

Lower Thames Crossing

9.218 Closing Submissions from the Applicant

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1 Executive summary

- 1.1.1 This ‘Closing Submission’ document provides a summary of the Applicant’s final position in respect of the principal planning issues that have been considered through the course of the Examination – particularly where they represent matters of remaining disagreement between the Applicant and key stakeholders. It is not the purpose of this document to replicate or replace existing submission documents, which continue to stand as the full articulation of the Applicant’s case and should be referred to on that basis.
- 1.1.2 This document, therefore, signposts to existing submission material, supplementing this where necessary documents to reflect changes and additional commitments during the Examination and to accurately reflect the Applicant’s final position.
- 1.1.3 The chapters of this report, in summary, cover and conclude the following:
- a. The context, purpose and structure of the document (Chapter 2).
 - b. The statutory and policy framework for determining the Application, including updates since the submission of the Application, which is not considered to represent a matter of contention (Chapter 3).
 - c. That the Applicant considers there is a clear consensus on the need to address the problems at the Dartford Crossing and the proposals would support the Scheme Objectives (Chapter 4).
 - d. That the Applicant has followed a detailed and logical optioneering process and has demonstrated accordance with all relevant legal and policy requirements in respect of the consideration of reasonable alternatives The Applicant maintains that there is no reasonable alternative to the Project to meet this need having regard to the achievement of the Scheme Objectives (Chapter 5).
 - e. The Applicant’s approach to ‘good design’ is both robust and proportionate, addressing matters discussed during Examination including highway standards and safety, green bridges and design input from stakeholders throughout the evolution of the Project into its detailed design (Chapter 6).
 - f. The extensive engagement with landowners across the Project to seek to resolve matters of concern in relation to the compulsory acquisition or temporary possession of land. Where required the Applicant has set out the compelling case in the public interest that exists for the acquisition of land for the public benefit, including for environmental purposes (Chapter 7).
 - g. That the Applicant’s fundamental position on traffic matters remains unchanged from that set out in the Application Document submissions (Chapter 8). The Applicant has provided comprehensive submissions during

the course of the Examination that reinforce this position and demonstrate that the Applicant's position is aligned with policy.

- h. The Applicant's position in respect of environmental and social matters, including the Project's impact on the River Thames; health and equality impacts; landscape, environmental and ecological impacts; and the Habitats Regulations Assessment. The Applicant has reviewed conclusions on policy compliance having regard to matters addressed during Examination and whilst modifications have been progressed and additional commitments made these do not alter the assessment of policy compliance (Chapter 9).
- i. The key provisions of the draft DCO and matters related to its implementation, including the discharging authority, the use of commuted sums and outstanding concerns regarding Protective Provisions (Chapter 10).
- j. The robust process of securing commitments through the Project Control Plan and Mitigation Route Map (Chapter 11).
- k. The extensive and thorough process of engagement during the course of the Examination (following extensive pre-application consultation and engagement) reflected in the final Statements of Common Ground (SoCGs) which would continue post-consent through discharge of Requirements and through the numerous advisory groups to be established under the outline management plans (Chapter 12).
- l. The final position on section 106 Agreements and unilateral undertakings which meet the tests for planning obligations (Chapter 13).
- m. In response to ongoing engagement and Project development, the series of minor changes have the effect of improving the Project overall and further minimise and mitigate its impacts. In that regard they should be considered as positive steps taken by the Applicant to further improve a Project which already demonstrated accordance with relevant policy (Chapter 14).
- n. The planning balance, weighs plainly in favour of granting the DCO as originally presented in Chapter 8 of the Planning Statement [[REP9-215](#)], and strengthened further through the changes and additional commitments made during Examination (Chapter 15).

1.1.4 It is the Applicant's position that there is nothing that has been presented by Interested Parties during the Examination hearings or written submissions that fundamentally alters the Applicant's position that the Project is compliant with relevant policy and the planning balance weighs in favour of granting the DCO. Points have been raised, discussed and debated during the Examination hearings, and the Applicant has proposed changes to the design of the Project and made additional commitments in response to those discussions. These changes have the effect of improving the Project overall and further minimise

and mitigate its impacts. In that regard they should be considered as positive steps taken by the Applicant to further improve a Project which already demonstrated accordance with relevant policy.

2 Introduction

2.1 Purpose of the document

- 2.1.1 The Applicant has prepared this document in response to the Rule 8(3) and 9 letter [[PD-049](#)] which requested that the Applicant submit ‘closing submissions’ at Deadline 10. The document is intended to supplement existing submission documents in order to assist the Examining Authority (ExA) and the Secretary of State (SoS) in their reporting and decision-making on the application for a Development Consent Order (DCO) for the A122 Lower Thames Crossing Project (the Project).
- 2.1.2 This document does not introduce new matters, rather it seeks to bring together in one place a summary of the Applicant’s final position in respect of the principal planning issues that have been considered through the course of the Examination - particularly where, despite an extensive process of discussion, collaboration and negotiation, they represent matters of remaining disagreement between the Applicant and key stakeholders. This document does not, therefore, seek to cover every matter that may be relevant to decision making. It does not go through each individual point of disagreement as these are addressed in the Principal Areas of Disagreement Summary (PADS) trackers and Statements of Common Ground (SoCGs) (see Chapter 13 of this Closing Submission), but highlights the Applicant’s position on those key areas of disagreement which are considered to be most directly relevant to the ExA’s consideration of the Project’s accordence with national and other relevant policy.
- 2.1.3 The document provides a narrative on these key planning issues - from the case presented in the original Application material, reflecting on where this has been tested through questions, discussion and additional submissions during course of the Examination and provides a commentary on whether and how this impacts on the Applicant’s position in terms of accordence with relevant National Planning Statement (NPS) policy – concluding on the Applicant’s final position on compliance with relevant policy.
- 2.1.4 In doing this, it is not the purpose or intention of this document to replicate or replace existing submission documents, which continue to stand as the full articulation of the Applicant’s case and should be referred to on that basis. It would be impractical, in this Closing Submission, to seek to present the full body of evidence relied upon to demonstrate policy compliance on complex planning issues. This document therefore signposts to existing submission material, supplementing this where necessary in order to provide any updates to the material in those documents to reflect changes and additional commitments during the Examination and to accurately reflect the Applicant’s final position.
- 2.1.5 The document should, for example, be read alongside the Planning Statement [[REP9-215](#)]. The revision to the Planning Statement at Deadline 9 provided only a partial update on facts, figures and errata. It did not represent a wholesale update to the planning policy analysis. This Closing Submission, therefore, makes it clear where any analysis of policy compliance in the Planning Statement remains current (through cross reference and avoiding duplication)

and where any update is necessary reflecting on the Examination of that subject.

- 2.1.6 The Environmental Statement (ES) Addendum [**Document Reference 9.8 (10)**] has been updated and submitted over the course of the Examination to take into account the changes made to the Project and concessions made to Interested Parties (IPs) during the Examination. It is not the intent to replicate the information in the ES Addendum within this Closing Submission.
- 2.1.7 Where certain topics are considered only relatively briefly in this document, this does not necessarily reflect a lesser importance to the planning case. The Need for the Project [[APP-494](#)], for example, represents a robust and detailed analysis of the need for the Project and it is not necessary to repeat this detail – which remains valid and relevant – in full in this document. For further information on the environmental matters reported in this document, refer to the ES Addendum.

2.2 Structure of this document

- 2.2.1 This Closing Submission is structured as follows:
- a. **Chapter 3** sets out the legislative and policy framework for determining the Application. It addresses the 2008 Act, accordance with relevant National Policy Statements (NPSs), and other potentially relevant and important matters.
 - b. **Chapter 4** describes the Project and explains the need for, and benefits of, the Project set in the context of the Scheme Objectives.
 - c. **Chapter 5** explains the route selection process undertaken by the Applicant in selecting the Project route and how the Applicant has considered reasonable alternatives to the Project.
 - d. **Chapter 6** addresses matters related to good design, dealing, in particular, with highway standards and safety, green bridges and design input from stakeholders throughout the evolution of the Project into its detailed design.
 - e. **Chapter 7** deals with issues related to the compulsory acquisition and temporary possession of land including statutory undertaker land and special category land, and the compelling case in the public interest for the acquisition of land for the public benefit, including for environmental purposes.
 - f. **Chapter 8** details traffic matters, focussing on the traffic benefits of the Project, the Lower Thames Area Model (LTAM), wider network impacts and matters related to specific Project junctions.
 - g. **Chapter 9** presents the Applicant's position in respect of environmental and social matters, including the Project's impact on the River Thames; health and equality impacts; landscape, environmental and ecological impacts; and the Habitats Regulations Assessment.

- h. **Chapter 10** summarises the key provisions of the draft DCO and matters related to its implementation, including the discharging authority, the use of commuted sums and outstanding concerns regarding Protective Provisions.
- i. **Chapter 11** explains the Project Control Plan and Mitigation Route Map with a particular focus on controls on construction, permitting, and long-term maintenance and management.
- j. **Chapter 12** summarises at a high level the consultation and engagement that the Applicant has undertaken in the pre-application and examination phases including matters related to the Statements of Common Ground (SoCGs).
- k. **Chapter 13** summarises the final position of the section 106 Agreements.
- l. **Chapter 14** sets out the Applicant-led change and amendments during the Examination.
- m. **Chapter 15** updates the planning balance, from that presented in Chapter 8 of the Planning Statement [[REP9-215](#)], to consider updates and additional commitments made during the Examination.

3 Statutory and policy framework for determining the application

3.1 The Planning Act 2008

3.1.1 Section 2.3 of the Planning Statement explained why the Project is a Nationally Significant Infrastructure Project (NSIP) under section 14(1)(h) of the 2008 Planning Act – including both the highways elements and the diversion of existing utilities infrastructure that are in their own right NSIPs. This position remains unchanged at the end of Examination and this policy framework is not considered to represent a matter of contention.

3.2 Relevant National Policy Statements that have effect

- 3.2.1 The National Policy Statement for National Networks (NPSNN) (Department for Transport (DfT), 2014) has effect in relation to the proposed highways NSIP. As advised at paragraph 1.2 of the NPSNN, the SoS will use this as the primary basis for making decisions on development consent applications for national networks NSIPs.
- 3.2.2 The energy-related nationally significant infrastructure which are NSIPs in their own right are required to be assessed against the Overarching National Policy Statement for Energy (NPS EN-1), National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (NPS EN-4), and National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (all Department of Energy and Climate Change, 2011) which have effect for those elements of the Project.
- 3.2.3 The NPS for Ports is not a ‘relevant NPS’ under section 104(2)(a) of the 2008 Act but is a potentially ‘important and relevant’ consideration under section 104(2)(d). That is because, even though the Applicant commits to use the ports for the transport of materials, the Project does not comprise port development itself. Consent is not being sought by the Project for any port development. The works associated with the construction and operation of the Project are not associated with port development. The completion of the Project will not prevent, hinder or impact on port development in any regard other than as described below in terms of the potential use of port facilities. The NPS for Ports is considered further in Section 7.2 of the Planning Statement [[REP9-215](#)].
- 3.2.4 The Applicant has demonstrated the Project’s accordance with the relevant NPSs throughout the Planning Statement [[REP9-215](#)] and, in detail, in Planning Statement Appendix A: NPSNN Accordance Table [[REP9-217](#)] and Appendix B: NPS for Energy Infrastructure Accordance Table [[REP9-219](#)].
- 3.2.5 At Deadline 9 the Applicant submitted a version 2 Planning Statement to capture factual changes which had been made through various updates to the Environmental Statement to ensure consistency across the Application Documents. It also provided a commentary on the emergence of new draft NPS policy as addressed in Section 3.3 of this Closing Submission below. However, this Deadline 9 update of the Planning Statement [[REP9-215](#)] did not involve any reassessment of the Applicant’s policy accordance case nor the planning

balance set out within version 1 of the Planning Statement [[APP-495](#)] or its Appendices A [[APP-496](#)] and B [[APP-497](#)].

- 3.2.6 The planning balance and the Project's accordance with policy is, however, revisited in Chapter 15 of this Closing Submission to address matters raised by IPs during the Examination hearings with appropriate cross reference to the version 2 Planning Statement [[REP9-215](#)].

