effects caused from the construction of the Proposed Development.</p> <p>The Outline CEMP [APP-096] contains little details on how measures set out in the REAC would be achieved and the SWMP has not been submitted into the Examination. Moreover, paragraph 4.4.3 of the CEMP lists the SWMP as a document which may or may not be ultimately submitted as part of the CEMP and Requirement 4 of the draft DCO [APP-015].</p> <p>The ExA is concerned that water management and drainage matters are not adequately addressed at this stage having regard to the concerns raised in RRs and that pre commencement works as set out in the draft DCO [APP-015] would be uncontrolled. The ExA</p>	<ul style="list-style-type: none"> i) See response to iii) ii) The definition of “commence” in the version of the dDCO to be submitted at Deadline 2 has been adjusted and none of the activities mentioned in that revised definition will have any significant environmental effects, including on drainage matters. iii) Highways England has updated Requirement 4 in Schedule 2 of the draft DCO to include the list of environmental control plans that must be produced under the CEMP. Highways England is also in the process of updating the Outline CEMP (APP-096) to include an Outline Surface Water Management Plan (SuWMP). <p>The revised draft DCO (TR010029/APP/3.1(1)) will be submitted at Deadline 2 and the updated Outline CEMP is proposed to be submitted at Deadline 3a.</p>

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		<p>considers the approach to surface water drainage should be known in this Examination.</p> <p>i) Comment on the approach not to submit an SWMP into the Examination.</p> <p>ii) Explain how the ExA can be satisfied that pre-commencement and uncontrolled works would have no significant effect on drainage matters and the discharge of Requirement 8 of the draft DCO and that mitigation would be adequate. OR</p> <p>For the Applicant:</p> <p>iii) Submit an outline SWMP into the Examination and update Requirement 8 of the draft DCO accordingly securing the final SWMP to be in accordance with the outline version.</p>	

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7. Geology and Soils			
GS 1.1	<i>Assessment Methodology</i> (Applicant)	<p>Section 10.5.7 of Chapter 10 of the ES [APP-032] states that “a second phase of GI [ground investigation] (the ‘main’ GI) has been carried out across the Scheme however, the complete factual dataset was pending at the time of writing and therefore the assessment is based on the findings of the preliminary GI only. In summary, the main GI included the following:</p> <ul style="list-style-type: none"> – Target areas where intrusive ground works will be undertaken. – Target areas of identified potential contamination sources (i.e. the Source-Pathway-Receptor linkages (SPR) identified within the risk assessment provided in this chapter) and locations of ground instability. – Provide an assessment of geological boundaries, thickness of strata and geotechnical testing to inform design. – Characterise the hydrogeological regime. – Sample identified surface water receptors to derive site-specific quality standards. 	The ‘main’ Ground Investigation Report (REP1-023 to REP1-025) was submitted at Deadline 1.

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		<ul style="list-style-type: none"> – Determine the extent and nature of fill material. – Determine the aggressivity of the ground towards buried concrete. <p>Confirm when the data and documents associated with the 'main', second phase GI, which has been carried out is expected to be submitted into the Examination.</p>	
GS 1.2	<i>Assumptions and Limitations</i> (Applicant)	<p>Section 10.6.4 of Chapter 10 of the ES [APP-032] notes that design updates to the Proposed Development may introduce features that have not been assessed due, in part or in whole, to incomplete Landmark Envirocheck report data for 1.5km of the South Eastern limb (along the M25) of the Proposed Development.</p> <p>Confirm that data will be procured to cover the entirety of the Proposed Development and that the findings of the assessment are not affected by this omission or provide robust justification for the continued omission of this data.</p>	<p>The statement regarding 'incomplete Landmark Envirocheck report data for 1.5km of the South Eastern limb (along the M25) of the Proposed Development' did not take into account the 1,000 m buffer zone included in the Envirocheck data. This can be seen on the maps in Slice A of the Envirocheck Report in Appendix 10.3 of the ES (APP-077). Therefore, Envirocheck data has been assessed for the area of the Scheme up to c. 400 m north of Warley Road, leaving a stretch of c. 500 m for which Envirocheck data has not been procured.</p> <p>Highways England does not consider it necessary to procure additional Envirocheck data in relation to this c. 500 m stretch of highway. The proposed works south of the junction 28 roundabout (along the M25) consists of above ground works such as replacement of signs on existing gantries. These works require no ground break or earthworks. The procurement and</p>

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			<p>assessment of additional Envirocheck data would cause no change in the impacts or effects already identified in Chapter 10 of the ES (APP-032).</p> <p>Therefore, based on the preliminary design, it is not deemed necessary to procure further Envirocheck data at this time.</p>
GS 1.3	<i>Mitigation</i> (Applicant)	Mitigation measures are dependent on findings of the as yet unpublished GI. Clarify how the Applicant would ensure that these measures are secured in the draft DCO [APP015].	<p>The 'main' Ground Investigation Report (REP1-023 to REP1-025) was submitted at Deadline 1.</p> <p>The report does not identify any further mitigation measures required over and above those already set out within Section 10.9 of Chapter 10 of the ES (APP-032) and the Register of Environmental Actions and Commitments (REAC) (APP-097).</p> <p>Requirement 4 in Schedule 2 of the draft DCO (APP-015) secures the implementation of mitigation measures set out in the Outline CEMP (APP-096) and REAC.</p>
GS 1.4	<i>Design Response</i> (Applicant)	In the absence of complete GI information, define the range of designs for ecological compensation ponds considered to be appropriate for the likely worst-case and likely affects associated with these designs.	The Ground Investigation (as detailed in the Ground Investigation Report (REP1-023 to REP1-025)) did not specifically target the locations of the proposed ponds. However, the GI confirmed that the actual ground conditions across the Scheme are generally consistent with British Geological Society geological mapping (summarised in Sections 10.7.34 to 10.7.47,

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			<p>Table 10.11 and Figure 10.3 of Chapter 10 of the ES (APP-032 & APP-045)).</p> <p>Based on this geological mapping, it is considered that the reasonably likely worst-case ground conditions, at the location of the proposed ecological compensation ponds, would consist of soft Head Deposits potentially at near residual strengths or soft to very soft Alluvium. Within these worst-case ground conditions, there is the potential to encounter relict shear planes (Head Deposits) and poor geotechnical parameters (Alluvium). These in turn may result in landslide / failure of slope faces on the cut banks of the ponds to be constructed.</p> <p>This potential risk will be mitigated through design, for example by using a shallow cutting bank batter, such as a 1V:4H, which would likely ensure the long term stability of the ponds.</p> <p>The proposed ecological compensation ponds are not considered to be high risk geotechnically complex structures and therefore the use of desk study data and conservative assumptions to inform their design is deemed to be an appropriate approach.</p> <p>By mitigating any risks through design, the associated effects will be as stated in Section 10.10.6 and Table 10.17 of Chapter 10 of the ES (APP-032).</p>

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GS 1.5	<i>Cumulative Effects</i> (Applicant)	Provide the assessment methodology used to conduct the cumulative assessment within Chapter 10 of the ES [APP-032].	<p>The methodology for the assessment of cumulative effects is presented in Section 15.5 of Chapter 15 of the ES (APP-037). Further explanation of the methodology specific to geology and soils is provided in Section 10.11.2 and Table 10.21 of Chapter 10 of the ES (APP-032).</p> <p>The cumulative effects assessment was based on the conclusions of the individual preceding topic chapters of the ES with regard to the Scheme (APP-026 to APP-036), and the latest environmental information available, as of the 28 February 2020 (the cumulative effects assessment cut-off date). The assessment follows the methodology outlined in the Planning Inspectorate's Advice Note 17.</p>

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8. Historic Environment			
HE 1.1	<p><i>Archaeological Control Plan and Written Scheme of Investigation</i> (Applicant) (All Relevant Planning Authorities)</p>	<p>Although Chapter 8 [APP-030] and the Summary [APP-038] of the ES and the REAC [APP-097] identify no significant effects from the Proposed Development on the historic environment, they nonetheless rely on the outline CEMP and in particular the submission of an ACP associated with a Written Scheme of Investigation (WSI) to mitigate any potential effects from archaeological finds.</p> <p>The Outline CEMP [APP-096] contains little details on how measures set out in the REAC would be achieved and the ACP / WSI has not been submitted into the Examination. Moreover, paragraph 4.4.3 of the CEMP lists the ACP as a document which may or may not be ultimately submitted as part of the CEMP and Requirement 4 of the draft DCO [APP-015].</p> <p>The ExA is concerned that archaeological matters are not adequately addressed at this stage having regard to the concerns raised in RRs and that pre-commencement works as set out in the draft DCO [APP-015] would be uncontrolled. The ExA considers the approach to</p>	<ul style="list-style-type: none"> i) See response to iii) ii) Archaeological investigations and mitigations are excluded from the definition of 'commence' because in the context of this nationally significant Scheme they are minor in nature and not likely to have any significant environmental effects. Any substantive archaeological works would need to be carried out in accordance with a Written Scheme of Investigation (WSI) approved under Requirement 9 as part of an Archaeological Management Plan (AMP) to be approved under Requirement 4 as part of the CEMP. By these means the substantial archaeological works will be controlled pursuant to the DCO. iii) Highways England has updated Requirement 4 of the draft DCO to include the list of environmental control plans that must be produced under the CEMP. Highways England is also in the process of updating the Outline CEMP (APP-096) to include an Outline Archaeological Management Plan (AMP). The revised draft DCO (TR010029/APP/3.1(1)) is submitted at Deadline 2 and the updated Outline CEMP is proposed to be submitted at Deadline 3a.

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		<p>mitigation on archaeological matters should be known in this Examination.</p> <p>i) Comment on the approach not to submit an ACP and an associated WSI into the Examination.</p> <p>ii) Explain how the ExA can be satisfied that pre-commencement and uncontrolled works would have no significant effect on historic matters and the discharge of Requirement 9 of the draft DCO and that mitigation would be adequate. OR</p> <p>For the Applicant:</p> <p>iii) Submit an outline ACP and WSI into the Examination and update Requirement 9 of the draft DCO accordingly securing the final ACP and WSI to be in accordance with the outline version.</p>	
HE 1.2	<p><i>SoCG Appraisal</i> (Applicant) (Essex County Council)</p>	<p>At Preliminary Meeting part 1 held on Friday 11 December 2020 [EV-001], both the Applicant and the London Borough of Havering stated that matters concerning the historic environment would form part of a SoCG between the two; and that such an agreement would also include that</p>	<p>A SoCG with Essex County Council was submitted at Deadline 1 (REP1-006) which confirms, in paragraph 8.1.1, that there are no designated heritage assets identified within Essex County Council which would be impacted by the Scheme. If heritage issues do arise within on the Essex side of the Scheme, Essex County Council will be the point of contact for these. Brentwood</p>