3.3 Draft and Revised NPS Policy

- 3.3.1 Chapter 7 of the Planning Statement [[REP9-215](#)] identifies a number of other matters of potential importance and relevance in the context set by section 104(2)(e) of the 2008 Act. These other matters of potential importance and relevance include draft NPS policy which has been published post-submission of the Application (and also post-commencement of the Examination hearings).
- 3.3.2 Since the Application was submitted in October 2022, the Government issued draft revisions to both the NPSNN and relevant Energy NPSs referred to above.
- 3.3.3 Paragraph 1.2 of the NPSNN and equivalent paragraphs in the three relevant Energy NPSs make it clear that the decision maker must determine applications in accordance with relevant NPSs (unless the various exceptions set out in that paragraph apply). The transitional arrangements for the draft NPSs (e.g. paragraphs 1.16 and 1.17 of the draft NPSNN) make it clear that draft NPSs will only have effect for applications for development consent that are accepted after the designation of the new NPSs, such that even if they are designated prior to the decision on the present application, the replacement NPSs will not have effect for the purposes of this application. Nonetheless, the draft NPSs are capable of constituting an 'important and relevant matter' in the decision-making process under the provisions of section 104(2)(e) of the 2008 Act.
- 3.3.4 In March 2023 the Government issued further revisions to the draft Energy NPSs to those previously published in September 2021 (which were assessed in Tables B.4, B.5 and B.6 of Planning Statement Appendix B: NPS for Energy Infrastructure Accordance Tables [[REP9-219](#)]). The Applicant reviewed these March 2023 revised draft Energy NPSs but did not consider they raised any new matters relevant to the Project that are not already addressed in [[APP-497](#)]. In those tables, the Applicant demonstrates the accordance of the energy infrastructure elements of the Project with those draft NPSs.
- 3.3.5 In March 2023, the Government also issued a draft revision to the NPSNN. The Applicant's submission 9.98 Policy accordance assessment of the Project against the consultation draft NPSNN (published March 2023) [[REP9-260](#)] demonstrates how the Project accords with the provisions of the draft NPSNN, insofar as it may be a potentially relevant and important matter, noting that it may be subject to further change as a result of consultation, which has a material bearing on the weight to be attached to current draft.
- 3.3.6 In November 2023 Government published the final versions of the suite of Energy NPSs (though at this time remain subject to parliamentary scrutiny prior to designation). This was raised by the Examining Authority (ExA) at Issue Specific Hearing 12 (ISH12) held on the 23 November 2023. Subsequent to that hearing the ExA issued ISH12 Action Point 23 [[EV-085a](#)] in respect of the suite of Energy NPSs which requested comments from the Applicant (and any other

IP) on the weight to be attached to these newly published NPSs, in particular in cognisance of the transitional arrangements set out in Section 1.6 of the newly published NPS EN-1.

- 3.3.7 The Applicant provided its response to Action Point 23 in Applicant’s response to ExA ISH12 AP23 on Suite of National Energy Policy Statements [REP9-274]. In summary, that submission concluded that, while the newly published Energy NPSs are potentially capable of carrying some weight in the decision-making process, the degree of weight is less than that to be afforded to the designated 2011 Energy NPSs for the reasons articulated in that submission. Those reasons being:
- a. the subsidiary nature of the energy aspects of the Project
 - b. the newly published NPSs have yet to be formally designated
 - c. the primacy given to the designated NPSs under the transitional arrangements
- 3.3.8 It is also the case that accordance tables have already been produced in respect of both the designated and 2021 draft Energy NPSs and that the key changes between the 2021 drafts and 2023 revised drafts, whilst notable in relation to projects for low carbon energy generation, appear to be only marginally relevant to the Project.
- 3.3.9 There is nothing in any of the draft NPSs, or the Applicant’s submissions responding to them, which fundamentally alters the Applicant’s position set out in the assessment of policy accordance presented in the Planning Statement [REP9-215] and its Appendices A and B [REP9-217] and [REP9-219].

3.4 Other relevant and important matters

3.4.1 Chapter 7 of the Planning Statement [REP9-215] identifies, at paragraph 7.15.1, other matters (including *inter alia* the NPS for Ports (see paragraph 3.2.3 of this Closing Submission above), the National Planning Policy Framework¹ and Guidance, other government publications and strategies and development plan policy) that may be important and relevant under section 104(2)(d) of the 2008 Act.

3.4.2 Chapter 7 of the Planning Statement concludes that the Project is broadly in alignment with these ‘other matters’. There is nothing fundamental that has changed since the Application was submitted which alters this position.

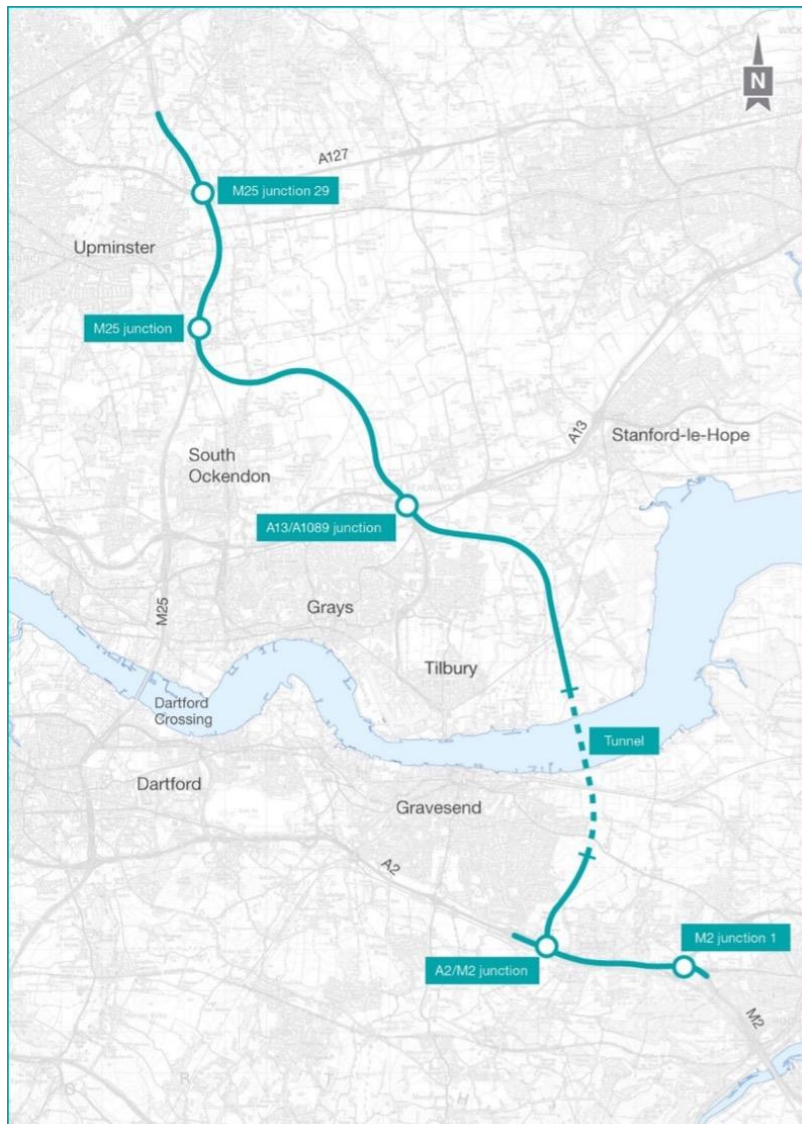
¹ The Applicant notes that revisions to the National Planning Policy Framework were published on 20 December 2023 (replacing the September 2023 version). The revisions are primarily concerned with housing delivery and do not alter the Applicant’s commentary on the previous revision(s) insofar as the policies are important and relevant.

4 The need for and benefits of the Project

4.1 Project Description

- 4.1.1 Environmental Statement (ES) Chapter 2: Project Description [[APP-140](#)] and Environmental Statement Addendum [[Document Reference 9.8 \(10\)](#)] provides a description of the Project including the route, tunnel construction and supporting works such as environmental mitigation, site preparation work and construction compounds.
- 4.1.2 The Project description is most concisely summarised in Section 3.2 of the Planning Statement [[REP9-215](#)] in the following terms.
- 4.1.3 The A122 Lower Thames Crossing (the Project) would provide a connection between the A2 and M2 in Kent and the M25 south of junction 29, crossing under the River Thames through a tunnel. The Project route is presented in Plate 4.1.

Plate 4.1 Lower Thames Crossing route



- 4.1.4 The Project would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13, M25 junction 29 and the M25 south of junction 29. The tunnel portals would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.

4.2 The Need for the Project

- 4.2.1 The Need for the Project [[APP-494](#)] demonstrates that there is there is a clear and compelling need to address the long-standing transport problems at the Dartford Crossing, which constrain the economy and impose negative issues on nearby communities.
- 4.2.2 This need is expressed in terms of a policy need, a transport need, an economic need and a community and environment need.

Policy need

- 4.2.3 The Policy need is expressed in paragraphs 2.1, 2.2, 2.6, 2.7, 2.9, 2.10, 2.13 and 2.16 of the NPSNN.
- 4.2.4 A full assessment of accordance with relevant NPS policy and other potentially relevant and important matters is set out in the Planning Statement [[REP9-215](#)] and its Appendix A: NPSNN Accordance Tables [[REP9-217](#)].
- 4.2.5 Section 3.3 of this Closing Submission above addresses the implications of draft and revised NPS policy and other potentially important and relevant matters.

Transport need

- 4.2.6 Section 4.2 of the Need for the Project [[APP-494](#)] sets out the transport need for the Project. It makes the case that, fundamentally, the Project is needed because the existing traffic demand wishing to cross the River Thames, east of London, outstrips the road space available at that location.
- 4.2.7 The Dartford Crossing is the only significant crossing of the River Thames east of London. It occupies a strategically important location on the country's road network and is a critical component in the country's economic infrastructure. It provides a strategic link between the UK and Europe, enabling goods and people to flow between the Channel Ports and the UK's industrial heartlands and beyond.
- 4.2.8 Despite performing this pivotal role, the capacity of the Dartford Crossing is limited by the layout of the approach roads to a theoretical design capacity of 135,000 vehicles per day; yet it regularly carries over 180,000 vehicles on the busiest days and carries 150,000 vehicles on a typical average day (paragraph 4.2.2 of the Need for the Project [[APP-494](#)]).
- 4.2.9 Traffic flows consistently and significantly in excess of its theoretical design capacity result in significant congestion, both at the Dartford Crossing itself and on the surrounding roads in the vicinity of the Crossing. There are operational constraints which cause significant delays and congestion on the Crossing and the surrounding road network as witnessed at the Accompanied Site Inspection 1 (paragraphs 4.2.14 and 4.2.19 of the Need for the Project [[APP-494](#)]). This

results in frequent traffic congestion and poor journey time reliability, making this part of the network one of the most unreliable sections of the Strategic Road Network (SRN) with the northbound approach to the crossing between the M25 junction 2 and the tunnels being the worst performing 1% of the whole SRN in terms of reliability.

4.2.10 It is difficult to significantly increase the supply of road space (widening the road) at the Dartford Crossing due to space constraints on the approach to the Crossing (paragraphs 4.2.5 and 4.2.8 of the Need for the Project [[APP-494](#)]). By continuing to route vehicles to the M25 and A282, new provision at Dartford would not provide additional resilience across the River Thames. Nor is it possible to reduce the strength of traffic demand due to the lack of alternative routes (paragraph 4.2.6 of the Need for the Project [[APP-494](#)]).

4.2.11 Accordingly, there is a clear and compelling transport need for the Project.

Community and environment need

4.2.12 The traffic problems at the Dartford Crossing described above, and a lack of viable alternatives to cross the Thames Estuary in the surrounding area, mean that strong connections between communities in Kent, Thurrock and Essex have been difficult to build. Local residents who are forced to use the Dartford Crossing suffer longer journey times compared to equivalent distance journeys elsewhere thereby reinforcing the social and community separation of local settlements north and south of the river (paragraphs 4.2.20, 4.2.22 and 4.2.23 of the Planning Statement [[REP9-215](#)] and paragraphs 4.3.3 and 4.3.5 of the Need for the Project [[APP-494](#)]).

4.2.13 Congestion causes high levels of emissions and poor air quality. When congestion and closures occur at the Dartford Crossing, the quality of the environment is heavily impacted by the queuing traffic with local communities being exposed to high levels of air pollution and noise (paragraph 4.2.25 of the Planning Statement [[REP9-215](#)] and paragraph 4.3.12 of the Need for the Project [[APP-494](#)]).

4.2.14 Traffic modelling forecasts that, without the Project, vehicle numbers on the Dartford Crossing will increase by nearly 21% in the period 2016-2030 (paragraph 4.3.14 of the Need for the Project [[APP-494](#)]), so exacerbating these air quality issues (which are explored in considerable detail in ES Chapter 5: Air Quality [[APP-143](#)] and Environmental Statement Addendum [**Document Reference 9.8 (10)**]).

4.2.15 Accordingly, there is a clear community and environmental need for the Project.

Economic need

4.2.16 The Dartford Crossing plays a critical role in the country's road network and it is a vital component in the UK's economic infrastructure. It connects local and regional businesses and provides a vital link between the Channel Ports, London and the rest of the UK.

4.2.17 The River Thames acts as a barrier between Kent, Thurrock, Essex and other parts of the South East economy. The poor transport connections across the river affects labour markets by reducing the development of new clusters in emerging sectors of the economy and the ability of local residents to find work

and local businesses to attract a skilled workforce (paragraphs 4.2.28 and 4.2.30 of the Planning Statement [[REP9-215](#)]).

- 4.2.18 This means that the economies either side of the river have developed separately, duplicating many activities and also stifling competition, limiting productivity, deterring investment and reducing the growth in job creation which negatively impacts the economic performance of the area (paragraph 4.2.29 of the Planning Statement [[REP9-215](#)]).