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	(Brentwood Borough Council)	<p>of Historic England. No such arrangement appears to exist for the Essex side, and the ExA is concerned that historic matters would not be adequately assessed and appraised.</p> <p>Explain how an appraisal of historic matters are to be appraised on the Essex side of the Order limits and whether it will form part of a SoCG signed between the Applicant and Essex County Council and / or Brentwood Borough Council.</p>	<p>Borough Council has confirmed they would rely on Essex County Council for advice on archaeology in paragraph 8.1.1 of the SoCG with Brentwood Borough Council submitted at Deadline 1 (REP1-005). Essex County Council confirmed at the Preliminary Meeting part 1 that they agreed with this approach and would be able to make decisions relating to historic matters within Essex. Highways England has explicitly referenced this agreement in paragraph 8 of the updated SoCG with Essex County Council (TR010029/EXAM/9.10(1)) submitted at Deadline 2.</p>
HE 1.3	<i>Construction</i> (Applicant)	<p>Paragraph 11.8.8 of Chapter 11 of the ES [APP-033] states that 'the setting of one designated asset, the Grade II listed Stony Hills Farm (1297215) may be temporarily impacted by bridge construction on Warley Road and subsequent gantry removal and re-installation. The farm building is significant for its age and construction, and sits within an active, modern farm complex.' The Proposed Development 'would introduce slight temporary changes to this farmstead setting, resulting in slight adverse effects, which are not considered significant'. The Works plans [APP-006] and the draft DCO</p>	<p>Chapter 11 (Cultural Heritage) of the ES (APP-033) incorrectly makes reference to construction works at Warley Road; the works proposed in the area are the replacement of signs on the existing gantries, which will create no noticeable change to the area around Stony Hills Farm. Highways England confirms there is no impact on the Grade II listed building, Stony Hills Farm (1297215). Paragraph 11.8.8 of Chapter 11 of the ES (APP-033) will be removed.</p>

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		<p>[APP-015] do not make references to any gantry or bridge works or construction at Warley Road.</p> <p>Clarify the extent of works proposed in this area</p>	
HE 1.4	<p><i>Impact on Heritage Assets</i> (Applicant)</p>	<p>Provide a response to the concerns raised by the London Borough of Havering in its RR [RR-017], which identifies designated and non-designated heritage assets within the Borough.</p> <p>The ExA would be assisted in the examination of these matters by the inclusion of further evidence to support the approach taken towards these assets in the heritage assessment.</p>	<p>Highways England has provided a response to each of the concerns, raised by London Borough of Havering, in turn within its response to the RR-017 (REP1-002). The approach to be taken towards these heritage assets is also detailed at section 8 of the SoCG with London Borough of Havering (REP1-004).</p>

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9. Landscape and Visual			
LV 1.1	<i>Landscape and Ecology Management and Monitoring Plan</i> (Applicant)	<p>A LEMP is required by Requirement 5 of the draft DCO [APP-015]. An outline LEMP has been submitted into the Examination [APP-072]. Yet the outline CEMP lists the LEMP as a document which may or may not form part of the final CEMP. The ExA is not clear as to why the LEMP may form part of a CEMP when it is required as a standalone document.</p> <p>Provide a response.</p>	<p>The final LEMP will be a standalone document substantially in accordance with the management objectives, targets and prescriptions set out in the Outline LEMP (APP-072) and reflecting the mitigation measures set out in the Register of Environmental Actions and Commitments (REAC) (APP-097). The production of the LEMP is secured through Requirement 5 in Schedule 2 of the draft DCO (APP-015).</p> <p>The Outline CEMP (APP-096) will be amended to refer to the production of the LEMP as a standalone document as per Requirement 5 in Schedule 2 of the draft DCO (APP-015).</p>
LV 1.2	<i>Assessment of Effects</i> (Applicant)	<p>Paragraph 9.14.6 of Chapter 9 of the ES [APP-031] states that as part of the CEMP the appointed Environmental Clerk of Works or Site Manager would be responsible for ensuring that the angle and direction of night-time lighting is not directly focussed on adjacent residential receptors.</p> <p>Provide further details regarding the proposed lighting strategy during construction and the proposed method for managing the direction of lighting.</p>	<p>For this stage of work only recommendations regarding the proposed lighting strategy have been made. Outline lighting design will be sensitively designed as stated in the REAC (APP-097), commitment LV2.1. The REAC details that the lighting used will be limited and/or directional lighting wherever possible to restrict night time impacts. There will be ongoing monitoring of compliance with the lighting strategy, during construction, through daily site audits.</p> <p>The REAC forms part of the Outline CEMP (APP-096) which is secured through Requirement 4 in Schedule 2 of the draft DCO. Further details relating to the exact nature of the lighting strategy will be developed by the Principal Contractor during the detail design phase of works. The construction lighting strategy</p>

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			<p>proposals should comply with the BS EN: 12464-2 Outdoor workplace lighting and Institute of Lighting Professionals Guidance note 01/20 – Guidance note for the reduction of obtrusive light.</p>
LV 1.3	<i>Mitigation and Monitoring</i> (Applicant)	<p>Chapter 9 of the ES [APP-031] concludes that adverse effects of the Proposed Development on visual receptors during the operational phase in opening year would likely be significant to nine visual receptors.</p> <p>The ES states that with the mitigation and compensation measures proposed as part of the development these adverse effects would reduce to three visual receptors experiencing significant impacts in the fifteenth year after opening.</p> <p>Clarify whether the three visual receptors would experience significant effects rather than impacts in the fifteenth year after the opening of the Proposed Development.</p>	<p>Highways England confirms that the word 'effects' is the correct terminology that applies in this instance rather than 'impacts'.</p> <p>The assessment text within APP-031 Chapter 9 Landscape and Visual, Paragraphs 9.10.25 and 9.10.26 state that one visual receptor (Grove Farm) would experience Large Adverse visual effects at year 15 and two visual receptors (Maylands Golf Club and Maylands Cottages) would experience Moderate Adverse visual effects at year 15. As the threshold for achieving significant effects is Moderate Adverse and higher, these are then the only three visual receptors to be significantly adversely affected at year 15.</p> <p>Highways England is proposing a change to the Scheme (subject to ExA acceptance) to remodel Work No. 18 into an environmental bund which will provide a greater degree of visual screening for residential receptors at Maylands Cottages. The change would contribute to a change to findings within the landscape and visual assessment set out in Chapter 9 of the Environmental Statement from an anticipated very large adverse visual effect at year 1 and moderate adverse effect at year 15 to</p>

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			an anticipated moderate adverse effect at year 1 and slight adverse effect at year 15.
LV 1.4	<i>Reasoned Conclusions</i> (Applicant) (London Borough of Havering)	<p>The London Borough of Havering has stated in its RR [RR-017] that the panoramic photographs within the Landscape and Visual figures have not been presented in accordance with the Visual Representation of Development Proposals Technical Guidance Note (TGN) 06/19 (Landscape Institute, September 2019).</p> <p>For the Applicant:</p> <p>i) Respond to London Borough of Havering's concerns over the accuracy of panoramic photographs used to assist the assessment of visual impacts and likely significance of effects.</p> <p>For the London Borough of Havering:</p> <p>ii) Clarify why they believe that it is important for visual representations to be depicted in the format that they have requested rather than that provided by the Applicant.</p>	<p>i) Highways England does not accept the assertion that the photomontages have not been produced in accordance with the Visual Representation of Development Proposals Technical Guidance Note (TGN) 06/19 (Landscape Institute, September 2019). Please see Highways England's response to RR-017-10 (REP1-002). The panoramic photomontages are accompanied by an updated technical methodology (REP1-017) which states that the photomontages have been produced in accordance with the stated guidance. This point is also clarified and agreed in the Statement of Common Ground with London Borough of Havering (REP1-004).</p> <p>ii) N/A</p>
LV 1.5	Reasoned Conclusion	i) Clarify what consultation was undertaken with stakeholders on the locations of viewpoints used	ii) The proposed locations of viewpoints for the photomontages were consulted on and agreed with the London Borough of

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	s (Applicant)	<p>for photomontages and whether agreement was reached.</p> <p>ii) If agreement was not reached, provide details of the differences between parties.</p>	<p>Havering and Brentwood Borough Council. The SoCGs with London Borough of Havering (REP1-004) and Brentwood Borough Council (REP1-005) include details of these meetings.</p> <p>iii) See response above confirming agreement was reached.</p>
LV 1.6	<i>Good Design</i> (Applicant)	<p>Paragraphs 4.28 to 4.35 of the National Networks National Policy Statement (NN NPS) establish the criteria for good design. The ExA notes the design comments contained within sections 4.10 of Chapter 4 of the ES [APP-026] and 9.9 of Chapter 9 of the ES [APP-031] but these are primarily responses to mitigation of the Proposed Development as opposed to an explanation of the overall design strategy.</p> <p>Demonstrate how good design has been incorporated into the proposals with particular reference to the design approach employed in order to achieve a high quality built environment when considering the design of structures including proposed new bridges, culverts and ponds.</p>	<p>As well as considering the criteria for good design in the NPS NN, the design has also considered the design principles set out in the Road to Good Design published by Highways England in 2018 and the Design Manual for Roads and Bridges (DMRB) GG103 - Introduction and general requirements for sustainable development and design. An explanation of the development of the Scheme's preliminary design which demonstrate how 'good design' principles were incorporated is provided below.</p> <p>The planting has been designed to ensure that there are no restrictions to drivers' sight as they travel around the loop road from the M25 to the A12. Carefully placed individual and groups of trees and grassland will also be provided to mitigate the environmental impacts from the loop road but also to ensure the safety of drivers. The preliminary landscape design is outlined on Figure 2.2 Preliminary environment design (APP-039) and in the Outline LEMP (APP-072).</p>

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			<p>As part of the loop road infrastructure, the Scheme includes the construction of four new bridges.</p> <p>These bridges have been designed as open span, to ensure the channel and floodplain continues to function as naturally as possible, within the bounds of multiple other constraints influencing the forms of the bridges. This decision has avoided significant adverse effects on floodplain storage, flood flow paths and the natural geomorphological function of the channel and floodplain.</p> <p>The inclusion of drainage ponds within the Scheme is in itself an example of the implementation of Good Design Principles. Ponds enable an environmentally sustainable design and a restrained design. Drainage ponds have been designed to take into account climate change and have been designed to account for a 20% climate change allowance as outlined in the Drainage strategy (APP-092). Ponds included specifically for ecological mitigation have been designed to suitable size and structure to provide habitat for breeding great crested newt.</p> <p>An extension of the existing Grove Culvert not exceeding 80 m in length beneath the realigned A12 eastbound exit slip road is required for the Scheme. The design of the culvert has been discussed with the EA including the realignment to the</p>

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			<p>Ingrebourne River to mitigate the environmental effects of the culvert. The culvert will also allow for mammal passage.</p> <p>Highways England has developed the preliminary design in consultation with the EA, Local Authorities and other key stakeholders. The preliminary design of bridges and structures within or in close proximity to the main water bodies has taken into consideration the EA's requests (covered in the Statement of Common Ground (SoCG) (REP1-003)), with a particular regard to bridges, the Grove Culvert extension and the ponds, to ensure that the impact on the water bodies is minimised as far as practicable.</p> <p>Refer to the EA SoCG (REP1-003) issue refs WFD07 and WFD08 on new river and floodplain crossings. Highways England's response to LV 1.9 below provides further information on the design of the Scheme's bridges.</p>
LV 1.7	<i>Good Design</i> (Applicant)	<p>Paragraph 4.33 of the NN NPS provides criteria for 'good design' for national network infrastructure.</p> <p>i) Set out the approach taken for scheme design in response to these criteria as they relate to landscape architecture, visual appearance and integration with the public realm.</p>	<p>i) As explained in response LV 1.6, the Scheme design has considered the design principles set out in the Road to Good Design published by Highways England in 2018. The Scheme fits in with the existing context of the local area as the design follows the contours of the existing land. Where existing vegetation is removed to accommodate the construction of the Scheme, mitigation planting is proposed to integrate the Scheme within the local landscape (See Figure 2.2 (APP-</p>