Need case at the Examination

- 4.2.19 The need for the Project was considered during the Examination at ISH1 under agenda item 4(a)(i) where the Applicant made oral submission in response to the ExA's request to demonstrate that the proposed development will meet anticipated need. The Applicant put those submissions in writing within its Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)], reiterating the points made in this section and Section 4.2 of this Closing Submission.
- 4.2.20 There has been no credible challenge by any IPs during the Examination hearings of the need for something to be done to address the problems identified above at the Dartford Crossing. Parties may disagree as to what is the most appropriate solution to the problem, but the Applicant considers that there was a clear consensus on the need to address the problems at the Dartford Crossing. As described below and in the consideration of alternatives to the Project in Chapter 5 of this Closing Submission, the Applicant has demonstrated that a robust optioneering process was undertaken and continually reviewed and the Project represents an appropriate solution to these problems which complies with relevant policy and legislative requirements.

4.3 Scheme Objectives

- 4.3.1 The policy, transport, community, environmental and economic considerations, as summarised above in relation to the need for the Project, gave rise to the setting of Scheme Objectives for the Project against which alternative options to the delivery of the Project have been assessed. The Scheme Objectives were endorsed by the DfT after the Government commissioned the Applicant to take forward options for a new road crossing in the Lower Thames area in 2014.
- 4.3.2 The Scheme Objectives are presented in a number of Application Documents (including in the Planning Statement [[REP9-215](#)] at Table 4.1 and the Need for the Project [[APP-494](#)] at Table 4.6) and are reproduced in Table 4.1 below.

Table 4.1 Scheme Objectives

Scheme Objectives	
Transport	To relieve the congested Dartford Crossing and approach roads and improve their performance by providing free-flowing north-south capacity
	To improve the resilience of the Thames crossings and the major road network
	To improve safety
Community & Environment	To minimise adverse impacts on health and the environment
Economic	To support sustainable local development and regional economic growth in the medium to long term
	To be affordable to government and users
	To achieve value for money

4.3.3 These objectives are consistent with the aims of Government policy for the national networks, are specific to the particular issues to be addressed in respect of the Dartford Crossing, and are consistent with the Scheme Objectives which have been set for other major highway projects. They provide an appropriate basis against which to assess the Project and the alternative options to the delivery of the Project. The Scheme Objectives themselves have not been challenged during the course of the Examination. Whilst some IPs have expressed the view that the Project does not accord with some or all of the Scheme Objectives, the Applicant observes that there has been no credible challenge during the Examination to the appropriateness of the objectives themselves.

4.4 The benefits the Project will deliver

4.4.1 The Project would deliver a range of benefits which address the needs or problems identified above. These benefits are presented in Chapter 5 of the Need for the Project [[APP-494](#)] and Section 4.3 of the Planning Statement [[REP9-215](#)] and are summarised very briefly below.

4.4.2 With specific regard to the transport benefits, the Project would provide substantial relief to the Dartford Crossing and its approach roads. During the Examination, the Applicant set out detailed considerations of how the forecast relief at the Dartford Crossing would lead to journey time savings and journey time reliability benefits, at opening and into the future (Annex A.2 of the Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)]). The new capacity on the road network would lead to changes in the way people travel, and on many roads to the west of the Project, such as the A2, the A13, the Dartford Crossing and the M25 in Thurrock, the number of vehicles would fall when the Lower Thames Crossing opens. Roads on the approach to the Project, including the M2, A228, A229, and some roads to the east of the Project, such as the A13, and on some sections of the M25, would experience an increase in traffic levels as travel across the River Thames becomes easier and more reliable. However, as set out in Annex A.3 of the same document, while many drivers will choose to make different, and

sometimes longer, journeys, there is only a small increase in the total number of car journeys.

4.4.3 More information on this is set out in section 8.6, which details the long lasting transport benefits.

4.4.4 Table 4.2 of the Planning Statement [[REP9-215](#)] (also at Table 5.2 of the Need for the Project [[APP-494](#)]) (a final Closing Submission version of which is provided below) presents a summary of how the key benefits of the Project identified in Section 4.3 above support the Scheme Objectives. The Applicant considers that they remain as valid now at the end of the Examination process as they did on submission of the DCO application.

Table 4.2 Project benefits and accordance with the Scheme Objectives

Benefits that the Project would achieve	
Transport	The Project would provide additional road capacity and river crossing east of London, significantly improving road space supply to serve the traffic demand
	The additional road space would not be challenged by design limitations (e.g. no sub-optimal junction layout, no need for escorting, no wind-related concerns, etc.).
	An additional crossing would provide an alternative crossing option across the river east of London and a more resilient road network in the Lower Thames area
	The Project would significantly reduce traffic congestion at the Dartford Crossing.
	Many journeys on both sides of the river, as well as those that cross the river, would be quicker.
	The Project would follow the latest safety standards and would decrease the accident rate.
	Cross-river journey time reliability would be improved, with fewer delays and less uncertainty
	The Project would be significantly beneficial to the business transport users wishing to cross the River Thames east of London
Communities and environment	Improved cross-river and local trips between communities by way of an additional crossing and less congested Dartford Crossing.
	Enhanced connectivity and facilities for walkers, cyclists and horse riders
	Reduced congestion in the Dartford area would decrease noise and air pollution.
	The Project would leave a positive legacy of green infrastructure and improved biodiversity.
	Improved access to local jobs and upskilling opportunities for local communities.
Economic	Faster and more reliable journeys and improved accessibility would boost the productivity of businesses in the Lower Thames area and wider region
	Enhanced connectivity and cross-river economic opportunities would further stimulate competition, boosting employment and increasing inward investment locally and regionally.
	Benefits would be greatest for high value businesses, but also significant for the local area's lower value transport and construction sectors.
	Quicker, more reliable access to key markets, resources and labour for the region's ports.
	The Project would provide value for money.

5 Route selection and reasonable alternatives

5.1 Policy context for the consideration of alternatives

- 5.1.1 Paragraphs 4.26 and 4.27 of the NPSNN require applicants to comply with all legal requirements and any policy requirements regarding the consideration of alternatives and that all projects are subject to an options appraisal.
- 5.1.2 Policy guidance on the consideration of alternatives for energy infrastructure development is also set out in Section 4.4 of NPS EN-1, paragraphs 2.21.3, 2.23.3 of NPS EN-4 and paragraphs 2.9.14, 2.9.15, 2.10.5 and 2.11.14 of NPS EN-5.

5.2 The Applicant's consideration of alternatives

- 5.2.1 The assessment of alternatives is presented in a number of Application Documents, but is primarily addressed in ES Chapter 3: Assessment of Reasonable Alternatives [[APP-141](#)] and Chapter 5 of the Planning Statement (Project evolution and alternatives) [[REP9-215](#)]. These documents draw on a wide range of pre-application documents as explained in the two Application Documents themselves.
- 5.2.2 They explain how the Applicant considered both modal alternatives to the Project itself and a number of different route corridors and route options within those corridors before arriving at the Preferred Route Announcement in 2017. They also explain the approach adopted by the Applicant to the consideration of alternative designs for individual elements of the Project and to the selection of locations for construction compounds and the Utility Logistics Hubs necessary to facilitate construction of the Project.
- 5.2.3 Further information on how the Applicant has considered different design alternatives for individual elements of the Project is also provided in the Project Design Report, in particular in Part G: Design Evolution [[APP-514](#)].
- 5.2.4 Some Interested Parties made comments on the consideration of alternatives in their Local Impact Reports and Written Representations at Deadline 1 which the Applicant responded to at Deadline 2. The Applicant's Post-event submissions, including written submissions or oral comments, for ISH1 [[REP1-183](#)] and its Post-event submissions, including written submission of oral comments, for OFH4 [[REP4-184](#)] also address modal and route alternative matters raised through the course of the Examination hearings. The Examining Authority's first written questions [[PD-029](#)] contained questions for IPs on alternatives at Section 3, and the Applicant responded to IP comments at Deadline 5 [[REP5-077](#)].
- 5.2.5 ISH3 considered Project design matters, including alternatives, and the Applicant's submissions were set out in Post-event submissions, including written submission of oral comments, for ISH3 [[REP4-179](#)]. ISH6 included considered land requirements for mitigation and compensation, and the Applicant's submissions were set out in Post-event submissions, including written submission of oral comments, for ISH6 [[REP5-182](#)]. ISH6 also considered design of green bridges. The design of green bridges from a landscape perspective was considered at ISH11. The Applicant set out its

submissions on this in Post-event submissions, including written submission of oral comments, for ISH11 [[REP8-110](#)].

Modal alternatives

- 5.2.6 The main alternative modes considered during the evolution of the Project were:
- a. Road-based public transport and non-motorised modes that could eliminate/reduce the need for the new crossing or change the location.
 - b. Rail-based passenger services to replace the road crossing with a rail crossing (or provide a road/ rail crossing of a different standard).
 - c. Rail-based freight services to reduce the truck traffic and reduce/eliminate the need for a new road crossing or provide a road/rail crossing solution.
 - d. Ferries across the Thames as an alternative or supplement to a fixed crossing.
 - e. Non- motorised transport (walking and cycling).
- 5.2.7 In considering these modal alternatives, the Applicant has demonstrated in the Planning Statement and in ES Chapter 3 (and in the NPS accordance tables appended to the Planning Statement [[REP9-217](#) and [REP9-219](#)]) that it has complied with all NPS and other relevant policy insofar as the consideration of modal alternatives is concerned. It has given full and proportionate consideration of the extent to which modal alternatives could deliver the Scheme Objectives and so obviate the need for the Project. The conclusion is that they cannot. They may, at best, be considered complementary to the delivery of the Project but none can deliver equivalent relief to the traffic congestion suffered at the Dartford Crossing sufficient to be considered viable and realistic alternatives.
- 5.2.8 The matter of route alternatives was raised in the Local Impact Reports / Written Representations by a number of IPs; Thurrock Council and Gravesham Borough Council in particular who were of the view that insufficient consideration was given to alternative modes which might otherwise obviate the need for the Project. The Applicant responded to these points in its Comments on LIRs [[REP2-054](#)].

Consideration of public transport alternatives during the Examination

- 5.2.9 As noted above, ISH1 considered public transport alternatives. Thurrock Council made submissions to the effect that a public transport alternative could deliver the same level of benefit in terms of traffic flows as the Project. The Applicant refutes that suggestion, and explained in Section B.4 of its Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)] that there is *'no viable public transport solution at this location that could deliver the outcomes sought, considering the diversity of journeys, in terms of origin, destination and purpose, the limitations of the existing infrastructure in the region that could connect onto such a solution, and the likely long term operational subsidy required'* (paragraph B.4.2).

- 5.2.10 The matter of rail as a modal alternative to the Project was also discussed at ISH1 under agenda item 4(b)(iii) in response to the ExA's question '*Are there elements of demand for the LTC alignment that can be met by existing or new heavy rail, or light rail/tram services (such as KenEx/Thames Gateway Tramlink) and to what extent has the contribution of such modes and options been explored?*'. The Applicant provided a written response to this question in its Post-event submissions, including written submissions or oral comments, for ISH1 [\[REP1-183\]](#) on pages 12-14 and in Annex B, Section B.2, which specifically considered rail alternatives (pages 54-56). It concludes in respect of both passenger rail and rail freight that neither is considered to be a viable or realistic alternative solution to a road crossing as they would not relieve congestion at the Dartford Crossing and so would not meet the Scheme Objectives.
- 5.2.11 The Applicant responded along similar lines to the same point made by the Thames Crossing Action Group (TCAG) at OFH2 in Chapter 5 of its Post-event submissions, including written submission of oral comments, for OFH2 [\[REP1-185\]](#) (pages 9-10 and 14).
- 5.2.12 The matter was raised again at OFH4 on 6 September 2023 when a representative of Thames Gateway Tramlink (TGT) made submissions regarding the possibility of incorporating a light tram link into the Project. The Applicant responded to this within Section 6 (pages 13-14) of its Post-event submissions, including written submission of oral comments, for OFH4 [\[REP4-184\]](#). The submission sets out the opportunities the Project will present for public transport operators in due course should they choose to use the Project to deliver future services. This includes the establishment of the Sustainable Transport Working Group which would be established as a forum to engage with local authorities, transport operators and other relevant stakeholders to develop improvements to existing and potential new services to make best use of the opportunities provided by the Project.
- 5.2.13 The matter of a ferry service as an alternative to the Project was addressed in response to comments made by the Thames Crossing Action Group (TCAG) at ISH1 in the Applicant's Post-event submissions, including written submissions or oral comments, for ISH1 [\[REP1-183\]](#), where paragraph E.9.19 notes that the option of a ferry (amongst other active travel/ non-road alternatives) was not taken forward for a variety of reasons including '*...technical feasibility, operational issues, lack of commercial viability, cost, environmental impacts, and poor safety.*'
- 5.2.14 Finally, with regard to non-motorised modes, cycling and walking will never satisfy more than a very small portion of the demand which could be met by a new road project and so would not meet the Scheme Objectives, meaning they are not realistic and viable alternatives to the Project. At the Examination, ISH10 focussed on Public Rights of Way (PRoWs) and Non-Motorised Users (NMUs). Annex B to the Applicant's Post-event submissions, including written submission of oral comments, for ISH10 [\[REP6-091\]](#) explains how the Applicant developed its strategy for making provision for NMUs and how that strategy was refined as a result of extensive consultation.

Complementary provision for alternative modes

- 5.2.15 In considering the complementary provision for NMUs and the significant benefit that provision for active travel can make in meeting various Government policy objectives beyond just transport policy, it is worth reiterating that the Applicant is one of the biggest builders of new pathways in the UK (National Highways, 2022). The Project will deliver approximately 60km of new or improved pathways in the form of new and improved footpaths, bridleways, byways and shared-use tracks (see paragraph 7.12.15 of the Transport Assessment [REP4-148]). This equates to almost 3km of pathway for every 1km of new roadway.

Route alternatives

- 5.2.16 The Applicant's consideration of route alternatives is documented in detail in ES Chapter 3: Assessment of Reasonable Alternatives [APP-141] (and Environmental Statement Addendum [Document Reference 9.8 (10)]) and Chapter 5 of the Planning Statement (Project evolution and alternatives) [REP9-215].
- 5.2.17 These documents present a comprehensive and detailed explanation of the Applicant's consideration of route alternatives. All of the route corridors and individual routes within those corridors that were considered as part of the route selection process were revisited and re-appraised several times during the route optioneering process in the light of new evidence and information. Each re-appraisal confirmed that the preferred route for which consent is sought via this DCO application is the most appropriate of all the alternatives and is the option that demonstrated optimal performance against the Scheme Objectives.

Consideration of route options during the Examination

- 5.2.18 Some IPs made submissions during the Examination through representations and Local Impact Reports to the effect that inadequate consideration had been given to opportunities to solve the Dartford Crossing congestion at the Dartford Crossing (Location A / Route Option 1) rather than requiring a new route to the east (Location C). However, as demonstrated in the Application and Examination Documents, and summarised above, Route Option 1 / Location A is not a viable alternative and does not meet the Scheme Objectives.
- 5.2.19 Route option selection was a matter considered at ISH1. The Applicant addressed comments made by Gravesham Borough Council at ISH1 regarding the route option selection process for Location C over Location A in Annex E, Section E.7 of its Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183].
- 5.2.20 The Applicant also addressed comments on the options selection exercise made:
- at OFH1, in the Applicant's Post-event submissions, including written submission of oral comments, for OFH1 [REP1-182] (page 4)
 - by the Thames Crossing Action Group (TCAG) at OFH2 in Section 5 of the Applicant's Post-event submissions, including written submission of oral comments, for OFH2 [REP1-185]

5.2.21 ExQ1_Q3.2.2 of the ExA’s first round of written questions [PD-029] asked those IPs with concerns that alternative route corridors have not been appropriately assessed to explain their detailed case. Various IPs responded to this question, but none raised any matters which were not already addressed in the Application Documents referred to above, and there were no substantive new points made regarding the consideration of route alternatives in strategic terms. The Applicant responded to the specific points made in Applicant’s Comments on IP Responses to ExQ1 at Deadline 4 [REP5-077]. The Applicant observes that no alternative routes were advocated for by the Statutory Environmental Bodies.

Conclusion on route options

5.2.22 As set out in the Planning Statement [REP9-215] and ES Chapter 3: Assessment of Reasonable Alternatives [APP-141], the Applicant has undertaken a detailed, comprehensive and proportionate assessment of route options and alternatives. This demonstrates how environmental implications have influenced route selection decisions and has taken account of all relevant legal and policy requirements. The Applicant has justified why the DCO application as submitted represents the preferred route for the Project and why this complies with NPS and other relevant policy. The Applicant submits that no credible challenge has been made out by any IP to the Applicant’s route selection.

Design alternatives

5.2.23 As with the consideration of route alternatives, the consideration of design alternatives has been an iterative process as set out in Part G: Design Evolution of the Project Design Report [APP-514]. The report describes how the design of 23 key components of the Project were changed in response to consultation and engagement feedback, and feedback from the National Highways Design Review Panel (NHDRP) during the evolution of the Project from the Preferred Route Announcement in 2017 through to the Local Refinement Consultation in May/June 2022.

5.2.24 In presenting the design evolution, the report sets out the alternative options that were considered for the design of those Project elements to improve the appearance and operation of the Project. It addresses the design of junctions and crossings, landscape mitigation and green bridges, of the tunnel portals and of various Project structures and ancillary features.

5.2.25 The design of the Project, including junctions, structures and mitigation proposals, and potential alternative solutions, was considered at a number of hearings and within Examination documents, including the following:

- a. Annexes E and F to the Applicant’s Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183]
- b. The Applicant’s Post-event submissions, including written submission of oral comments, for ISH3 [REP4-179]
- c. The Applicant’s Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182]

- 5.2.26 Further information is provided in Chapter 6 of this Closing Submission on Good Design.
- 5.2.27 Section 5.6 of the Planning Statement [[REP9-215](#)] explains the various factors which have been considered in assessing the options for the utility elements of the Project. Key design considerations have been:
- a. Limiting diversions
 - b. Utility undertakers' alignment requirements
 - c. Reducing working areas
 - d. Minimising environmental impacts
 - e. Minimising the amount and duration of traffic management
- 5.2.28 The options were considered in close collaboration with the utility companies who operate the respective utility networks. Options for utility diversions in the Kent Downs Area of Outstanding Natural Beauty (AONB) were carefully considered to minimise impacts on the AONB as set out in paragraphs 5.6.8 and 5.6.9 of the Planning Statement [[REP9-215](#)]. In terms of the overhead line diversions, a number of additional factors were considered in the options process (paragraph 5.6.12):
- a. Technical feasibility
 - b. Ensuring clearance of the Project road design
 - c. Minimising impacts on the existing overhead line (OHL) network
 - d. Minimising the length of change and the number of new and temporary towers
 - e. Ensuring efficient, safe and economical construction and maintenance
 - f. Factoring in construction work areas associated with access, scaffolding and stringing activities
 - g. Taking account of industry standard routeing practices through application of the Holford Rules and compliance with NPS EN-5
 - h. Avoiding/minimising impacts on known ecological, historic, landscape and visual, and socio-economic constraints
 - i. Having regard to project design elements including compounds, environmental mitigation, flood mitigation
- 5.2.29 Paragraphs 5.6.18 to 5.6.25 and Table 5.19 of the Planning Statement [[REP9-215](#)] set out the locational considerations which determined the consideration of options for the Utility Logistics Hubs.

- 5.2.30 Section 5.7 of the Planning Statement [[REP9-215](#)] sets out the locational considerations for the 18 temporary construction compounds which will be necessary to deliver the Project.
- 5.2.31 Section 3.28 of ES Chapter 3: Assessment of Reasonable Alternatives [[APP-141](#)] (and Environmental Statement Addendum [**Document Reference 9.8 (10)**]) describes the key considerations which have influenced the design of those diversions and connections including both locational considerations and construction techniques. It reiterates that the design has sought to avoid or reduce impacts on environmentally sensitive areas but, where this was not possible, an appropriate balance was struck between the engineering and environmental constraints, impacts on residential areas and ensuring customer supply is maintained.
- 5.2.32 Matters related to utility alternatives (including alternative designs) were raised at a number of Issue Specific Hearings including ISH1 (which considered pylon design), ISH9 (works related to Works Nos. OH6 and OH7) and in the ExA's third round of written questions (impacts on ancient woodland, SSSIs and local wildlife sites) to which the Applicant responded in its Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)], Post-event submissions, including written submission or oral comments, for ISH9 [[REP6-090](#)] and Responses to the Examining Authority's Third Written Questions (ExQ3) [[REP8-115](#)] respectively.
- 5.2.33 Construction compound matters were discussed at ISH5 on 7 September 2023 and at ISH8 on the 19 October 2023. The Applicant responded to comments made at ISH5 in its Post-event submissions, including written submission of oral comments, for ISH5 [[REP4-181](#)] and to ISH8 in its Post-event submissions, including written submission of oral comments, for ISH8 [[REP6-089](#)].

Conclusion on the consideration of reasonable alternatives

- 5.2.34 In view of the above summary, the Applicant has demonstrated accordance with all relevant legal and policy requirements in respect of the consideration of alternatives. Having regard to the achievement of the Scheme Objectives, the Applicant has demonstrated that there is no reasonable alternative to the Project. The Applicant's case is set out in Chapter 5: Project evolution and alternatives in the Planning Statement [[REP9-215](#)] and in Appendix A National Policy Statement for National Networks Accordance Table [[REP9-217](#)]. The Applicant's view is that no credible challenge to that conclusion has been made out by IPs.

6 Good design

6.1 Introduction

- 6.1.1 The Applicant's team responsible for developing the design included traffic modellers, highway engineers, structural engineers, utility engineers, architects and landscape architects, geotechnical engineers, tunnel engineers, and many other technical specialists including experts in flood risk, drainage, lighting, technology, pavement, signing and lining, operations, safety and active travel. The team also included the environmental specialists who were undertaking the Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA), with specialists from ecology, landscape and visual impact, and cultural heritage, amongst others. Achieving good design requires weighing and balancing the requirements of these different specialist disciplines along with factors raised as part of consultation and engagement.
- 6.1.2 The landscape, ecology, architecture and engineering designs have been developed concurrently since the Preferred Route Announcement (April 2017) with much interplay between the design and environmental disciplines. This phase resulted in active collaboration on a weekly basis and an iterative design process which lasted approximately four years. As an overarching principle, the Applicant actively sought to prevent, avoid, reduce or offset adverse environmental effects where reasonably practicable, and to seek beneficial effects. As a result, environmental mitigation and compensation measures are embedded into the design proposals.
- 6.1.3 While the Applicant has had ongoing discussion and challenge on the wording of some individual Design Principles [\[REP9-227\]](#), the document, secured through the draft DCO has been thoroughly examined and is not subject to credible challenge in terms of its general content and detail (specific instances of challenge around particular principles are laid out below). The document secures ongoing processes to deliver good design based on the best practice guidance of the National Infrastructure Commission (NIC) Design Principles (NIC, 2020), National Infrastructure Strategy (HM Treasury, 2020) and the recent National Infrastructure Assessment (NIC, 2023). Namely, accordance with the NIC Design Principles (see the Project Design Report: Part B: Policy Context and Project Process [\[APP-507\]](#)).
- 6.1.4 The Design Principles [\[REP9-227\]](#) commit to appointing an independent design review process (PRO.01), an integrated design (PRO.02), appointing a Design Champion to protect and promote good design in the delivery phase (PRO.05) and a commitment on the detailed design on stakeholder engagement (PRO.07).

6.2 Landscape design

- 6.2.1 Developing good design, including good landscape design, has been a focus of the Project. The Project design team has had regard to the NPSNN (DfT, 2014), seeking to achieve a good quality design in all areas within the physical constraints associated with a highways project.

- 6.2.2 Good design is referenced within the NPSNN, paragraph 4.34 of which states ‘Whilst the applicant may only have limited choice in the physical appearance of some national networks infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting and design measures relative to existing landscape and historical character and function, landscape permeability, landform and vegetation’.
- 6.2.3 The landscape design rationale is presented in the Project Design Report, Part D: General Design South of the River [[APP-509](#)], Part D: General Design North of the River – Tilbury to the A13 Junction [[APP-511](#)], and Part D: General Design North of the River – North of the A13 Junction to the M25 [[APP-510](#)].

Context-led mitigation

- 6.2.4 Representations were received from Interested Parties during the Examination process regarding the siting and land-take of the Project route and nature of the compensation and mitigation proposals.
- 6.2.5 Mitigation proposals and the landscape design for the Project have been informed by the landscape context of the Project route. Mitigation proposals have been designed to be fully integrated with the Project design at a landscape scale and not ‘bolt on’ or piecemeal proposals.
- 6.2.6 Project Design Report Part C: Design Rationale [[APP-507](#)] explains in paragraph 3.2.2 that the ‘*Preliminary Design response is that the Project route has provided a road that lies subservient within its context*’.
- 6.2.7 Paragraph 3.2.4 explains that ‘In addition, a design narrative has been developed in keeping with the Design Manual for Roads and Bridges (DMRB) GG 103 (Introduction and general requirements for sustainable development and design). This narrative covers the Project extents and provides an overarching context-led design response for the emerging proposals. In part, it required the translation of environmental mitigation into clear visual proposals that are embedded within the Project.’
- 6.2.8 As such, regional strategies for landscape design are set out in Project Design Report Part D: General Design South of the River [[APP-509](#)] for the area south of the River Thames, in Project Design Report Part D: General Design North of the River – Tilbury to the A13 Junction [[APP-511](#)] for north of the river from Tilbury to the A13 Junction and in Project Design Report Part D: General Design North of the River – North of the A13 Junction to the M25 [[APP-510](#)] for north of the A13 Junction to the M25.
- 6.2.9 Representations were received from Interested Parties during the Examination process regarding the use of shrub planting along the A2 corridor instead of woodland.
- 6.2.10 The widened M2/A2 corridor and the related utilities diversions have been designed to include shrubs with intermittent tree planting, incorporating woody pioneer species (as 9.214 Applicant's comments on Interested Parties' submissions at Deadline 8 [[REP9-276](#)]). This is due to the proximity of proposed planting to the proposed utilities diversions and the associated easements restricting woodland planting immediately above or adjacent to the assets. For these areas, shrubs with intermittent tree planting has been proposed, to

perform as a woodland edge habitat, comprising appropriate species within the constraints of the utility easements.