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		<p>ii) Explain whether an independent design review of the Proposed Development has been undertaken and if not, why not.</p>	<p>039)). The planting design will reflect and respond to the existing landscape character of the area. The landscape character is predominantly rural and characterised by strongly undulating wooded farmland/wooded hills with extensive patches of woodland, small-scale field patterns with mature tree lined field boundaries, and narrow, quiet and sinuous rural lanes connecting small-scale settlements. A sense of tranquillity exists away from main road corridors. The planting design for the junction responds to the existing context. Areas of woodland will be provided around the new loop road to provide screening. Woodland will be planted on earthwork slopes which have been designed to be of a gradient which is suitable for planting. Areas of highways vegetation and grassland will also be provided to create habitats for various species and commuting routes for bats. During preliminary design, site surveys identified 15 Veteran Trees within the Scheme extent. A design review was undertaken to minimise the impact on these trees which is outlined in Appendix C of the Case for the Scheme and Schedule of Accordance with National Policy Statement (APP-095). Mitigation measures for the loss of the two veteran trees is outlined in the REAC (APP-097) in Table 1.1, page 6-7. The REAC forms part of the Outline CEMP (APP-096) which is secured through Requirement 4 in Schedule 2 of the draft DCO.</p>

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			<p>ii) The Scheme has been designed in accordance with the DMRB guidance.</p> <p>Highways England's 'Road to Good Design' describes the role of Highways England's Strategic Design Panel as overseeing the independent design review of individual Highways England projects. Highways England's Strategic Design Panel was set up in 2017 and is intended to focus on strategic input rather than scheme specific details targeting where its expertise, insight and guidance will have most positive impact and wider benefit, such as standards, procurement and evaluation. The Scheme, in line with "The Road to Good Design" principles was reviewed by the Highways England's internal design panel and it was agreed that the Scheme is not required to be reviewed by Highways England's independent design panel.</p>
LV 1.8	Good Design (Applicant)	<p>Concerns have been raised by IPs about the visual effect of proposed new road infrastructure on their property and amenity.</p> <p>Provide an explanation of the design approach to elements of the Proposed Development which potentially would have significant visual impacts.</p>	<p>The design approach undertaken by the design team has sought to arrive at a highways arrangement integrate into the surrounding environment, as far as possible, and minimises adverse environmental impacts, including potential adverse impacts on residential properties.</p> <p>The project team comprising of both engineering and environmental disciplines worked collaboratively to arrive at the final design, to ensure that the Scheme sits comfortably in its environs. Regular meetings were conducted between the</p>

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			<p>engineering teams (highways, structures, geotechnics, maintenance and operations etc) and environmental teams to ensure a thorough understanding across the teams of the potential constraints in the area and opportunities for efficiencies were discussed. The environmental considerations fed into the design through these meetings and provided the opportunity to influence and develop a robust design proposal for the Scheme.</p> <p>Where the findings from the landscape and visual impact assessment (Chapter 9 of the ES, APP-031), have identified key receptors that will be significantly affected by the Scheme (paragraphs 9.10.15, Table 9.12, paragraphs 9.10.16, 9.10.18-19, 9.10.22-25, 9.10.28, 9.10.32 and Table 9.13), measures have been incorporated into the landscape design to reduce these. These measures are outlined in paragraphs 9.9.2 to 9.9.7 in Chapter 9 (APP-031) and include proposed mitigation measures that will provide a woodland belt that runs along the western periphery of the loop road. This will assist by providing a screening element to reduce the predicted impacts experienced by sensitive receptors, including Maylands Golf Club, Maylands Cottages and the residential properties located on Woodstock Avenue. Other measures are included in Table 1.1, page 6 and 7, of REAC (APP-097) for retaining and protecting existing mature trees and hedges (see BD2.9 from REAC (APP-097)) wherever possible to maintain important visual screening and</p>

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			<p>biodiversity habitats; proposed earth contouring and planting to integrate relocated golf course hole at Maylands Golf Club; the introduction of scrub and scattered trees; proposed alterations to landform will be incorporated within the proposals for the remodelled hole 2 of Maylands Golf Club; where slope gradients allow embankments, these could be planted with native trees and shrubs to disguise the engineered form of the earthworks and where areas of surplus topsoil, alluvium and subsoil are to be placed within mitigation areas these will be incorporated into the surrounding landscape through planting. Without this proposed screening element, the adverse visual intrusion of the loop road would be greater.</p> <p>Highways England is proposing a change to the Scheme (subject to ExA acceptance) to remodel Work No. 18 into an environmental bund which will provide a greater degree of visual screening for resident receptors at Maylands Cottages. The change would contribute to a change to findings within the landscape and visual assessment set out in Chapter 9 of the Environmental Statement from an anticipated very large adverse visual effect at year 1 and moderate adverse effect at year 15 to an anticipated moderate adverse effect at year 1 and slight adverse effect at year 15.</p>

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LV 1.9	Good Design (Applicant)	<p>The Engineering Drawings [APP-011] illustrate sections of the main bridges to be used, those being:</p> <ul style="list-style-type: none"> – Alder Wood Bridge (sheet 1 of 10) where the proposed M25/A12 off slip overpasses the M25 northbound on slip. – Duck Wood Bridge (sheet 2 of 10) where the proposed M25/A12 off slip overpasses Weald Brook. – Grove Bridge (sheet 3 of 10) where the proposed M25/A12 off slip overpasses both the Weald Brook and Ingrebourne River. – Maylands Bridge (sheet 5 of 10) where the proposed A12 eastbound off slip overpasses the M25/A12 off slip. <p>i) Set out the design approach to these bridges and explain how they constitute good design.</p> <p>ii) Justify the requirement and size for the deck planned for Alder Wood Bridge and how this constitutes good design.</p>	<p>i) Principles of good design were applied throughout the Scheme, including in the design of the four bridges. The design approach has been to integrate the Scheme into the surrounding landscape as far as possible. Some examples of the approach taken to the design of the bridges are:</p> <ul style="list-style-type: none"> • Bridges have been designed, wherever possible, to mirror the existing bridges' material and structural configuration. This is the case for Maylands Bridge and Grove Bridge, which are the closest to the existing M25 and junction 28 roundabout structures. • The design of the bridges was developed by taking into consideration the presence of existing assets, minimising land take and the environmental receptors likely to be affected by the Scheme. • For Duck Wood Bridge, Maylands Bridge and Grove Bridge, these bridges have been designed to allow for sufficient set back of abutments from watercourses and to allow sufficient space for mammal passage. Headroom above the 1:100 years flood level (including an allowance for climate change). • The Environment Agency, the Local Authorities, asset and land owners were consulted throughout the

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			<p>development of the preliminary design (see Chapters 4, 5, 8 and 9 of the Consultation Report (APP-022 - APP025)).</p> <p>ii) Alder Wood Bridge is a single span, precast concrete beams bridge, approximately 58 m long and 20 m wide. Originally, Alder Wood Bridge was expected to be more “conventional” (that is a bridge aligned to the proposed M25/A12 off slip, orientated indicatively east to west). However, as the design progressed and topographical information was collected, it became evident that a different approach could provide a leaner, more efficient design. A “conventional” bridge orientation would present construction challenges and not fit into the good design principles as the current solution does.</p> <ul style="list-style-type: none"> • Firstly, the proposed M25/A12 off slip is approximately at ground level at the location where the first abutment of such a bridge would be located. This would require additional temporary works and construction complications. • Secondly, a “conventional” bridge orientation would require a significantly longer span. This would lead to significantly bigger components, a different structural configuration likely to be more onerous, and additional

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			<p>challenges during construction, also associated with lifting heavy components in a closer proximity to high voltage overhead cables. The M25 northbound off slip would likely be lowered to accommodate the thicker bridge, resulting in additional earthworks and materials to dispose.</p> <ul style="list-style-type: none"> Finally, a conventionally orientated bridge would be skewed: the bridge deck would not be perpendicular to the orientation of the bridge supports. This would lead to significant challenges in the details of the reinforcements, which would likely be also more onerous. <p>The proposed Alder Wood Bridge, is a simpler, single span bridge, which would be constructed “<i>down to top</i>”, but which presents a conventional deck, with a relatively smaller, single, span, avoiding skews and allowing a simpler and safer construction option compared to other alternatives considered as part of the design development.</p> <p>Highways England acknowledges that this would mean that parts of the deck of the bridge will not be used by traffic.</p>

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LV 1.10	<i>Arboricultural Method Statement (AMS)</i> (Applicant)	<p>The ExA is concerned by the Applicant's apparent approach to tree management and mitigation.</p> <p>Chapter 7 of the ES [APP-029] introduces arboricultural matters. The REAC [APP-097] and outline CEMP [APP-096] particularly Table 9.1 identify that the Proposed Development has the potential to directly and indirectly affect 19 ancient woodlands including two adjacent to the Order limits and 15 veteran trees. The REAC identifies a number of measures designed to mitigate and protect trees to be retained and signposts the outline CEMP as the principle document where such matters would be controlled. However, the outline CEMP makes no further mention of trees in detail and neither the outline CEMP or REAC give any meaningful indication of management of Tree Preservation Order (TPO) trees. The REAC references to the Scheme Layout Plans [APP010] and Preliminary Environmental Design Plans (which do not appear to be before this Examination) are not sufficient as tree protection documents.</p>	<p>i) The Scheme's approach to tree management and mitigation follows British Standard guidance and is in line with the approach on consented Highways England schemes. The tree protection requirements presented in the Outline CEMP (APP-096) and the REAC (APP-097) are being informed by the Arboricultural Impact Assessment (AIA) (APP-063).</p> <p>Highways England is preparing an Outline Arboricultural Method Statement (AMS) which will be included at Appendix F to the updated Outline CEMP (APP-096) to be submitted at Deadline 3a.</p> <p>To further assist the ExA Highways England has responded to the points raised in LV.1.10.</p> <p>The Tree Preservation Orders (TPO) trees affected by the Scheme are presented in section 4.5 of the AIA (APP-063). All TPOs that are affected by the Scheme are cited as groups, woodlands or areas. Therefore, individual trees within these orders are not specifically cited. The commitment to ensure the protection of TPO trees in accordance with British Standard and other best practice guidance is included in the REAC (APP-097, page 17). Further details on the management of TPOs will be covered within the Outline AMS which will be included in the updated Outline CEMP (APP-096).</p>

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		<p>The Arboricultural Impact Assessment (AIA) [APP-063] identifies and plots the positions of veteran trees and TPO groupings. The AIA alongside the REAC and outline CEMP rely on an AMS which is not before the ExA and no provision is made for it within the draft DCO [APP-015].</p> <p>The ExA is concerned that the Applicant's approach does not satisfactorily address tree protection measures and places a heavy reliance on an as yet unseen AMS. Unanswered questions remain, including:</p> <ul style="list-style-type: none"> - The identification of the Root Protection Areas (RPAs) for the veteran trees within or close to the Order limits that are identified to be retained and the most appropriate approaches for their protection. - The absence of identification of and survey work of the ancient woodlands and the potential indirect impacts on them, which contrary to the REAC are not set out in the CEMP in any detail. 	<p>The root protection areas (RPAs) for all the veteran trees recorded as part of the Scheme are illustrated as a dashed pink circle on the Tree Protection Plans within Appendix C of the AIA (APP-063). The veteran trees are identifiable on the plans by their crowns being blocked in yellow. The approaches to the protection of the veteran trees are detailed within Table 4.1 (p.38-40) of the AIA (APP-063), including the protection of their RPAs and crown extents through the provision of barriers to define a construction exclusion zone around the tree.</p> <p>The location of ancient woodland is identified in the biodiversity assessment, Chapter 7 (APP-029), with location shown on the Figure 7.1 (APP-042) and the biodiversity sites and features plan (APP-012). Potential impacts to ancient woodland during construction are set out in the biodiversity assessment (APP-029), paragraphs 7.8.26 and 7.8.27. There will be no loss of ancient woodland as a result of the Scheme, and there will be no construction work which would directly affect ancient woodland or the root protection areas of trees within ancient woodland. Four woodlands lie within 50 m of the DCO boundary. The proposed construction works at these locations are restricted to the carriageway of the existing road (for example, replacement signs on gantries and alterations to carriageway markings) and potential</p>

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		<ul style="list-style-type: none"> - A precise indication of the trees to be removed. - The appointment of, the roles and responsibilities and the timing of the Ecological Clerk of Works and the Arboricultural Officer. <p>The ExA considers the Applicant's approach to tree protection and management to be scattered over several documents and is as such imprecise and unclear. It places too heavy a reliance on an AMS, which needs to be examined in this application. Given the quantum and importance of trees and the vagueness of the CEMP and REAC, the ExA does not consider that Requirement 4 of the draft DCO adequately secures the mitigation practices set out by the Applicant.</p> <p>The ExA requires the submission of an outline AMS, which should incorporate the AIA and build on in greater detail the headline measures set out in the CEMP and REAC, thus providing the Examination with a clear identification and mitigation approach to trees.</p>	<p>indirect impacts during construction are identified for one woodland, Lower Vicarage Wood.</p> <p>The REAC (APP-097) Table 1.1, biodiversity section page 6, includes two commitments with regards to protection of ancient woodland which is present outside of the DCO boundary. These commitments refer to the CEMP which will be produced by the Principal Contractor and it is secured through updated Requirement 4(2) in the updated draft DCO (APP-015) submitted at Deadline 2.</p> <p>The Arboricultural Impact Assessment (AIA) (APP-063) provides a precise indication of the trees that would be directly and indirectly affected by the proposed Scheme, see section 4.0 (Arboricultural Impacts) and Appendix B of the AIA. Appendix C of the AIA includes the Tree Protection Plans which illustrate the root protection areas of trees, crown spreads and the Scheme Layout, these were also used to create the Environmental Design Plans submitted as Figure 2.2 within APP-039.</p> <p>The Principal Contractor will be required to appoint an Ecological Clerk of Works and a suitably qualified Arboricultural Specialist (see bullet point 3 of page 7 in REAC (APP-097)) to support the detail design and construction phase of the Scheme.</p>

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		<p>i) Provide an outline AMS to contain the evidence set out above.</p> <p>ii) Insert a new Requirement into the draft DCO securing the mitigation and management of trees which requires, prior to the commencement of the development, the submission for approval of an AMS in accordance with the outline AMS.</p> <p>iii) Explain whether the AMS should be added to the list of Certified Documents in Schedule 10.</p>	<p>Section 5 (Mitigation) of the AIA (APP-063) provides information that is relevant to the production of an AMS in accordance with 'British Standard 5837:2012 - Trees in relation to design, demolition and construction' recommendations. This section also outlines the measures required to be implemented by the Principal Contractor through detailed design and construction methodologies and further information on the management of the trees is outlined in Appendix B (column name: preliminary management recommendations).</p> <p>ii) Highways England has updated Requirement 4 in Schedule 2 of the draft DCO (TR010029/APP/3.1(1))) to include the list of environmental control plans that must be produced under the CEMP. Highways England is also in the process of updating the Outline CEMP(APP-096) to include the Outline Arboricultural Method Statement (AMS). The Principal Contractor will need to adhere to, and develop, the final AMS as part of detailed design under Requirement 4 of the dDCO. The updates to the draft DCO (APP-015) are submitted at Deadline 2 and the updated Outline CEMP is proposed to be submitted at Deadline 3a.</p> <p>iii) The certified documents at Schedule 10 to the DCO are documents forming part of the DCO application which will be certified by the Secretary of State should the Order granting</p>

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			development consent be made. The AMS will be developed and implemented by the Principal Contractor during the detailed design and construction stages and would therefore not be listed in Schedule 10. The Outline CEMP (APP-096) is a certified document listed in Schedule 10 and an Outline AMS will be included in an updated version of the Outline CEMP at Appendix F.
LV 1.11	TPO (Applicant)	Schedule 5 of the draft DCO [APP-015] lists TPO trees at risk from felling to facilitate the Proposed Development. Confirm whether this includes veteran trees.	Schedule 5 of the draft DCO (APP-015) does not include the veteran trees.

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NV 1.1	<i>Dust, Noise and Nuisance Management Plan</i> (Applicant) (All Relevant Planning Authorities)	<p>Although the Chapter 6 [APP-028] and the Summary [APP-38] of the ES and the REAC [APP-097] identify no significant effects from the Proposed Development from noise and vibration, they nonetheless rely on the CEMP and in particular the submission of a Dust, Noise and Nuisance Management Plan (DNNMP) to mitigate any harmful effects caused by the construction and operation of the Proposed Development. The outline CEMP [APP096] contains little details on how measures set out in the REAC would be achieved and the DNNMP has not been submitted into the Examination. Moreover, paragraph 4.4.3 of the CEMP lists the DNNMP as a document which may or may not be ultimately submitted as part of the CEMP and Requirement 4 of the draft DCO [APP-015].</p> <p>The ExA is concerned that noise and vibration matters are not adequately addressed at this stage having regard to the concerns raised in RRs and that pre-commencement Works as set out in the draft DCO [APP-015] would be uncontrolled. The ExA considers the approach to</p>	<ul style="list-style-type: none"> i) see response to iii) ii) The noise assessment considered all activities needed for the construction of the Scheme. Those activities not within the definition of “commence” in the version of the draft DCO (TR010029/APP/3.1(1)) to be submitted at Deadline 2 are all minor works that will not have any significant environmental effects. iii) Highways England has updated Requirement 4 in Schedule 2 of the draft DCO (TR010029/APP/3.1(1)) to include the list of environmental control plans that must be produced under the CEMP. Highways England is also in the process of updating the Outline CEMP (APP-096) to include an Outline Dust Noise and Nuisance Management Plan (DNNMP). The revised draft DCO (TR010029/APP/3.1(1)) will be submitted at Deadline 2 and the updated Outline CEMP is proposed to be submitted at Deadline 3a.

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		<p>mitigation on noise matters should be known in this Examination.</p> <p>i) Comment on the approach not to submit an DNNMP into the Examination.</p> <p>ii) Explain how the ExA can be satisfied that pre-commencement and uncontrolled works would have no significant effect on noise matters and the discharge of Requirement 4 of the draft DCO and that mitigation would be adequate.</p> <p>For the Applicant:</p> <p>iii) Submit an outline DNNMP into the Examination either update Requirement 4 or insert a new Requirement into the draft DCO securing the final DNNMP to be in accordance with the outline version.</p>	
NV 1.2	<i>Vibration</i> (Applicant)	<p>The condition of the road surface is a significant factor in determining the likelihood of ground-borne vibration impacts. Ground-borne vibration is scoped out of the assessment as it is assumed that the new road surface will be adequately maintained to be free of irregularities over the long-term assessment period.</p>	<p>The road surface will be maintained to avoid surface irregularities and as such prevent ground-borne vibration impacts. Highways England has legal duties with respect to the maintenance and operation of the strategic road network. These duties are derived from the Highways Act 1980 and the Infrastructure Act 2015 and details and requirements are set out in the DMRB. In particular, the standard which covers these</p>

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		Is the maintenance regime secured in order ensure that ground-borne noise will not become a problem over the lifetime of the Proposed Development?	matters is DMRB GM 701 Asset Delivery Asset Maintenance Requirements (ADAMr). With regards to Pavement, Appendix E/A covers maintenance requirements. The scheme will therefore be maintained in accordance to standards.
NV 1.3	<i>Noise Climate</i> (Applicant) (Grove Farm)	<p>Paragraph 6.7.1 of Chapter 6 of the ES [APP-028] omits Grove Farm from the list of closest businesses that are sensitive receptors to noise but includes it as a residential receptor.</p> <p>For the Applicant:</p> <p>i) Confirm that these lists of receptors are accurate.</p> <p>For the occupiers of Grove Farm</p> <p>ii) Comment on the noise assessment contained within Chapter 6 of the ES</p>	<p>The businesses listed at paragraph 6.7.1 whilst being receptors are not sensitive receptors and have been included incorrectly in this paragraph. Reference to these receptors will be deleted in the revised Chapter 6 (Noise and Vibration) of the ES (APP-028) to be submitted at Deadline 3a.</p> <p>The noise assessment identifies all receptors which are noise sensitive, as set out in the Design Manual for Roads and Bridges (paragraph A1.13 in HD213/11) which identifies dwellings and a range of other receptor types to be noise sensitive). Not all businesses are noise sensitive, and the businesses at Grove Farm have not been identified as being noise sensitive and that is why they are not listed in paragraph 6.7.3. Grove Farm has been identified as a residential noise sensitive receptor.</p> <p>Paragraph 6.6.15 of Chapter 6 (Noise and Vibration) of the ES (APP-028) further clarifies that the noise sensitive receptors have been identified based on Ordnance Survey mapping, and have been agreed with the Local Authorities.</p>