Chalk Park

- 6.2.11 Chalk Park provides embedded mitigation for the Project, as well as helping to integrate the portal and route alignment into the surrounding landscape.
- 6.2.12 The Department for Environment, Food and Rural Affairs (Defra) family objectives for this area call for woodland creation, habitat buffering and creation of multifunctional accessible spaces to mitigate the impact of the route (Page 69 of the Planning Statement Appendix H: Green Infrastructure Study [[APP-503](#)]).
- 6.2.13 The Project has been developed to be landscape led, support the recovery of nature and to avoid or minimise impacts to the environment in accordance with NPSNN paragraph 4.31 'Good Design'.
- 6.2.14 The Project has sought to generate a positive legacy of green infrastructure and identified an opportunity to improve access to semi-natural open space. This includes a mitigation proposal that creates a wooded hilltop landform in Chalk Park, providing open space and creating a landscape buffer between the South Portal and the edge of Gravesend, whilst also softening some views of the edge of the settlement from the east. The design of the hilltop landform reflects the local characteristic of settlements located on the slopes below a wooded hill.
- 6.2.15 Chalk Park has also been designed to provide a recreational landscape for north-eastern Gravesend and Chalk which currently have a limited public open space provision. Gravesham Borough Council stated in their Deadline 4 Response to ExQ1 – Annex 1: Q13.1.10 Open Space [[REP4-288](#)] '*Amenity green space provision within the Chalk area is limited to a small recreational space which serves the housing development at Castle Lane and a small piece of open space to the east of Vicarage Lane which lacks any facilities. There has been no additional space provided in this area since this assessment. As such, the additional recreational offer is welcomed, subject to agreed details as to the form and type of recreational offer being proposed.*'
- 6.2.16 Recreational routes have been designed that build upon the routes of existing PRowS and enable active leisure activities including walking, jogging and informal recreation. The woodland associated with the proposed hilltop landform has been designed to maintain open land near the summit, providing open views toward the Thames Estuary.
- 6.2.17 The made ground gives the opportunity to create favourable conditions for species diverse chalk wildflower grassland, with steep chalk slope profiles conducive to a thinner soil profile developing, thereby helping to support chalk species and limiting more dominant common species.
- 6.2.18 The landform utilises significant amounts of excavated material generated from the South Portal and Gravesend link cutting, thereby avoiding the need to transport material offsite and the associated environmental impacts.
- 6.2.19 The Project has developed the design of Chalk Park to make beneficial reuse of this excavated material onsite. Beneficial reuse was supported by the Environment Agency's (EA's) initial scoping opinion and Kent responses at Statutory Consultation as additional benefits including fewer vehicle movements

to transport the excavated material, leading to a lower carbon footprint and improved ecological enhancement opportunities.

Tilbury Fields

- 6.2.20 The design of Tilbury Fields looks to utilise the excavated material generated from the construction of the tunnel and portal to create a multi-functional space located on The River Thames, and adjacent to the North Portal. The various materials excavated from the tunnel can be used to create the substrate for the creation of an open mosaic ecological habitat at Tilbury Fields, for the benefit of invertebrates and other fauna. The designation of Tilbury Fields as a Park will help the regular disturbance of land that would benefit the Open Mosaic Habitat. A detailed design rationale is provided in Project Design Report Part D: General Design North of the River – Tilbury to the A13 Junction [[APP-511](#)].
- 6.2.21 In 2022, the Applicant amended the proposals for Tilbury Fields and environmental mitigation to support the wider regeneration of the area and in particular the emerging Thames Freeport proposals. Further to this, the creation of Open Mosaic Habitat has been extended further north, adjacent to the Project route, to link into existing and proposed habitat sites adjacent to, and further north of the Tilbury Loop railway line and extending the new Open Mosaic Habitat creation at Linford.
- 6.2.22 Natural England is broadly supportive of the proposals as detailed in items 2.1.50 and 2.1.55 of the SoCG between (1) National Highways and (2) Natural England [[REP9A-014](#)].

6.3 Project Enhanced Structures

- 6.3.1 While the Project is committed to providing high quality design solutions for every structure across the Project, certain structures have been identified where the design and appearance of specific parts of the Project infrastructure is particularly important. This is due to the wider impact and connectivity benefits they have, not just for those using or looking at the structures, but within the surrounding landscape and environment. These are designated as Project Enhanced Structures, and include:
- a. The South Portal (Work No. 3C)
 - b. The North Portal (Work No. 5A)
 - c. Thong Lane green bridge north (Work No. 3B)
 - d. North Portal operational access bridge (Work No.5E)
 - e. Mardyke and Orsett Fen Viaducts (Work No. 8B)
 - f. Thames Chase WCH bridge (Work No. 90)
- 6.3.2 The location of Project Enhanced Bridges at the start and end of the route become landmark structures telling road users that they are on the main Project route. They also represent key moments for people crossing or living close to the route. Similarly, the Project Enhanced Portals mark the entrance and exit from the tunnel.

- 6.3.3 The design rationale for Project Enhanced Structures is discussed in the Project Design Report, Part F: Structure and Architecture [APP-513]. The Applicant made additional commitments within the Design Principles [REP9-227] (clause STR.07 Bridge structures), to ensure that the Preliminary Design presented at DCO is carried through to detailed design and implementation. The Design Principle is for all bridge structures across the Project, and ensures that the detailed designs:
- Use a complementary and consistent material palette
 - Are well detailed and coordinated
 - Are integrated sensitively and seamlessly into the landscape

6.4 Green bridges

- 6.4.1 The Applicant has promoted the use of green bridges where appropriate along the Project route. The Applicant has sought best guidance for the design of green bridges as set out in the Summary of Findings within the Natural England (2015) report, Green Bridges: A Literature Review (NECR181). The Project provides a higher number of green bridges than typical on the SRN as has been demonstrated through a review of the relatively few numbers of bridges currently on the highway network, including those proposed for recently consented highway schemes. This was set out as part of Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182] and in response to ExQ2_Q11.2.5 at Responses to the Examining Authority's Second Round of Written Questions (ExQ2) [REP6-106].
- 6.4.2 There are seven green bridges along the Project route, and the design and integration of each green bridge has been tailored to suit the surrounding landscape character, specific engineering constraints, its use by people and the types of flora and fauna that it needs to accommodate. The Applicant notes that this is the largest number of green bridges for a National Highways project, representing almost a doubling of the current number of green bridges on existing Highways Schemes. Representations have been made suggesting other locations for additional green bridges, for example Park Pale. However this is not a structure that requires replacement as part of the road widening within the A2 corridor and would not provide direct linkage to habitats south of HS1 due to Park Pale crossing under the railway line at this location and it is not supported due to a lack of ecological requirements to provide connectivity at this location where no additional fragmentation is resulting from the Project. Replacing the existing Park Pale bridge would also require the closure of the local road, impacting on two local businesses as noted in Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182].
- 6.4.3 Green bridges have been designed where an opportunity to maintain or enhance connectivity of sensitive landscapes and habitats for small animals such as bats, badgers and dormice, as well as mitigating landscape severance has been identified. The bridges also provide an improved experience for WCH (e.g. in the south on Brewers Road and Thong Lane south green bridges where no WCH provision currently exists). In the north, two new dedicated WCH bridges are being constructed (Thames Chase and the A127 west WCH

bridges) reconnecting historical severance and providing an improved experience for WCH users.

- 6.4.4 These green bridges have been designed to reflect the existing local landscape character through the choice of planting species and materials used. Within the technical constraints at each crossing, the character of existing roads, tracks and footpaths that lead up to these bridges has been used to inform the design. This is secured in Design Principle STR.08 [[REP9-227](#)].
- 6.4.5 Where bridges have multiple user types, and where physically practicable, the alignment of the road or footpath has been located to maximise the area of adjacent landscape whilst still providing a suitable connection. WCH routes across the bridges provide safe connections into the existing network, minimising crossing of traffic, whilst enhancing local public rights of way connectivity.
- 6.4.6 As examples, bridges located within the rich landscape of the Kent Downs AONB (as of 22 November 2023 the name has changed to Kent Downs National Landscape) will form a key gateway to the Project route from the south where the A2/M2 joins the alignment. The proposed structures and landscape between will also act together to perform as landmarks signalling entry through the Kent Downs AONB (secured in Design Principle S1.04). Feature planting on the bridges shall be visible on the horizon to reconnect the Kent Downs AONB visually and physically as drivers and their passengers approach along the A2. In the north, to limit the Project's impact on users of Hoford Road, a sunken lane character is adopted over the proposed Hoford Road green bridge. The enclosed character created by the route lying below surrounding ground along with roadside hedgerow planting has been designed to limit views toward the Project route.
- 6.4.7 The green bridge soft landscape proposals include drought tolerant species, diverse grassland and drought tolerant shrub mix resembling a woodland edge. The design includes detailed contouring that raises the soil profile in the area of shrub mix, increasing soil volume for rooting capacity and water retention. The raised profiles have also been designed to increase the feeling of separation from the road in the early years of the Project while the planting is establishing. The design includes a planting mix that has been designed to replicate the woodland edge which helps to reduce people's perception of crossing a bridge while giving the impression of a continuation of woodland prominent in the local landscape.
- 6.4.8 The inclusion of green bridges in the Project design has been supported by Natural England and the Kent Downs AONB as reflected in their Statements of Common Ground:
- SoCG item 2.1.34 'Natural England supports the creation of green bridges. Their design should focus on reducing the impact of increased severance exacerbated by the proposed Lower Thames Crossing for both wildlife and recreational users.' [[REP9A-014](#)]
- SoCG item 2.1.22 'The AONB Unit supports the creation of green bridges. Their initial view was that the design should focus on WCH experience, which should be through the 'green' area. However, the AONB Unit now accepts that the WCH route is located at the edge of the 'green' to provide ecological

connectivity. The AONB Unit would like the green bridges to be wider than those proposed.' [REP9A-010]

6.5 Highways standards and safety

Smart Motorways

- 6.5.1 Certain Interested Parties have made representations and oral submissions to the ExA suggesting that the A122 Lower Thames Crossing road design is (in their view) equivalent to an all lane running smart motorway (ALR motorway) in design and operation.
- 6.5.2 At Issue Specific Hearing 1, the Applicant presented a summary of the key distinctions between an All Purpose Trunk Road (APTR) (design standard for the Lower Thames Crossing) and ALR motorways. The Applicant provided a more detailed response and analysis in a Deadline 1 submission [REP1-196].
- 6.5.3 The submission concluded that the A122 is not a ALR motorway or 'smart motorway by stealth' as suggested by some Interested Parties.
- 6.5.4 APTRs have been in existence for many years and are used regularly by the public. There are different design standards used for APTRs and ALR motorways covering aspects such as the number of lanes, lane widths, hard strip widths, junction design, verges and gradients. In common with other APTRs, the A122 would not feature a hard shoulder in the baseline design and will typically have 1m nearside and offside hard strips. The Applicant will introduce technology services on the A122 to enhance the safety, road user experience and operation over and above it operating as a conventional APTR.
- 6.5.5 The Government's position on this matter is similarly clear: the Department for Transport does not consider the proposed A122 as a smart motorway, and nor was it included in the proposed schemes which were subject to the Written Ministerial Statement of 17 April 2023 relating to the cancellation of smart motorways (UK Parliament, 2023a). Therefore, the appropriate design and operation for the A122 is that of an APTR with enhanced safety and operational features.
- 6.5.6 Safety is National Highways' highest priority. The design of the A122 seeks to further enhance safety, beyond that of a conventional APTR, through addition of technology services and features to better support the road user. While the A14 Cambridge to Huntingdon is the closest equivalent, the A122 is being designed to be the most advanced APTR on the strategic road network.