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			<p>Paragraph 6.8.20 identifies that the noise assessment study area considers 1065 residential receptors and three non-residential noise sensitive receptors.</p> <p>A figure showing all noise sensitive receptors will be included in the revised version of Chapter 6 figures of the ES will be submitted at Deadline 3a. All lists of noise sensitive receptors in Chapter 6 (Noise and Vibration) of the ES (APP-028) are correct except for the omission of the Gardens of Peace, which is being added to the revised Chapter 6 for submission at Deadline 3a.</p> <p>The noise results at the residential property at Grove Farm are given in Appendix 6.3 of the ES (APP-055), with daytime results presented in Table 6.1. A report preparation error omitted the calculated night-time results for the residential property at Grove Farm from Table 6.2, and this data will be updated at Deadline 3a. The missing results are presented below:</p> <table border="1" data-bbox="1176 1114 2089 1394"> <thead> <tr> <th data-bbox="1176 1114 1370 1273" rowspan="2">Noise Sensitive Receptor</th> <th colspan="4" data-bbox="1370 1114 1899 1173">Road traffic noise levels (L_{Aeq,8h}, dB)</th> <th colspan="2" data-bbox="1899 1114 2089 1173">Change (dB)</th> </tr> <tr> <th data-bbox="1370 1173 1503 1273">DM2022</th> <th data-bbox="1503 1173 1632 1273">DS2022</th> <th data-bbox="1632 1173 1765 1273">DM2037</th> <th data-bbox="1765 1173 1899 1273">DS2037</th> <th data-bbox="1899 1173 1995 1273">Short-term</th> <th data-bbox="1995 1173 2089 1273">Long-term</th> </tr> </thead> <tbody> <tr> <td data-bbox="1176 1273 1370 1394">Grove Farm, Brook Street CM14 5NG</td> <td data-bbox="1370 1273 1503 1394">67.6</td> <td data-bbox="1503 1273 1632 1394">66.9</td> <td data-bbox="1632 1273 1765 1394">66.7</td> <td data-bbox="1765 1273 1899 1394">66.9</td> <td data-bbox="1899 1273 1995 1394">-0.7</td> <td data-bbox="1995 1273 2089 1394">-0.9</td> </tr> </tbody> </table>	Noise Sensitive Receptor	Road traffic noise levels (L _{Aeq,8h} , dB)				Change (dB)		DM2022	DS2022	DM2037	DS2037	Short-term	Long-term	Grove Farm, Brook Street CM14 5NG	67.6	66.9	66.7	66.9	-0.7	-0.9
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	DM2022	DS2022	DM2037	DS2037	Short-term	Long-term																	
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NV 1.4	<i>Noise Climate</i> (Applicant) (Grove Farm)	<p>Despite Grove Farm's immediate proximity to the M25 / A12 junction it is not designated as an Important Area for Noise (NIA) within Table 6.7 of Chapter 6 of the ES [APP-028].</p> <p>Provide justification for this omission, particularly in the light of the inclusion of 'The Poplars' and explain whether the findings presented in the assessment would be altered by Grove Farm's inclusion as an NIA.</p>	<p>Noise Important Areas (NIAs) in England are defined by DEFRA as part of their strategic noise mapping process. The NIAs capture the 1% of the population exposed to the highest noise levels, as calculated by DEFRA using their strategic noise maps. The most recent NIAs are from the third round of Strategic Noise Maps and Action Plans, published in 2019, and Grove Farm has not been identified as a NIA.</p> <p>Grove Farm is not currently in a NIA and was not in a NIA under the first or second rounds of Strategic Noise Maps and Action Plans, published in 2011 and 2014 respectively.</p> <p>If Grove Farm were in a NIA it would not affect the results of the assessment because all changes in noise are smaller than 1dB, as shown in Appendix 6.3 (APP-055). The conclusions of the assessment, as detailed in paragraphs 6.8.25 and 6.8.30 of ES Chapter 6 (Noise and Vibration) (APP-041), would not change.</p> <p>Also, note that ES Chapter 6 omitted calculated night-time noise levels at Grove Farm in Table 6.2 of Appendix 6.3 (APP-055). This information is given in response to point NV 1.3 above.</p>

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11. Minerals and Waste			
MW 1.1	<i>Waste Deposits</i> (Applicant)	<p>In paragraphs 2.1, 2.2 and 2.3 of its RR [RR-009], the EA raises concerns about waste deposits and permit frameworks.</p> <p>Provide a response to the issues raised and provide a timeframe for the resolution of the issues identified.</p>	<p>Highways England is in discussion with the Environment Agency (EA) and these matters are covered in section 3.3 of the draft Statement of Common Ground (REP1-003). Highways England is working with the EA to resolve these issues before the end of the examination and future updates to the Statement of Common Ground will reflect the outcome of discussions. Also please see Highways England response to EA written representation RR-009 (REP1-002).</p>

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PC 1.1	<i>Locations of residential and commercial property receptors</i> (Applicant)	Tables 13.18 and 13.19 of Chapter 13 of the ES [APP-035] lists the residential and commercial property receptors in the vicinity of the Proposed Development site. It would be helpful if this information could be provided in a colour-coded map form. The ExA requests from the Applicant that such a map is submitted into the Examination. Provide a response.	<p>Table 13.18 lists the residential and commercial property receptors and Table 13.19 lists the community receptors. A colour coded map identifying the receptors relevant to the Chapter 13 (People and Communities) of the Environmental Statement (ES) (APP-035), has been provided in Figure 13.1 in Chapter 13 figures (APP-047). The residential dwellings and commercial receptors from Table 13.18 are marked in purple and the community receptors from Table 13.19 are marked in pink.</p> <p>The residential dwellings and commercial properties have been combined as a receptor for the purposes of the People and Communities' assessment as the methodology for assessment is the same. Some receptors listed in Table 13.18 and shown in purple on Figure 13.1 are clusters of properties. As explained in paragraph 13.10.1 of Chapter 13 (People and Communities) of the ES (APP-035), where a cluster of receptors contains both residential and commercial properties, the sensitivity has been considered as high for the purposes of this assessment.</p>
PC 1.2	<i>Assessment of effects on private dwellings</i> (Applicant)	Section 13.10 and Table 13.24 of Chapter 13 of the ES [APP-035] set out those dwellings assessed together with a summary of effects from the Proposed Development on their living	i) The assessment of properties on Woodstock Avenue is covered under the receptor identified as 'dwellings at Harold Park' (as listed in Table 13.18 and Table 13.24, APP-035) and is therefore covered within the assessments which have been made in Chapter 13 (People and Communities) of the

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		<p>conditions. No assessment has been made for the properties in Woodstock Avenue.</p> <p>i) Explain the absence of assessment for properties in Woodstock Avenue.</p> <p>ii) Given the number of RRs received from occupiers in those properties, explain whether an assessment of those properties should form an addendum to Chapter 13 of the ES.</p>	<p>ES (APP-035). The Harold Park receptor covers the properties on the northern side of the A12 from Woodstock Avenue westward to the DCO limits and on the southern side of the A12 from Maylands Way westward to the DCO limits Figure 13.1, which supports Chapter 13 (People and Communities) (APP-047) further, clarifies the extent of the properties which have been assessed under this receptor name.</p> <p>ii) See response above.</p>
PC 1.3	<i>Grove Farm</i> (Applicant)	<p>Section 13.10 and Tables 13.24, 13.25 and 13.26 of Chapter 13 of the ES [APP-035] identifies that the Proposed Development would have a significant adverse effect on the private dwellings at Grove Farm from both construction and operation. However, to understand the actual effects, the occupiers of these properties and the ExA need to look at a range of ES Chapters as well as the REAC [APP-097]. The ExA considers it would be beneficial if an individual and cumulative assessment on the effects on the living conditions of the occupiers of Grove Farm could be provided in a concise statement or document to be submitted into the</p>	<p>i) As noted, Section 13.10 of Chapter 13 (People and Communities) of the ES (APP-035) includes a summary of the assessment of the amenity effects on Grove Farm. In summary, the following effects are expected:</p> <p>In terms of visual effects, as set out in paragraphs 9.10.16 and 9.10.20 of Chapter 9 (Landscape and Visual) of the ES (APP-031), and in 13.10.4 and 13.10.14 of Chapter 13 (APP-035), there is expected to be a very large adverse effect on Grove Farm as a result of both the construction works and the final built Scheme. Tree planting is proposed to mitigate effects as far as practicable, and the effect is expected to reduce to a large adverse effect at year 15 once tree planting matures.</p>

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		<p>Examination, and the ExA requests such an assessment.</p> <p>i) Provide a response.</p> <p>ii) Explain how mitigation can be considered to be adequate when statements, for the DNNMP has not been submitted into the Examination.</p>	<p>The Register of Environmental Actions and Commitments (REAC) (APP-097) sets out the mitigation measures proposed to limit the visual impact and include:</p> <ul style="list-style-type: none"> • Maintaining and managing landscape planting once established. • Ensuring the protection of veteran trees and trees covered by Tree Protection Areas. • Ensure the stripping, storage and maintenance of soils. • Maintain liaison with affected landowners to develop landscape proposals that take account of their views where possible. <p>The noise and vibration effects, as set out in section 6.10 of Chapter 6 (Noise and Vibration) (APP-028), indicate that during the construction stage, Grove Farm is likely to be affected by a high level of construction noise, but with the proposed mitigation measures this will not be significant. A temporary noise barrier will be provided at Grove Farm during construction and it is proposed that no vibratory rolling will take place within 20 m of Grove Farm (as set out in Table 1.1 of the REAC (APP-097)). Furthermore, it is noted within the Outline CEMP (APP-096) and REAC (APP-097) that the Principal Contractor will consult with the Environmental Health Departments at the relevant Local</p>

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			<p>Authorities in relation to noise and vibration matters from construction works.</p> <p>As for the operational stage, the change in noise levels has been assessed and the change in noise level is deemed to be negligible at Grove Farm as noted in Table 6.19 of Chapter 6 (APP-028).</p> <p>Receptors representing buildings at Grove Farm to the north west of junction 28 have been included in the air quality assessment in Chapter 5 of the ES (APP-027). The results of the assessment show that during construction, with the application of appropriate mitigation measures, any temporary effects from dust emissions would be minimised, such that there would not be any significant adverse effects. Typical mitigation measures as set out in paragraph 5.9.1 of Chapter 5 (Air quality) would be implemented, including regular water spraying and sweeping, wheel washing, sheeting of vehicles carrying dusty materials, enforcing speed limits, limiting temporary road widths, damping down of surfaces and storing dusty materials away from site. These measures are listed in the REAC (APP-097 - see entry AQ2.1 on page 37) and secured through the Outline CEMP (APP-096). An Outline Dust Noise and Nuisance Management Plan is being prepared and will be submitted at Deadline 3a in an updated version of the outline CEMP. At the operational stage, the five receptors (R6, R71, R72, R73 and</p>

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			<p>R74) as noted on Figure 5.8 supporting Chapter 5 of the ES (APP-040) are expected to have an increase in NO₂ concentrations ranging between +0.5 to +1.0 µg/m³ in the opening year. However, neither the NO₂ or PM₁₀ AQS objectives would be exceeded with the Scheme, and there would not be an overall significant adverse effect on human health.</p> <p>As set out within section 13.10 of Chapter 13 (People and Communities) of the ES (APP-035) regarding the impact on amenity at the construction stage, the noise and air quality impacts can be mitigated however there will remain a large adverse effect due to the visual impact of the works. The REAC (APP-097) which has been submitted with the Scheme lists all of the proposed mitigation measures. Requirement 4 of the draft DCO (APP-015) secures the preparation and approval of a CEMP which must reflect the mitigation measures set out in the REAC.</p> <p>At the operational stage, the air quality and noise effects are considered to be imperceptible/negligible, however the visual impact of the Scheme would remain, and the overall amenity effects is considered to be a large adverse effect.</p> <p>To summarise, the Cumulative Effect Chapter of the ES (APP-037) provides a summary of the in-combination effects on Grove Farm for the construction and operation stage. For the construction stage, paragraph 15.8.3 notes that Grove Farms</p>

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			<p>expected to receive a large adverse in-combination visual impacts during works, as well as temporary and permanent land take resulting in a large adverse effect.</p> <p>For the operational stage, Grove Farm will be significantly adversely affected due to permanent land take, the proximity to the proposed new loop road and due to the inherent landscape, visual and amenity effects of the proposed loop road encircling the receptor. Reduced congestion would have positive effects for local residents and businesses and improved drainage would also prevent any increase in flood risk to human receptors over time. Overall, there would be slight adverse in-combination effects upon human receptors due to reduced congestion and improvements to flood risk and landscape and visual effects are localised to Grove Farm.</p> <p>ii) Mitigation outlined in the REAC (APP-097) is considered adequate for both the air quality and noise assessments. For the air quality assessment, with the application of appropriate measures, any temporary emissions of dust would be minimised, such that there would be no significant adverse effect. For the noise assessment, the construction activities have been included in the impact assessment and the described mitigation avoids significant impacts. The updated Outline CEMP will contain an Outline Dust Noise and Nuisance Management Plan, submitted at Deadline 3a,</p>

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			describing the proposed controls on noise and vibration and air quality. The Principal Contractor will be required to produce and implement a final Dust Noise and Nuisance Management Plan as part of the CEMP as secured by the updated Requirement 4 of the draft DCO submitted at Deadline 2. Further information is provided in GQ 1.1.
PC 1.4	<p><i>Maylands Golf Course – Hole 2</i> (Applicant) (Luddington Golf Limited)</p>	<p>Paragraph 13.8.21 of Chapter 13 of the ES [APP-035] states that the tee off area for Hole 2 is required for Work No.29 (diversion of high-pressure gas pipeline). The area of land indicated for this is plot 1/12 as shown on the Land plans [APP-005]. The Applicant proposed that plot 1/12 be CA for the freehold owing to the need to provide a permanent easement over the diverted gas pipeline and to minimise future disruption that the presence of the gas pipeline might cause to the availability of Hole 2 to users of the golf course.</p> <p>However, in its RR [RR-019] Luddington Golf Limited states that Hole 2 only needs to be temporarily relocated (although the Applicant and Luddington Gold Limited are not currently in agreement on those works). The SoR [APP-019]</p>	<p>i) The high-pressure gas pipeline diversion would run through Plot 1/12. This plot is currently occupied by the tee off area to hole 2 of Maylands Golf Course. While Cadent Gas Limited (“Cadent”) has indicated that it would be possible to undertake tunnel boring construction techniques that would avoid the need for the surface ground to be dug up, a permanent easement would be required over their asset for inspection, repair, maintenance and renewal works. . It is also proposed that Plot 1/12 forms part of the ecological mitigation area comprised in the Scheme. It is therefore proposed that Plot 1/12 is permanently acquired, however, the existing tee for hole 2 on the plot is proposed to remain available for use until such a point when the replacement hole (Works No 32 in the draft DCO (APP-015)) is available.</p> <p>ii) Aside from Plot 3/2, the permanent acquisition of Plot 1/12 is the only direct impacts to the golf course itself.</p>

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		<p>only refers to discussions having taken place between the Applicant and Maylands Golf Club.</p> <p>i) Clarify whether there is a dispute between the parties as to whether Hole 2 needs permanent or temporary relocation and whether there is subsequently a dispute on the CA powers sought.</p> <p>ii) Clarify that it is only Hole 2 of the Maylands Golf Course that would be directly affected by the Proposed Development (setting aside Plot 3/2).</p> <p>iii) Provide details of the Applicant's and Luddington Golf Limited's solutions to remodel and / or mitigate the construction effects and set out the disputes between the parties.</p>	<p>The temporary acquisition of Plot 1/14 is proposed in order to facilitate the construction of a replacement hole in order to mitigate the impact of the Scheme on the golf course.</p> <p>The temporary acquisition of Plot 1/11 (owned by Glebelands Estate, see Book of Reference (APP-021)) and the permanent acquisition of plot 1/10, also owned by Glebelands Estate, would impact the area identified as an informal practice area. This area is required as a surplus construction material deposition area during (and following) construction. This would temporarily occupy approximately half of the area currently used as an informal practice area for the duration of the works. In accordance with article 35 of Part 4 of the draft DCO (APP-015), Highways England would restore land acquired temporarily to the reasonable satisfaction of the owners of the land. A corner section of this area of around 10% of the total area would be permanently acquired to enable the construction of a drainage pond. This is an estimation as the extent of the informal practice area is not clearly defined.</p> <p>During construction, it is not expected that the practice area could be fully utilised. However, once the works are completed, the area will be restored to its original use and could continue to be used as an informal practice area.</p>

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			<p>iii) Highways England has proposed the area identified as Work No. 32 on the Works Plans (APP-006) to provide a replacement hole 2. The area would allow for a replacement hole, of equal length and playability as the existing hole 2, to be created.</p> <p>Highways England has put forward the proposed replacement hole 2 design for the following reasons:</p> <ul style="list-style-type: none"> • The proposal would allow for a replacement hole that is of equal playing length from each tee (women's, men's and competition tee) as the current hole and would be comparable in terms of playability and difficulty. • The proposal would enable a hole to be constructed which meets the required safety standards for a golf hole. • The proposal would minimise further intrusion into the Green Belt and would seek to minimise impact on the openness of the Green Belt by constraining works to only that which is deemed to be required as a result of the impacts of the Scheme on the course. • The proposal would avoid interaction with the easements required by Cadent Gas over the diverted high-pressure gas pipeline.

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			<ul style="list-style-type: none"> • The proposal would limit impacts upon the Great Crested Newt pond as part of the environmental mitigation. • The proposal would allow for the construction of a replacement hole to be undertaken offline without the need to close the existing course thereby avoiding any interruption to operation of the golf course. • The proposal would include the planting of native tree and shrub species to assist in delineating the boundary to the replacement hole as well as respecting the local wooded landscape character. <p>Luddington Golf Limited (LGL) has submitted an alternative design to that proposed by Highways England for mitigating the impacts of the Scheme. LGL have provided several design options for the replacement of hole 2 which involved work to other nearby golf holes as follows:</p> <ul style="list-style-type: none"> • The lengthening of hole 1 to the existing hole 2 green and the subsequent remodelling of that green. • The creation of a new hole 2 utilising the existing hole 3 tee and creation of a new hole 2 green east of the existing hole 3. • Creation of a new fairway for the new hole 2.

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			<ul style="list-style-type: none"> • Creation a new hole 3 involving the creation of a new tee and fairway, utilising the existing hole 3 green. • The creation of a new hole 8 tee to avoid conflict with the new hole 3. <p>Highways England has explained to LGL the reasons why it is considered that the Highways England proposal for hole 2 is the most appropriate. These reasons are:</p> <ul style="list-style-type: none"> • The design would constitute an appropriate level of mitigation for the impacts which have been identified. • The design would address safety concerns raised by Luddington Golf Club. • The design would limit the impact on the Green Belt. • The design would reduce any further tree loss, • The design would be capable of being constructed without the need to close the existing course. <p>While discussions with LGL have been ongoing, there remain areas of disagreement regarding the following:</p> <ul style="list-style-type: none"> • The quality of the Highways England proposed design for golf hole 2.

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			<ul style="list-style-type: none"> • The most cost-effective design for the replacement of golf hole 2. • The safety of the Highways England proposed design. <p>In addition to the above a non-statutory targeted consultation is currently taking place, which proposes a change to the Highways England proposal for the replacement hole, as noted in a letter to the ExA submitted at Procedural Deadline A (AS-002). The proposed change is to incorporate a boardwalk into the design which would allow for a safe route for players to walk back to the existing hole 3 green and would reduce any delays in play occurring when players wait for the new hole 2 to be clear before taking their shot.</p> <p>This change is anticipated to form part of a formal change submission to be submitted to the ExA no later than Deadline 3a. Notwithstanding this, discussions are ongoing between Highways England and LGL.</p> <p>Highways England will continue to engage with LGL on this matter.</p>
PC 1.5	Maylands Golf Course (Applicant)	Section 13.10 and Table 13.23 identifies that there would be a not inconsiderable land take from Maylands Golf Course both for a temporary and permanent nature. Table 13.27 and	i) The construction effects that are expected to occur to the Maylands Golf Course are detailed within paragraphs 13.8.18 to 13.8.34 in Chapter 13 (People and communities) of the ES (APP-035) which draws upon the findings of

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	(Luddington Golf Limited)	<p>paragraphs 13.10.19 to 13.10.28 set out the construction effects on the Maylands Golf Course which is described as having a LSE.</p> <p>i) Clarify the construction effects that would occur to the wider Maylands Golf Course and how they are mitigated and secured in the draft DCO [APP-015].</p> <p>ii) Explain the status of the 'informal' practice driving range at plot 1/11 as shown on the Land plans [APP-005].</p>	<p>Chapter 5 on air quality (APP-027), Chapter 6 on noise (APP-028) and Chapter 9 on landscape and visual impact (APP-031). The position is summarised below:</p> <p>In regard to air quality, with the application of appropriate mitigation measures there would not be a significant adverse effect at Maylands Golf Course during construction as a result of any dust emissions. To control dust during construction mitigation measures are proposed such as:</p> <ul style="list-style-type: none"> • Regular water-spraying and sweeping of unpaved and paved roads to minimise dust and remove mud and debris. • Using wheel washes, shaker bars or rotating bristles for vehicles leaving the site where appropriate to minimise the amount of mud and debris deposited on the roads. • Sheeting vehicles carrying dusty materials to prevent materials being blown from the vehicles whilst travelling. • Enforcing speed limits for vehicles on unmade surfaces to minimise dust entrainment and dispersion. • Ensuring any temporary site roads are no wider than necessary to minimise their surface area. • Damping down of surfaces prior to their being worked.

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			<ul style="list-style-type: none"> Storing dusty materials away from site boundaries and in appropriate containment (for example, sheeting, sacks, barrels etc.). <p>These measures are set out on page 37 of the REAC (APP-097). Requirement 4 in Schedule 2 of the draft DCO (APP-015) secures the preparation and approval of a CEMP which must reflect the mitigation measures set out in the REAC.</p> <p>In regard to noise, paragraph 6.5.19 of Chapter 6 (Noise and Vibration) (APP-028) notes that outdoor recreational facilities such as golf courses are not considered as noise sensitive receptors as the use of the facility is of a transient nature and is therefore not considered further in this assessment.</p> <p>In regard to landscape and visual impact, the Scheme would have a Large Adverse landscape effect on this landscape character area during construction as a consequence of the introduction of the proposed loop road as outlined in paragraph 9.10.4 of Chapter 9 (Landscape and visual) of the ES (APP-031). The works will require the removal of existing vegetation. The removal of these elements will result in a noticeable change on the landscape character in the immediate vicinity of the junction. Mitigation measures including tree planting, associated maintenance, protection of veteran trees and liaison with</p>

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			<p>landowners over protecting views are proposed as set out on page 17 of the REAC (APP-097).</p> <p>As noted in the response to question PC 1.4 above, it is proposed that around half of the area identified as an informal practice area would be required to be used as construction compound for the construction phase of the development. This would temporarily occupy approximately half of the land used as a practice area for the duration of the construction works. In accordance with article 35 of Part 4 of the draft D CO (APP-015), Highways England would restore land acquired temporarily to the reasonable satisfaction of the owners of the land.</p> <p>As summarised in Table 13.27 of Chapter 13 (People and Communities) (APP-035), the combination of the amenity effects during construction post mitigation are considered to constitute a moderately adverse effect on the golf club.</p> <p>ii) In regard to the informal practice area, the area is understood by Highways England not to have any formal planning permission for such a use, nor is Luddington Golf Ltd listed as an occupier, tenant or lessee in the Book of Reference for Plot 1/11 (Book of Reference (APP-021)).</p> <p>The use of this land was raised with the lessees and operators of the golf club in a letter dated to them on 23 July 2020 following their response to targeted consultation. No</p>