6.6 Consideration of Good Design during Examination

- 6.6.1 During Examination substantial issues that were raised in relation to good design included:
- a. Design Principles
 - b. Design input from stakeholders
 - c. Long term management of the landscape
 - d. Tilbury Viaduct

- e. Design of the green bridges
- f. Matters raised by the Emergency Services
- g. Provision for walkers, cyclists and horse riders

Design Principles

- 6.6.2 In addition to the above (green bridges), the Applicant has made further commitments to support the detailed design of green bridges, through the inclusion of clause STR.08 (a Project-wide Design Principle applying to all green bridges across the Project) and clause S1.04 (specific to Brewers Road green bridge). Further additions have been made to the Design Principles, to strengthen connectivity for wildlife in relation to the green bridges in the AONB (at clause S1.23 and S2.15) to address concerns regarding lack of direct linkages between habitats at either side of the A2 corridor due to local road connections and junctions. The Applicant has aimed to balance the needs of ecology and the non-motorised users at each bridge through the wording of the Design Principles.
- 6.6.3 At Deadline 7, the Design Principles [[REP7-140](#)] were updated to include clause PRO.07 which provides that the key elements of the detailed design should be subject to structured stakeholder engagement on their spatial arrangement, user experience, appearance, integrated with the surrounding context and where relevant, signage and interpretation. In Appendix D of the Design Principles, there is provision for the detailed design multi-disciplinary workshop terms of reference, which have recently been included.
- 6.6.4 Comments from Stakeholders on the Design Principles during Examination (including Kent County Council, the Kent Downs AONB Unit, Gravesham Borough Council and Natural England) are set out in the Applicant's comments on Interested Parties' submissions at Deadline 8 [[REP9-276](#)].

Design input from stakeholders

- 6.6.5 The Applicant has in response to stakeholder feedback and as part of the DCO application secured processes for design input from stakeholders as part of its proposals at the detailed design stage. Below, a description of new Design Principles is provided, but this should not be seen in isolation and must be seen in the context of:
- a. Protective Provisions for Local Highway Authorities which secures design input.
 - b. A robust and meaningful set of Design Principles [[REP9-227](#)] which secures further consultation and engagement on a number of specific features of the Project (e.g. Clause PRO.01, Clause PRO.06, Clause S1.08, Clause S3.20 / Clause S9.21, Clause S3.21 / Clause S9.23, Clause S3.22 / Clause S9.24, Clause S6.01, Clause S11.12 and Clause 12.05)
 - c. The Project's commitment to utilise permit schemes, where they exist, in relation to works on the local road network

- d. Specific SAC-R [\[REP9A-060\]](#) commitments which relate to the design of further assets (e.g. SAC-R-009 Folkes Lane ULH (Work No. ULH 02), SACR-010 Drainage Pond (Work 9T), SACR-011 Embankment at Franks Farm, SACR-012 Retention of vegetation at Plot 4407, SACR-013 Franks Farm water treatment plant, SACR-014 Ron Evans Memorial Fields replacement open space, SACR-015 Thames Chase replacement open space, SACR-016 Folkes Lane Woodland replacement open space, SACR-017 Tunnel Design and Safety Consultation Group (TDSCG), SACR-019 Landowner access through Compound CA5, SACR-021 North Portal rendezvous point (RVP), SACR-022 Restoration of Royal Society for the Protection of Birds (RSPB) land at Shorne Marshes, SACR-024 Star Dam Flood Defence Structure)

PRO.06 Suicide prevention

- 6.6.6 A new Design Principle [\[REP3-111\]](#) PRO.06 Suicide prevention was added at Deadline 3: *'The detailed design process for the highways forming part of the strategic road network or local road network must consider the incorporation of measures, such as enhanced parapets on high-risk structures, so far as is reasonably practicable to reduce the risk of suicides in accordance with the National Highways (2022) Suicide Prevention Strategy (or any substituted version of that strategy published by National Highways). The emergency services will be consulted on the proposed measures as part of the detailed design process.'*

S1.23 Brewers Road green bridge: Habitat connectivity

- 6.6.7 A new Design Principle [\[REP6-046\]](#) S1.23 was added at Deadline 6: *'A mammal culvert shall be provided at the north side of the bridge, between the existing and new bridge abutments. The culvert shall be designed to allow mammal passage and adequate space for maintenance and inspection. The culvert structure shall be designed to integrate into the surrounding landscape.'*

S2.15 Thong Lane green bridge south: Habitat connectivity

- 6.6.8 A new Design Principle [\[REP6-046\]](#) S2.15 was added at Deadline 6: *'A mammal culvert shall be provided south-west of the bridge, under the southern connector road. The culvert shall be designed to allow mammal passage and adequate space for maintenance and inspection. The culvert structure shall be designed to integrate into the surrounding landscape.'*

S12.19 Retaining wall and Watercourse diversion at 'The Wilderness' (Works Numbers 8A and 8V)

- 6.6.9 A new Design Principle [\[REP6-046\]](#) S12.19 was added at Deadline 6: *'The earthworks, retaining wall and watercourse diversion in the vicinity of 'The Wilderness' shall be carefully coordinated and designed in such a way as to minimise the loss of vegetation and trees in The Wilderness as far as reasonably practical.'*

PRO.07 Detailed Design (and Appendix D)

- 6.6.10 A new Design Principle [[REP7-140](#)] PRO.07 Detailed design (and Appendix D Terms of Reference) was added at Deadline 7. This will ensure that key elements of the detailed design shall be subject to coordinated stakeholder engagement on their spatial arrangement (within the parameters of the DCO), user experience, appearance ('look and feel'), integration with the surrounding context and, where relevant, signage and interpretation. These elements include the consistent design approach, Project Enhanced Structures, community parks and green bridges.
- 6.6.11 There shall be multi-disciplinary workshops with relevant stakeholders before and after the National Highways Design Review Panel (NHDRP) (secured by Design Principle PRO.01). Comments made on the designs/design approach by the attendees shall be assessed and responded to in the detailed design as far as reasonably practicable and in accordance with the terms of reference in Appendix D of the Design Principles [[REP7-140](#)].

S2.16 Thong Lane (Work no. 1H): Candidate Veteran Trees – Shorne Woods Country Park

- 6.6.12 Following Issue Specific Hearing 8, Hearing Action Point 8 requested the Applicant to: "Consider the potential re-alignment of the proposed footpath to avoid/reduce the impact on the candidate veteran trees adjacent to Shorne Woods Country Park (as indicated on the plan in REP4- 084)."
- 6.6.13 The Applicant reviewed the limits of deviation (LOD) associated with the DCO submitted design for the Thong Lane alignment north of the A2 and identified that it would be possible to avoid the candidate veteran trees associated with the western boundary of the Shorne and Ashenbank Woods Site of Special Scientific Interest (SSSI). This could be achieved through adopting the western-most alignment for the road within the LOD (by moving the current highway alignment west by up to 10m and by lowering slightly the highway alignment by up to 700mm).
- 6.6.14 To secure the necessary approach for detailed design to achieve this alignment, a new Design Principle [[REP7-140](#)] S2.16 was added at Deadline 7, stipulating that the alignment of Thong Lane north of the A2 shall be designed to avoid impacting the Shorne and Ashenbank SSSI to the east.
- 6.6.15 By restricting the alignment as proposed in the new Design Principle, it will also be possible to further minimise the impact on the western boundary of the Shorne and Ashenbank Woods SSSI.

S10.15 Access to High House Lane / FP78

- 6.6.16 A new area-specific Design Principle [[REP7-140](#)] S10.15 was added at Deadline 7: *'To deter unauthorised access to High House Lane from Brentwood Road, independent accesses shall be provided to High House Lane and FP78 (which is to be upgraded to bridleway status) with each to have their own access controls, suitable for their intended use.'*

S12.20 Land to the east of North Road

- 6.6.17 A new area-specific Design Principle [[REP7-140](#)] S12.20 was added at Deadline 7: *'To deter unauthorised access to land east of North Road, the*

detailed design of the section of bridleway adjacent to North Road shall include a ditch to the eastern boundary, together with a post and rail fence and hedge.'

LST.04 Lighting on green bridges

- 6.6.18 Following stakeholder engagement with the Kent AONB Unit and Natural England, a new Project-wide Design Principle [[REP8-082](#)] LST.04 was added at Deadline 8: '*...lighting on green bridges shall be minimised and where possible column heights shall be reduced. Furthermore, the detailed design shall carefully consider the space allocation on the bridge to maximise the separation of the highway and associated lighting from the green space. Where lighting is required, it shall be carefully designed to focus light onto the highway and to minimise obtrusive light spill.'*

S1.24 Highways furniture

- 6.6.19 Following stakeholder engagement with the Kent AONB Unit and Natural England, a new area-specific Design Principle [[REP8-082](#)] S1.24 was added at Deadline 8: '*...roadside furniture within the AONB including (but not limited to):*
- Gantries
 - Lighting columns
 - Signage
 - Technology

Shall be finished to accord with the Kent Downs AONB Guidance on the selection and use of colour in development.'

STR.18 Central reserve crossing points

- 6.6.20 A new area-specific Design Principle [[REP8-082](#)] STR.18 was added at Deadline 8: '*Central reserve emergency crossing points will be provided in accordance with DMRB GD 368 and CD 192. The location and detailed design of the central reserve emergency crossing points will be developed in consultation with the emergency services.'*

STR.19 Emergency access roads

- 6.6.21 A new area-specific Design Principle [[REP8-082](#)] STR.19 was added at Deadline 8: '*Where access roads are provided, for emergency services use, they shall have a minimum paved carriageway width of 6.0m, gradients shall be in accordance with DMRB CD 122 and the design of the verge shall take into account the need for sufficient load bearing to accommodate operational vehicles in accordance with DMRB CD 127. The detailed design of the access roads will be developed in consultation with the emergency services.'*

S3.23 Central reserve crossing points

- 6.6.22 A new area-specific Design Principle [[REP8-082](#)] S3.23 was added at Deadline 8: '*A central reserve emergency crossing point shall be provided on the approach to the South Portal. The detailed design of the central reserve emergency crossing point will be in accordance with DMRB GD 368 and CD 192 and will be developed in consultation with the emergency services.'*

S3.24 Emergency hub

- 6.6.23 A new area-specific Design Principle [[REP8-082](#)] S3.24 was added at Deadline 8: *'An emergency hub area shall be provided within the South Portal Tunnel Services Building for the use of the emergency services. The emergency hub will provide control room, meeting room and welfare facilities for use by the emergency services. The layout of the emergency hub will be developed in consultation with the emergency services.'*

S6.03 Tunnel fire fighting systems

- 6.6.24 A new area-specific Design Principle [[REP8-082](#)] S6.03 was added at Deadline 8: *'In the event that the detailed design has cross-passages at a maximum of 100m spacing and does not include a FFFS, then an increased flow of firefighting water to at least 3,000l/min is required in the firefighting main. There shall be consultation with both the emergency services and specialist tunnel fire engineering technical advisers on the type and specification of the tunnel firefighting systems.'*

S9.25 Central reserve crossing point

- 6.6.25 A new area-specific Design Principle [[REP8-082](#)] S9.25 was added at Deadline 8: *'A central reserve emergency crossing point shall be provided on the approach to the North Portal. The detailed design of the central reserve emergency crossing point will be in accordance with DMRB GD 368 and CD 192 and will be developed in consultation with the emergency services.'*

S9.26 Emergency hub

- 6.6.26 A new area-specific Design Principle [[REP8-082](#)] S9.26 was added at Deadline 8: *'An emergency hub area shall be provided within the North Portal Tunnel Services Building for the use of the emergency services. The emergency hub will provide control room, meeting room and welfare facilities for use by the emergency services. The layout of the emergency hub will be developed in consultation with the emergency services.'*

S10.16 Emergency Services Rendezvous Point (RVP)

- 6.6.27 A new area-specific Design Principle [[REP8-082](#)] S10.16 was added at Deadline 8: *'The detailed design and layout of any RVP area (whether in accordance with SACR-021 or otherwise) will be developed in consultation with the emergency services.'*

Long term management of the landscape

- 6.6.28 Representations were received from Interested Parties during the Examination process regarding the terminology of 'long-term management' within the outline Landscape and Ecology Management Plan (oLEMP) [[REP9-207](#)].
- 6.6.29 The outline oLEMP sets out the proposed management and monitoring of the parcels of land that perform landscape and ecological functions to compensate or mitigate impacts of the Project. It details the management regimes, management expectations and monitoring requirements for each of those land parcels and the habitat typologies contained within them.

- 6.6.30 The outline oLEMP also sets out the long-term goals and the outline landscape and ecology management practices for the Project. The outline oLEMP [REP9-207] has been updated to state the management of the land parcels and typologies will be undertaken ‘in perpetuity’ and also includes an agreed definition of what in perpetuity entails.

Tilbury Viaduct

- 6.6.31 This structure emerges from embankment south of Station Road and north of Coal Road. Views of the structure would be experienced primarily by people travelling along Station Road, by those using Coal Road/the BR58 and its proposed diversion, and at a greater speed, by those travelling by train, including close-range views. The design of the viaduct would be visible in mid-range views from Low Street Lane and by residents of Low Street.
- 6.6.32 Woodland planting following the escarpment adjacent to the highway and associated earthworks retains a sense of the local character and helps integrate the Project route approaching the proposed Tilbury Viaduct from the south, into the landscape. The preliminary design of the structural form (as shown illustrative only) illustrates one design solution that utilises a series of shallow arches to help reduce the verticality and scale of the structure within this landscape and preserve views beneath the viaduct structure.
- 6.6.33 Representations were received from Thurrock Council in their Local Impact Report [REP1-281] suggesting that Tilbury Viaduct should be proposed as a Project Enhanced Structure and that the narrow Order Limits restrict the amount of screen planting that can be provided around it. The Applicant’s Deadline 2 response [REP2-064] discusses why Tilbury Viaduct has not been proposed as a Project Enhanced Structure and also the rationale for the amount of land taken for proposed mitigation, including in the area around Tilbury Viaduct.
- 6.6.34 The Tilbury Viaduct has not been included as a ‘Project Enhanced Structure’ for the following reasons:
- It is already taller than the Mardyke Viaduct relative to the surrounding ground level, giving it better proportions and greater clearance for views under and beneath it.
 - In terms of long views, the landscape is less open with more woodland areas, trees and hedge lines breaking up views. The proposed landscape design would strengthen the existing wooded ridge with new tree planting, which once established will help to soften views of the viaduct and integrate the structure into the landscape.