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			further detail with regard to the status of the area has been provided to Highways England.
PC 1.6	<i>Development Land</i> (London Borough of Havering)	<p>Paragraphs 13.8.45, 13.8.46 and 13.10.47 of Chapter 13 of the ES [APP-035] identifies the Order land as including sites within the London Borough of Havering's emerging development plan as being for wind related development. Paragraph 13.10.47 concludes that "this is considered to be of low significance given the alternative sites available, and the result effect is therefore considered to be negligible".</p> <p>i) Provide a response as whether this is agreed with.</p> <p>ii) Indicate which plots within the Land plans this relates to.</p>	N/A – as directed to the London Borough of Havering
PC 1.7	Development Land (Glebelands Estates Limited)	<p>In Glebelands Estates Limited's RR [RR-020], it is stated that the Proposed Development would prevent other land holdings being brought forward for development.</p> <p>If this does not relate to the wind development discussed above in WQ PC 1.6, explain which plots Glebelands Estates Limited are referring to,</p>	N/A – as directed to Glebelands Estates Limited

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		and what stage in the planning process these developments have progressed.	
PC 1.8	<i>Cycleways</i> (Applicant)	<p>Table 13.33 of Chapter 13 of the ES [APP-035] states that there is the potential for the cycle infrastructure to be upgraded and functional during the operational phase of the Proposed Development which would have a significant beneficial impact.</p> <p>Explain how this is secured in the draft DCO [APP-015]</p>	<p>Highways England is currently in the process of applying for Road Investment Strategy 2 Designated Funds for the implementation (construction) of a proposed NMU route in the vicinity of M25 junction 28. Designated funds are separate to Highways England's core work of operating, maintaining and improving England's strategic road network. They provide ring-fenced funding to be invested in and to support initiatives that deliver lasting benefits for road users, the environment and communities across England.</p> <p>The NMU scheme comprises the conversion of 3.1km of existing walking route into a high-quality shared use cycling and walking route. The proposal comprises continental-standard cycling provision between A1023 / Kavanaghs Road junction and the M25 junction 28. The proposed improvements would continue west of junction 28 linking with the NCN route 136 in Harold Wood. The proposal has been developed in consultation with Essex Country Council, London Borough of Havering, Brentwood Borough Council and Transport for London.</p> <p>This application for Designated Funds is separate to this DCO application.</p>

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PC 1.9	<i>Plot 1/8</i> (Gardens of Peace Muslim Cemetery)	<p>The SoR [APP-019] confirms that plot 1/8 as shown on the Land plans [APP-005] is required for Work No.29 (diversion of a high-pressure gas pipeline) in order to allow for the construction of the Proposed Development. In Gardens of Peace's RR [RR-024] it is stated that the works would interfere with the operation of the cemetery and would result in a redesign of the layout.</p> <p>i) Explain the anticipated length of time it would take to divert the existing high-pressure gas pipeline on Plot 1/8.</p> <p>ii) Explain why the cemetery would need to be resigned.</p> <p>iii) Explain whether the diversion could be timed to minimise harm to the cemetery.</p>	<p>In response to point i) Highways England understands that the works to divert the high-pressure gas main would commence with site mobilisation in March 2022 and demobilisation taking place in November 2022.</p> <p>No response from Highways England is required for points ii) and iii).</p>
PC 1.10	<i>Limits of Deviation</i> (Applicant)	Part 2, Article 7(1)(b), (c) and (d) of the draft DCO [APP-015] would permit the authorised development to be increased by up to 2m upwards in certain places.	i) The assessment within the ES, including that within Chapter 13 (People and communities) (APP-035) considers the Scheme including the limits of deviation permitted under Article 7 of the draft DCO (APP-015). Where the assessment draws upon the findings of other ES chapters, including Chapter 5 on air quality (APP-027), Chapter 6 on

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		i) Confirm whether the scope and assessment in the ES has allowed for these limits of deviation. ii) If no assessment has been given, provide it and explain whether it has any bearing on the scope and assessment in the ES, particularly on the identified effects to the private dwellings at Grove Farm.	noise and vibration (APP-028) and Chapter 9 on landscape and visual (APP-031), these also have accounted for the limits of deviation set out within the draft DCO (APP-015). ii) N/A
PC 1.11	<i>Community Engagement</i> (All Interested Parties)	The ExA is concerned that the REAC [APP-097] and CEMP [APP-096] do not provide adequate and clear instructions on how the Applicant intends to liaise with the local community during construction. i) Comment on the Applicant's approach to community engagement during construction of the Proposed Development, should the SoS decide to make the Order, and whether this is adequately secured in the draft DCO [APP-015]. For the Applicant: i) Consider an additional requirement which requires, prior to the commencement of the development, the submission for approval of a	Question i) for the Applicant A Community Engagement Plan (named Community Relations Strategy in the REAC (APP-097)) will be prepared by the Principal Contractor and it will form part of the final CEMP. This will include the communication protocols with the general public, key stakeholders and other parties likely to be affected by the Scheme during the pre-construction and construction stages. The requirements to liaise with the community during construction are outlined in the REAC in Table 1.1, page 20, people and communities section (APP-097). Highways England has updated Requirement 4 Schedule 2 of the draft DCO to include the list of environmental control plans that must be produced under the CEMP. The updates to the draft DCO (APP-015) are submitted at Deadline 2. Highways England is also in the process of updating the Outline

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		Community Engagement Plan which must be in accordance with the outline document.	CEMP(APP-096) which is proposed to be submitted at Deadline 3a.

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TA 1.1	<p><i>Traffic Management Plan</i> (Applicant) (Essex CC) (London Borough of Havering) (Transport for London)</p>	<p>Although the REAC [APP-097] identifies no significant effects by the construction and operation of the Proposed Development in respect to noise and vibration and people and communities from traffic issues, it does nonetheless rely on the submission of a Traffic Management Plan (TMP) to mitigate any harmful effects. However, this document is not before the Examination and the ExA is concerned that traffic management matters are not adequately addressed at this stage having regard to the concerns raised in RRs. The ExA considers the approach to mitigation on traffic management matters should be known in this Examination.</p> <p>Additionally, concerns have been raised in RRs that construction traffic and construction site access requirements could lead to significant disruption to traffic on local roads and to access westwards along the A12 for residents of Woodstock Avenue.</p> <p>i) Comment on the approach not to submit an TMP into the Examination. OR</p> <p>For the Applicant:</p>	<p>i) Temporary traffic management proposals to enable construction of the Scheme have been developed following submission of the DCO application. These, along with revised forecast traffic impacts due to construction of the Scheme and proposed mitigation measures, are summarised in Section 6 of the Transport Assessment Supplementary Information Report (PDB-003), submitted to the ExA at Procedural Deadline B (21 December 2020), which supersedes the information presented in Section 8 of the Transport Assessment Report (APP-098).</p> <p>Requirement 10 of the draft DCO (APP-015) requires the preparation and implementation of a traffic management plan (TMP) that will have to be submitted to and approved by the Secretary of State following consultation with the relevant highway authority before the works can start.</p> <p>Consequently, it is not necessary to submit an outline TMP with DCO applications for proposed schemes. Requirement 10 of the draft DCO (APP-015) provides adequate surety to interested parties that a TMP will be prepared prior to commencement of construction and will contain commitments to ensure that traffic will be managed appropriately in order to avoid, so far as practicable, adverse effects on the road network.</p>

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		ii) Submit an outline TMP into the Examination update Requirement 10 of the draft DCO securing the final TMP to be in accordance with the outline version	
TA 1.2	<i>Extent of traffic modelling</i> (Applicant)	i) Provide a response to the traffic and access concerns raised by the London Borough of Havering in its RR [RR-017]. ii) Explain whether traffic modelling has been carried out to establish the impact of the Proposed Development on roads beyond Gallows Corner and the impact on roads approaching the A12 between Gallows Corner and J28.	i) Refer to Highways England's responses 17.1 to 17.4 and 17.11 to London Borough of Havering relevant representations (RR-017 (REP1-002)). ii) As explained in Section 5.2 of the Transport Assessment Report (APP-098), the traffic models used to evaluate the traffic impacts of the Scheme comprise the following: <ul style="list-style-type: none"> a. a strategic traffic model that covers the road network over a large area around the north east quadrant of the M25, including roads beyond Gallows Corner and key roads approaching the A12 between Gallows Corner and the M25 junction 28; and b. a more detailed operational traffic model that covers the road network in the immediate vicinity of junction 28. This model includes the M25 between junction 27 and 29, and the A12 between Mountnessing and Gallows corner; though it does not include the side roads along the A12 between Gallows Corner and junction 28, nor the Gallows

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			<p>Corner junction itself (Gallows Corner is assessed using the strategic model).</p> <p>The roads beyond Gallows Corner and those approaching the A12 between Gallows Corner and junction 28 are excluded from the operational traffic model because the strategic traffic model showed that the changes in traffic flows on these roads due to the Scheme are small and will not, therefore, have a significant impact. This is demonstrated by information presented in Section 4 of the Transport Assessment Supplementary Information Report (PDB-003).</p>
TA 1.3	<p><i>Extent of traffic modelling</i> (London Borough of Havering)</p> <p>(Essex County Council)</p>	<p>For the London Borough of Havering:</p> <p>i) Set out the specific concerns regarding the Gallows Corner area and provide comment, where appropriate, in response to the additional information, specific to this area, provided within Chapter 9.5 Transport Assessment Supplementary Information Report, submitted at Procedural Deadline B on 21 December 2020 [PDB-003].</p> <p>For Essex County Council:</p> <p>ii) In its RR [RR-011], Essex County Council raises general concerns around the impact of</p>	N/A – as directed to the London Borough of Havering and Essex County Council

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		<p>traffic congestion on Brentwood's emerging local plan. Set out the specific areas of concern and what mitigation measures might be appropriate to address these concerns.</p>	
TA 1.4	<p><i>Brook Street</i> (Applicant)</p>	<p>Section 5.8.6 of the Transport Assessment Report [APP-098] states "the Brook Street westbound mitigation is proposed to be delivered as part of the Scheme and it will be developed further in the subsequent detailed design phase. With this mitigation, the delays with the Scheme in place are expected to be less than those predicted for the Do minimum in both the AM and PM peaks".</p> <p>Confirm whether the information contained within Procedural Deadline B submission - 9.5 Transport Assessment Supplementary Information Report [PDB-003] describes "the Brook Street westbound mitigation"</p> <p>Explain whether further development of this mitigation work is guaranteed in the draft DCO [APP-015]</p>	<p>Section 2 of the Transport Assessment Supplementary Information Report (PDB-003) explains that the mitigation for delays on Brook Street included in the Scheme comprises of an extended inter-green at the junction of the A12 east off-slip with the junction 28 roundabout and demonstrates that this will reduce delays on Brook Street compared to without the Scheme.</p> <p>It also explains that Highways England are separately seeking to secure designated funding to optimise traffic signal timings at the junctions of Brook Street with Mascalls Lane and Nags Head Lane to further reduce delays on Brook Street, but these improvements are not included in the Scheme and are not therefore currently guaranteed.</p> <p>It is Highways England's intention to introduce the extended inter-green at the junction of the A12 east off-slip with the junction 28 roundabout as part of the Scheme. This is because it will not only reduce traffic delays on Brook Street, but also delivers the greatest overall journey time savings and the best benefit to cost ratio (BCR), as presented in Section 2 of the Transport Assessment Supplementary Information Report (PDB-</p>

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			<p>003). However, no explicit requirement to deliver the extended inter-green as part of the Scheme is included in the DCO.</p> <p>Also see Highways England's response RR-028-25 to Transport for London's Relevant Representation RR-028 (REP1-002).</p>
TA 1.5	<p><i>Collision Date for M25 junction 28</i> (Applicant)</p>	<p>Figure 6-1 of the Transport Assessment Report [APP-098] shows a fatal accident in the region close to the A12 junctions with Maylands Golf Course and Woodstock Avenue. These are areas that a number of IPs have raised concerns about in relation to safety and accessibility of this area within RRs.</p> <p>Explain what measures exist within the Proposed Development to address the concerns raised.</p>	<p>As presented in Section 4 of the Transport Assessment Supplementary Information Report (PDB-003), the Scheme is not forecast to result in any significant changes in traffic flows along the A12 and is not, therefore, forecast to have any direct material impact on road safety and accessibility along the A12.</p> <p>In addition, accident records covering the five years from 2013 to 2017 show that there are no accident clusters at the junctions of Maylands Golf Course and Woodstock Avenue with the A12. Within 20m of the A12 junction with Woodstock Avenue there has been no accidents recorded over this five-year period. Within 20m of the A12 junction with the Maylands Golf Course there have been one slight and one fatal accident, with no other fatal accidents recorded on the A12 between Gallows Corner and junction 28 over this five-year period. The circumstances of the fatal accident show the involvement of a broken-down vehicle on the A12 which is more relevant than the location near the access to the Golf Course. Aside from this, addressing existing road safety and accessibility issues on the A12 in the vicinity of junctions with Maylands Golf Course and Woodstock</p>

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			<p>Avenue is a matter for Transport for London as the Highway Authority for this part of the road network.</p> <p>Consequently, the Scheme does not include any measures to address the concerns raised.</p>
TA 1.6	<i>Road Safety Audit</i> (Applicant)	<p>Figure 6-8 of the Transport Assessment Report [APP-098] indicates that the road safety audit Problem 1 was responded with “disagree”.</p> <p>i) Explain the evidence to support this disagreement.</p> <p>ii) Explain whether local businesses and residents have been consulted on the possibility, or practicality, of using existing access for maintenance vehicles.</p> <p>iii) Set out whether specific objections have been raised and whether the risk of traffic disruption caused by an accident under Problem 1 would be a greater, or significant inconvenience and a higher safety risk than periodic access via a shared connection.</p>	<p>i) Highway's England's maintenance arrangements will follow the guidance on frequency of maintenance access of balancing ponds is provided in the CIRIA SuDS Manual paragraph 23.12 and table 23.1. The masts supporting the CCTV cameras will be inspected in accordance with DMRB design standard CS450, chapter 4 and table 4.1. A general inspection will be undertaken every 24 months, a principal inspection every 72 months. Design of Roadside CCTV standard MCH 2554B paragraph M105 advises maintenance intervals of 1 year. Accordingly, use of the access will be infrequent.</p> <p>ii) The proposed access arrangements have been published and comments sought from local businesses and residents through consultation. They have not been asked specifically to comment on the possibility or practicality of using the existing access to Maylands Golf Club for maintenance vehicles (not lease because this is not proposed). TfL were consulted on this access arrangement and they raised no concerns.</p>

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			<p>iii) No specific objections have been raised about the separate access. A concern has been raised by Glebelands Estates Limited about the proximity of the proposed A12 eastbound off-slip road to the access to Maylands Golf Club. Given the infrequent use of the maintenance access, as explained above, the risk of traffic disruption caused by an accident is expected to be no greater than access via a shared location. Highways England has consulted TfL on the proposed access arrangement and no concerns were raised. A safety risk assessment has been undertaken by road safety engineers and the risk assessed to be low.</p>
TA 1.7	Road Safety Audit (Applicant)	<p>Figure 6-8 of the Transport Assessment Report [APP-098] indicates that the road safety audit Problems 3 and 6 were responded with “agree, it is proposed that this recommendation is implemented in the detailed design stage’.</p> <p>Explain whether the provision of the agreed additional safety measures is guaranteed in the draft DCO [APP-015].</p>	<p>The draft DCO does not guarantee the incorporation of these recommendations and nor does it need to. However, Highways England's scheme delivery procedures and governance (the Project Control Framework) require the review of previous road safety audits and designer's responses in subsequent road safety audits. The Stage 2 audit of the detailed design will involve a review of these issues. If they have not been addressed and are still recommended, they will be raised again. Highways England oversee the audit and decides upon the course of action in accordance with its usual procedures.</p>

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TA 1.8	Road Safety Audit (Applicant)	<p>Figure 6-8 of the Transport Assessment Report [APP-098] indicates that the road safety audit Problem 7 was responded with “disagree”.</p> <p>While noting that the design has been carried out in line with guidance set out in DMRB, it is apparent that an out of date version is referenced.</p> <p>Confirm that the design of the Proposed Development in its entirety complies with the guidance set out in the most current DMRB</p>	<p>The design standards undergo a continuous cycle of review and updating. It is usual practice to “freeze” the design once the final design milestone has been achieved and this practice has been adopted for the preliminary design of the scheme. When DRMB standards have been updated post design freeze, such as the CD122 standard referred to in the auditor’s response, the new standard is reviewed to ascertain whether any changes materially affect the design. A formal assessment has been undertaken to assess the implications of CD 122 and the changes were predominantly assessed to have no or low impact. However, some revised environmental standards were identified to have a medium impact and so a sensitivity test was undertaken.</p> <p>Newly introduced DMRB requirements (that is to say introduced following the design freeze) required the need for a comparison of effects described in the ES and the predicted effects under the updated DMRB guidance. The results of this comparison are outlined in the Environmental Statement Appendix 4.1 DMRB Sensitivity Test (APP-050) which concludes in paragraph 6.2.1 that the updated DMRB guidance would not change the result of the assessments presented in the ES chapters and the environmental mitigation measures proposed for the Scheme remain appropriate.</p>

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			This approach is in accordance with Highways England's internal procedure and ensures that the proposed development fully complies with the guidance in the current DMRB.
TA 1.9	Road Safety Audit (Applicant)	<p>Figure 6-8 of the Transport Assessment Report [APP-098] indicates that the road safety audit Problem 7 was responded with "disagree". It is confirmed that a GG104 safety risk assessment has been undertaken.</p> <p>Confirm whether the findings of the risk assessment have been published.</p>	The safety risk assessments were included as appendices to the designer's response to the Stage 1 road safety audit. They have not been published.
TA 1.10	Road Safety Audit (Applicant)	<p>Figure 6-8 of the Transport Assessment Report [APP-098] indicates that the road safety audit Problem 12 was responded with "disagree".</p> <p>The Applicant's response does not appear to fully address the problem raised.</p> <p>i) Confirm whether evidence has been provided to explain that there is no greater risk of lighting columns positioned as proposed being struck in a collision and that there is no increased severity of collision as a result of this positioning.</p>	<p>i) Errant motorists will be prevented from striking lighting columns by a continuous road restraint system. The provision of these road restraints has been shown on the engineering drawings and sections (APP-011), for example sections J-J, L-L, M-M and N-N on sheet 1. Road restraint systems are designed to absorb vehicle impact and redirect vehicles away from hazards (such as lighting columns) and return vehicles to the direction of travel. If lighting columns were placed in the nearside verge, a road restraint system would still be provided in the offside verge where other hazards will exist such as CCTV masts and structures and</p>

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		<p>ii) Demonstrate that lighting columns on the offside position of the carriageway are not more difficult to maintain and that routine maintenance will not require lane closures, resulting in longer periods where lighting is inoperable in this case.</p>	<p>which will be struck by an errant vehicle. There will be no increased severity of collision as a result of locating lighting columns in the offside verge.</p> <p>ii) Lane closures will be needed when maintaining the lighting columns and lanterns whether the lighting columns are located in the offside or nearside verge, in order to provide working space and a safety clearance as described in the Traffic Signs Manual Chapter 8 (this is the standard Department for Transport manual dealing with these matters). An alternative to lane closures would be to close the proposed link road overnight and direct traffic heading for the A12 eastbound to use Brook Street roundabout. This would allow rapid progress and completion of maintenance activities.</p>
TA 1.11	<i>Sustainable Transport</i> (Applicant)	<p>Section 3.17 of NN NPS states that new development should “identify opportunities to invest in infrastructure in locations where the national road network severs communities and acts as a barrier to cycling and walking, by correcting historic problems, retrofitting the latest solutions and ensuring that it is easy and safe for cyclists to use junctions.”</p>	<p>As noted within the response to paragraph 3.17 of the NPS NN in Table B.3 of the Case for the Scheme (APP-095), the existing routes for non-motorised users (NMUs) would remain unaffected during the construction phase of the Scheme. A new NMU route along the A12 off-slip, as indicated on Figure 13.1 in the ES (APP-047) would be constructed and made available during the operation phase. This would include a new widened footway. The existing route would remain operational during construction ensuring no resultant severance to pedestrian routes.</p>

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		<p>Demonstrate the extent to which the Proposed Development has sought to address the NN NPS objectives.</p>	<p>Notwithstanding this Highways England is currently looking at implementing a scheme as part of its Designated Funds programme, that would include some additional improvements to NMU's that could have been considered at junction 28. The junction 28 NMU improvements have been developed as part of a wider strategy and programmes of works to deliver a comprehensive and coordinated approach to improving the corridor along with the A1023 and the A12 between Brentwood and Harold Hill.</p>
TA 1.12	<p><i>Accessibility</i> (Applicant)</p>	<p>Section 3.22 of NN NPS states that new developments should "seek to deliver improvements that reduce community severance and improve accessibility". A number of local residents in RRs - particularly those who reside in Woodstock Avenue - have raised this as a concern.</p> <p>Demonstrate the extent to which the Proposed Development has sought to address the NN NPS objectives.</p>	<p>As presented in Section 4 of the Transport Assessment Supplementary Information Report (PDB-003), the Scheme is not forecast to result in any significant changes in traffic flows along the A12 and is not, therefore, forecast to have any material impact on road safety and accessibility along the A12. Where local traffic needs to use the junction 28 roundabout to make certain journeys, the Scheme will offer improvements in terms of travel times etc.</p> <p>Chapter 13 of the ES (APP-035) provides an assessment of any severance caused by the Scheme to local communities and businesses. As set out in the chapter, the Scheme would ensure that access to all surrounding properties is maintained throughout the project. Where the Scheme severs land, discussions with relevant landowners have taken place to</p>

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			<p>ensure that mitigation is provided so that access can be maintained.</p> <p>The assessment indicates that no significant severance effects are expected due to the Scheme.</p>
TA 1.13	<p><i>Accessibility</i> (London Borough of Havering) Transport for London)</p>	<p>Particular concern has been raised by residents of Woodstock Avenue in relation to a lack of access westbound along the A12 from their road as it is currently not possible to execute a right turn from the junction of Woodstock Avenue on to the A12.</p> <p>i) Comment on the level of support within each organisation for the provision of a right turn from Woodstock Avenue onto the A12.</p> <p>ii) Comment on the practicalities of such a provision on the current network.</p> <p>iii) Provide an opinion as to whether the Proposed Development would alleviate the current issues faced by residents of the properties.</p>	<p>iii) As presented in Section 2 of the Transport Supplementary Information Report (APP-098), the Scheme reduces traffic congestion and delay at junction 28. Therefore, with the Scheme in place residents of Woodstock Avenue will experience an improvement in journey times when making U-turns at junction 28 to travel westbound on the A12.</p>

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