Given the above factors, it was not considered necessary for the proposed Tilbury Viaduct to be a Project Enhanced structure. This matter is not agreed, due to both parties’ positions remaining unchanged.

Design of the green bridges

- 6.6.35 Interested parties made representations relating to the widths of green bridges, and the provision of planting zones.

- 6.6.36 The Applicant provided a supplementary response to the response at Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182], giving a commentary as to the feasibility of any scope to widen the green bridges (within the AONB) which would not significantly alter the linear extent of the structures, in Hearing Action Point 7 of ISH11 [REP8-110] following representations during hearings to widen the green bridges from Natural England, Kent Downs AONB, Kent County Council, Gravesham Borough Council and Shorne Parish Council. Representations were also made requesting consideration of replacing Park Pale bridge with a green bridge and a response to this was provided in Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182].
- 6.6.37 Natural England made suggestions to amend the Design Principles for S1.17 (Brewers Road green bridge) and S2.12 (Thong Lane green bridge south), which secure the minimum planting zones on these bridges respectively.
- 6.6.38 Following discussions with Natural England in June 2023, these Design Principles were amended at Deadline 7 [REP7-140] to afford greater flexibility during detailed design for the appropriation of planted zones within the green bridges around the WCH routes and carriageway. The reason for the revised wording of the Design Principles was to allow flexibility at detailed design stage to help meet the design aspirations of key stakeholders for the green bridges. However, to provide greater certainty, a further amendment to the wording of the Design Principles S1.17 and S2.12 was made at Deadline 9 [REP9-227] to provide further clarity in response to stakeholder comments at their Deadline 8 submissions.

Widths of green bridges

- 6.6.39 A number of interested parties made comments on the widths of green bridges. For example, Natural England (NE) has provided comments. In respect of Brewers Road green bridge, NE has provided the following comments (NE comments, SoCG 2.1.35 [REP9A-014 (6)]): *‘Natural England is broadly supportive of the design of the Brewers Road green bridge, but it recommends the WCH path is separated from the carriageway by a substantial strip of species-rich grassland with a low wooden barrier.’*
- 6.6.40 In respect of Thong Lane green bridge south, NE has provided the following comments (NE comments, SoCG 2.1.35 [REP9A-014 (6)]): *‘Regarding Thong Lane green bridge south, Natural England agrees that the WCH route should be on the eastern side of the bridge. However, Natural England considers it should pass through a substantial band of natural habitat. Natural England has recommended a narrow band of woody/scrub habitat is provided on the western side to signal the entry to the AONB. On the eastern side, it has recommended that a wider, more substantial area of species-rich grassland transitioning to scrub/woodland is provided, through which the WCH route will pass.’*
- 6.6.41 Design Principles S1.17 and S2.12 secure the minimum widths of the planting zones on Brewers Road and Thong Lane south green bridges respectively. Following discussions with Natural England in June 2023, these Design Principles were amended at Deadline 7 (and subsequently updated at Deadline 9 [REP9-227]) to afford greater flexibility during detailed design for the

appropriation of planted zones within the green bridges around the WCH routes and carriageway.

- 6.6.42 The Applicant provided a supplementary response to these Interested Parties in Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182] and gave a commentary as to the technical feasibility to widen the green bridges (within the AONB) which would not significantly alter the linear extent of the structures, in response to Hearing Action Point 7 of ISH11 [REP8-110]. Balancing existing constraints of designated site boundaries, multiple utilities crossings, existing properties, the need to keep the A2 and existing Thong Lane (over the A2) open during construction and to minimise the time required for the closure of Brewers Road bridge, the Applicant does not consider it appropriate to further widen these structures, which are seeking to address the widening resulting from the Project and historic severance caused by the A2 transport corridor more generally.
- 6.6.43 It should be noted that there is no green connectivity across the A2 at present and what the Applicant is proposing is a step change in provision. Whilst it is recognised that some Interested Parties have made representation about increasing the width of the green bridges in the AONB, there are significant physical and technical challenges to overcome to achieve this, not least constructing over an existing 8-lane carriageway. Additionally, increasing the width and number of green bridges would have consequences on the protected sites that sit alongside the highway. Given the ecological constraint of the HS1 corridor immediately to the south of the Project, it is questionable as to what benefit wider green bridges would have in this area.

Matters raised by the Emergency Services

- 6.6.44 Extensive engagement has taken place with the Emergency Services and Safety Partners Steering Group (ESSP SG) both before and throughout Examination. This has included weekly catch-ups, as well as topic specific technical meetings. The Applicant has created several new Design Principles to address matters raised, including the northern rendezvous point (RVP), as well as providing detailed Terms of Reference for the Tunnel Design and Safety Consultation Group (TDSCG) which has been secured in the Stakeholder Actions and Commitments Register (SAC-R) [REP9A-060]. The CoCP has also been amended to ensure emergency services are consulted on the production of the Security Management Plan, and the Applicant has also referred to the Security Partnership Working Group within the CoCP [REP9-184] and provided terms of reference to the police services.
- 6.6.45 At Deadline 9A, the final agreed SoCG with the ESSP SG contains 40 matters in total of which 26 matters were agreed and 14 not agreed [REP9A-080]. The principal areas of disagreement at the end of Examination are:
- Dispute resolution
 - Developer funding
 - The location of the northern Rendezvous Point

Dispute resolution for matters consulted on within the Tunnel Design Safety Consultation Group (TDSCG) and Security Partnership Working Group.

- 6.6.46 The TDSCG, and nationally established requirements and guidance on running the group, are outlined in Section 2.15 of DMRB CD 352 (Highways England, 2020a). There is no requirement within the DMRB to provide an escalation route for dispute within the group. Instead, the requirements dictate that “*details of information presented to the TDSCG, along with any feedback and comments received, shall be formally recorded into a finalised safety consultation document, and appended to the Approval in Principle (AIP) document, as required by CG 300.*” The Applicant has committed to doing this.
- 6.6.47 However, in addition to what is required of the Applicant in DMRB requirements and guidance, the Applicant has provided a route for dispute resolution within a Terms of Reference. In the event that the group cannot reach a majority decision on a matter, as its likely that any matter would relate to safety, the most appropriate escalation mechanism would be in accordance with National Highways Health and Safety Arrangement HSA009 ‘Management Arrangement of Safety Risk for National Highways Activities’, and DMRB GG 104 Requirements for safety risk assessment (Highways England, 2018).
- 6.6.48 This process would involve the matter being considered through a Safety Control Review Group (SCRG). Decision making and attendance of the SCRG would be suitably independent of the activity and can also invite external independent advice.
- 6.6.49 The key complainant member(s) of the TDSCG would be invited to make representations to the SCRG where the subject matter is being heard.
- 6.6.50 To conclude, the Applicant has not only complied with national requirements and guidance, it has also demonstrated a robust dispute resolution process which includes an opportunity for the organisation/organisations disputing the proposals to present their case to a SCRG. The Applicant considers the suggestion that the terms of DMRB CD 352 are not appropriate to be meritless given the process for the production of DMRB, and the experience upon which it is based.
- 6.6.51 With regard to the Security Partnership Working Group, there is no requirement to establish a SPWG. The Applicant has sought to create this group to ensure efficient engagement on security related matters both before and during construction, and as a forum to ensure relevant emergency services are consulted on the production of the Security Management Plan which is a requirement of the Applicant as noted in Requirement 4 of the draft DCO [\[REP9-107\]](#).
- 6.6.52 For other matters that may arise within the group, to ensure a collaborative approach, the Applicant has outlined within the terms of reference a process for resolving issues where a majority decision is not reached by the group. In such a case, and following consideration by the Chair, the matter would be escalated to the Joint Operations Forum (JOF) and the relevant member of the SPWG would be invited to attend a meeting of the JOF to present their case. The JOF would then decide whether to accept or not accept the relevant member

positions. More information on the role of the JOF can be found in paragraph 4.3.4 of the Code of Construction Practice [[REP9-184](#)].

- 6.6.53 As with the TDSCG, the Applicant maintains the approach that it is taking goes beyond that which is required of it.
- 6.6.54 The Applicant has developed an RVP site to the north of the tunnel portal in accordance with DMRB CD 352, and in consideration of guidance provided by the emergency services.
- 6.6.55 The Applicant accepts that the needs of the emergency services have evolved. While the Applicant maintains that the site it has included within the DCO is suitable, it has nevertheless provided a commitment within the Stakeholder Actions and Commitments Register [[REP9A-060](#)] to continue to work with the emergency services on an alternative location should it secure consent. As such, the Applicant's position is that this commitment ensures that a suitable RVP to the north of the tunnel portal will be provided. A more detailed response to this matter is included within the Applicant's comments on Interested Parties' submissions at Deadline 9 and 9A [**Document Reference 9.216**].

Developer funding to support the policing provision to increase capacity, response capability and project preparations for resourcing, infrastructure, vehicle fleet and estate assets.

- 6.6.56 The Applicant has provided DfT with the case for such contributions and DfT has confirmed that the case is not met out. The Applicant is not, therefore, able to provide funding commitment in circumstances where DfT has concluded there is no need (see Annex D of the cover letter at Deadline 8 [[REP8-001](#)]).

Location of the northern Rendezvous Point

- 6.6.57 The Emergency Services have set out their objection to the proposed location of the northern rendezvous point, and a preference for a different location to the north. The Applicant has responded to this objections in the Applicant's comments on interested parties submissions at Deadline 9 and 9A [**Document Reference 9.216**].

Provision for walkers, cyclists and horse riders (WCH)

- 6.6.58 During the development of the project design, the Applicant has carefully considered the requirements of the NPSNN, to “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” (paragraph 3.17). Paragraph 5.205 of the NPSNN, further states “Applicants should consider reasonable opportunities to support other transport modes in developing infrastructure. As part of this, consistent with paragraph 3.19-3.22 above, the applicant should provide evidence that as part of the project they have used reasonable endeavours to address any existing severance issues that act as a barrier to non-motorised users.”
- 6.6.59 The Applicant has taken this seriously and the Project comprises 33.2km of new NMU routes, 12.5km of NMU routes with increased accessibility (these are generally re-designated routes), and 12.6km of NMU routes widened or resurfaced. The Applicant's position therefore is that this is a significant legacy.

6.6.60 Interested Parties raised concerns about anti-social behaviour, as well as the need for further provision of walkers, cyclists and horse riders routes, including the Applicant's proposals to upgrade the designation of existing routes. In relation to the former, the Applicant has put forward clause PEO.06 in the Design Principles [[REP9-227](#)] which seeks to provide assurance on measures to address anti-social behaviour. In relation to the latter, the Applicant considers its provision of upgraded and additional rights of way is a substantial betterment and has set out detailed reasons for excluding other proposals put forward by the Interested Parties in the Post hearing submission note for ISH10 [[REP6-091](#)].

6.7 Topic conclusion

6.7.1 Developing good design, including good landscape design, has been a focus of the Project. The Applicant has had regard to the policies of the National Policy Statement for National Networks (NPSNN) (DfT, 2014), seeking to achieve a good quality design in all areas within the physical constraints associated with a highways project. The following strategies were engaged to develop and deliver design quality:

- a. Developing proposals based on a clear design narrative and understanding of the places impacted by the Project
- b. Developing designs in an integrated team
- c. Responding to public consultation and stakeholder engagement
- d. Undertaking independent design review
- e. Incorporating appropriate flexibility for future design development

6.7.2 In conclusion, the Applicant's approach to good design is both robust and proportionate, setting out specific measures for detailed design that have been tailored to the needs of the Project and have been embellished during the development of the preliminary design.

6.7.3 A full assessment of compliance with the policy requirements for good design is provided in Chapter 6 of the Planning Statement [[REP9-215](#)] in paragraphs 6.4.28 to 6.4.42 and in Appendix A of the National Policy Statement for National Networks Accordance Table in the Planning Statement [[REP9-217](#)]. While there has been engagement on a number of matters through the Examination, and as a result modification to some of the secured design principles, the Applicant's view is that the assessment provided within the Planning Statement remains an accurate demonstration of the compliance of the design requirements with the NPSNN.

7 Compulsory acquisition and temporary possession

7.1 Summary statement

- 7.1.1 The Applicant has engaged extensively with landowners across the Project since the announcement of the preferred route in April 2017. As outlined in the Statement of Reasons [REP9-114], the Applicant has worked collaboratively with those impacted by the proposals to identify specific areas of concern, amending the design to remove or mitigate these as far as reasonably possible, while still delivering the Project's objectives. This proactive approach by the Applicant has resolved many compulsory acquisition matters prior to submission of the DCO application.
- 7.1.2 The Applicant has written to landowners to invite discussions to acquire land and rights required for the Project by voluntary agreement. The Applicant has made it clear during the course of engagement with landowners and throughout the course of the Examination that voluntary agreements are an option that remains open to those who wish to progress such discussions, as an alternative to compulsory acquisition.
- 7.1.3 The Planning Act 2008: Guidance related to procedures for compulsory acquisition ('the Guidance') (Department for Communities and Local Government, 2013) recognises (paragraph 25) that for linear schemes where multiple landowners are affected, negotiations are likely to proceed in parallel with the DCO process. The Applicant has progressed negotiations where persons with an interest in land (PILs) are willing and has acquired land and rights by agreement including the purchase of two thirds of the residential properties that require demolition for the Project.
- 7.1.4 The Project impacts approximately 1,676 PILs within the Order Limits. Of these, 245, less than 15%, submitted a Relevant Representation or a Written Representation to the Examining Authority. Only 47 of these have an outstanding objection to a specific element of compulsory acquisition, or to the Project as a whole. This is considered a relatively small number of representations and objections to compulsory acquisition given the scale of interests sought to be acquired and the scale of the Project compared to other DCO applications. It demonstrates the quality of engagement the Applicant has had with landowners and the successful focus on resolving matters of concern in relation to the compulsory acquisition or temporary possession of land.
- 7.1.5 There were five Compulsory Acquisition Hearings (CAHs) attended by 27 PILs (or groups of PILs) which account for only 5.6% of all PILs. Of these the Applicant is progressing, or has agreed to progress, voluntary legal agreements in relation to specific matters with 17 of them. Table 7.1 below shows status of these agreements at Deadline 10.
- 7.1.6 Excluding local authorities, five PILs (or groups of PILs) that attended CAHs have agreed final Statements of Common Ground with the Applicant in which 56% of matters are agreed or agreed in principle.
- 7.1.7 The Applicant has also continued to engage with PILs who did not attend CAHs. Eight PILs who did not attend the CAHs are progressing, or have

completed, voluntary agreements with the Applicant, they are listed in Table 7.1 below and denoted with a (*).

Table 7.1 Summary of progress with voluntary agreements

PIL	Agreement(s) summary	Status
Cheale Group Ltd	Utility access agreement	Negotiations
Clearserve*	Land agreement	Draft legal agreement
Cole Family	Irrigation agreement WCH dedication agreement	Negotiations
David Attwood*	Option agreement to purchase land	Completed
E & K Benton Ltd	WCH dedication agreement	Negotiations
Forestry England*	WCH dedication agreement	Draft legal agreement
Francis Alfred Wilson	Blight	Negotiations
Gravesham Borough Council	Financial compensation agreement	Heads of Terms
Harlex Haulage Ltd and J&B Martin (Crayford & Fawkham) Ltd*	Land and access agreement	Heads of Terms
HS1 Ltd	Land agreement	Final draft legal agreement
John & Elizabeth Gressier*	Land agreement	Negotiations
Runwood Homes Ltd and Runwood Properties Ltd	Voluntary acquisition	Negotiations
Kent County Council	Compensation agreement	Draft legal agreement
Malthurst South East Ltd*	Land agreement	Completed
Medebridge Solar Ltd	Land and access agreement	Final draft legal agreement
Mott Family	WCH dedication agreement	Draft legal agreement
Ockendon Solar Farm*	Land agreement	Completed
Orsett Golf Club	Early mitigation agreement	Negotiations
Port of London Authority	Voluntary acquisition	Draft legal agreement
Port of Tilbury London Ltd	Wider framework agreement	Draft legal agreement
Rochester Bridge Trust	Section 253 and land agreement	Final draft legal agreement
S & J Padfield Estates LLP and Christopher Padfield	Brentwood Enterprise Park - Land and Works Agreement and separate Land Agreement	Final draft legal agreement
St John's College Cambridge	Option agreement to purchase land	Heads of Terms
St Modwen Developments Ltd	Brentwood Enterprise Park - Land and Works Agreement	Final draft legal agreement
Stuart David Mee and Family	Land agreement	Draft legal agreement

PIL	Agreement(s) summary	Status
Tarmac Building Products Ltd	Access agreement	Heads of Terms
Veolia*	Land agreement	Final draft legal agreement

7.1.8 In relation to Whitecroft Care Home the Applicant is in active negotiations with the owner (Runwood Homes Limited) regarding a voluntary acquisition of the property. See Section A.8 of the Post-event submissions, including written submission of oral comments, for ISH14 [[REP8-114](#)].

7.1.9 Most of the objections raised to the Applicant’s compulsory acquisition and temporary possession proposals are in relation to the Project in general. More specific concerns relate to matters that have been raised at the compulsory acquisition hearings; these include the requirement for land for environmental mitigation, replacement special category land, new WCH routes and the ownership of those routes. These are addressed in further detail below.

Crown Land

7.1.10 The Applicant has engaged with the required Government departments regarding the legal requirements under section 135 of the Planning Act 2008 (PA 2008).

7.1.11 Section 135 Crown consent letters have been submitted to the Examining Authority from the Department of Health and Social Care at Deadline 2 [[REP2-075](#)] and the Department for Environment, Food and Rural Affairs at Deadline 9A [[REP9A-078](#)].

7.1.12 The following statement has been provided to the Applicant via email on 15 December 2023 from the DfT in relation to providing a section 135 letter:

“The parties agree there are no known outstanding substantive issues in relation to the proposed acquisition or potential use of the Department for Transport’s interests in land by National Highways as identified as being affected by the proposed development. The parties acknowledge that the formal legal agreements to fully document this position will not be concluded prior to 20 December 2023. The parties are working collaboratively to agree these during the recommendation stage, and subject to concluding these documents there is currently no known impediment to consent being provided under section 135 of the Planning Act 2008 prior to the decision.”

7.1.13 With regard to the bona vacantia interests held by the Duchy of Lancaster and the Crown Estate, the Applicant is in correspondence with their respective solicitors to confirm that the interest would be disclaimed. The Applicant is confident that this matter will be resolved during the DCO recommendation period.

Legal tests

7.1.14 The tests for compulsory acquisition of land (including the creation and acquisition of new rights over land) are set out in section 122 of the PA 2008, and further explained in the Guidance. In the Statement of Reasons [[REP9-114](#)], the Applicant has set out its case in full for the authorisation of

compulsory acquisition (including the acquisition of rights) and temporary possession of land.

- 7.1.15 Section 122 provides that an order granting development consent may include powers of compulsory acquisition only if the Secretary of State is satisfied that the conditions in subsections (2) and (3) are met. Subsection (2) provides that the land must be: (a) required for the development; (b) required to facilitate or is incidental to the development; or (c) replacement land which is to be given under sections 131 or 132 of the PA 2008. Subsection (3) provides that there must be a compelling case in the public interest for the land to be acquired compulsorily.

Requirement for the land – section 122(2)(a) and (b) of the PA 2008

- 7.1.16 In common with other major highway schemes applying for development consent under the PA 2008, the Applicant has prepared an outline design for the Project. This is of sufficient detail to enable parameters of the development to be set, to carry out an EIA and to identify land required to construct, operate and maintain the Project.
- 7.1.17 This approach is entirely consistent with the level of detail presented in all other highways NSIPs promoted, and granted development consent, under the PA 2008.
- 7.1.18 There are sound reasons for this approach given the complexity of NSIPs. A proportionate degree of flexibility is required when developing such projects to facilitate engineering solutions to unforeseen problems. Undertaking detailed design prior to seeking development consent would also add to the cost of early stages of the Project.
- 7.1.19 Within the Statement of Reasons [[REP9-114](#)], Book of Reference [[REP9-116](#)] and Land Plans [[REP9-008](#) to [REP9-012](#)], the Applicant has demonstrated a clear justification and intended use for all land within the Order Limits that is proposed to be subject to powers of compulsory acquisition and temporary possession. The Applicant has demonstrated that it requires all land within the Order Limits to deliver the Project and has included no more land than is required so to do.
- 7.1.20 As the detailed design of the Project is progressed, the Applicant will refine its understanding of what land is required and may conclude in the light of that detailed design that it need not compulsorily acquire certain areas of land that are currently subject to powers of compulsory acquisition. This may be because it has concluded negotiations to acquire by agreement the interests in land it requires, or because the refinement of the detailed design permits a reduction to the amount of land required to deliver the Project.
- 7.1.21 Where this is the case, the provisions of the draft DCO provide an additional safeguard. Article 25(1) of the draft DCO [[REP9-107](#)] only enables the compulsory acquisition of “*so much of the Order land as is required for the authorised development, or to facilitate it, or as is incidental to it*”. This requires the Applicant to consider at the point of exercising powers of compulsory acquisition whether that land is required for the authorised development, further respecting the human rights of affected persons (see Section 7.6).

- 7.1.22 There are therefore clear safeguards that ensure that only the land required for the Project is compulsorily acquired. The Applicant is therefore satisfied that the conditions in section 122(2)(a) and (b) of the PA 2008 are met.

7.2 Compelling case in the public interest – section 122(3) of the PA 2008

- 7.2.1 Section 122(3) of the PA 2008 requires a compelling case in the public interest for the authorisation of the compulsory acquisition of land.
- 7.2.2 The compelling case for the Project and the benefits of the Project are summarised in Section 4 of this document. The NPSNN, at paragraph 2.2, identifies a “critical need” to improve road congestion to provide safe, expeditious and resilient networks that better support social and economic activity. Chapter 2 of the Statement of Reasons [REP9-114] outlines the need for the Project. The Need for the Project [APP-494] sets out that need case in detail and summarises the policy support which underpins the Project.
- 7.2.3 The Applicant has considered carefully the potential adverse effects associated with the changes of land use that would be required for the Project if development consent is granted. ES Chapter 13: Population and Human Health [APP-151] (among other matters) identifies the likely significant effects of the Project on private property, housing, community land and assets and agricultural land holdings.
- 7.2.4 As summarised in Section 5 of this document, the Applicant has explored alternative options for the Project. None of the alternatives or modifications considered would obviate the need for the compulsory acquisition of land or rights and the temporary possession of land. In designing the Project and determining the land to be subject to compulsory acquisition and temporary possession powers, the Applicant has considered alternatives and modifications to the Project to minimise the amount of land required.
- 7.2.5 Considering the above, the Applicant considers there is a compelling case in the public interest for the authorisation of the compulsory acquisition of land and that the interference with private interests in land is justified.

7.3 Acquisition of land for the public benefit

Walkers, cyclists and horse riders

- 7.3.1 In relation to the ownership and dedication of new WCH routes, the Applicant has explained at Examination hearings, including CAH3 (see Post-event submissions, including written submission of oral comments, for CAH3 [REP6-087]), that a voluntary dedication agreement has been offered to any landowner affected by new WCH routes that has raised concern about ownership of the route. This agreement would resolve the concern that landowners have regarding the compulsory acquisition of land for WCH routes and the creation of ransom strips on their land.

Special category land and replacement land – section 122(2)(c) of the PA 2008

- 7.3.2 The Applicant requires powers of compulsory acquisition in respect of existing special category land, comprised of public open space and common land.
- 7.3.3 In relation to section 122(2)(c) of the PA 2008, the Applicant therefore seeks authorisation for powers of compulsory acquisition in respect of “replacement land” to be given in exchange for such special category land under sections 131 and 132 of the PA 2008. The basis on which replacement land is required is set out in Section 7.2 of the Statement of Reasons [[REP9-114](#)].
- 7.3.4 Article 40 of the draft DCO [[REP9-107](#)] ensures that a scheme for the provision of replacement land, developed in consultation with the relevant planning authority, must be submitted to the Secretary of State before the existing special category land vests with the Applicant.
- 7.3.5 The Applicant requires permanent acquisition over 73.09ha of open space and common land, across 14 sites. Of these, seven sites require replacement open space or common land, in total the Applicant is providing 93.47ha of replacement land.
- 7.3.6 In all cases, replacement land would be larger in quantity, equally or more accessible, useful and attractive, and its overall quality would be comparable or better to the existing. Replacement land would, therefore, be no less advantageous to the persons, if any, entitled to rights, and to the public, in accordance with sections 131 and 132 of the PA 2008. Moreover, the benefits of the Project (including need) outweigh any temporary loss of existing open space and/or common land during the construction period, taking into account the quality and extent of replacement land to be provided. For these reasons, the proposed replacement land complies with paragraphs 5.166 and 5.174 of the NPSNN as well as sections 131(4) and/or 132(4) of the PA 2008.
- 7.3.7 The design of replacement land has been developed in close consultation with stakeholders and the public. Special category land and replacement land was discussed at ISH2, CAH1, CAH2, CAH3, ISH9, CAH5 and ISH12 and has been further refined in response to comments received during the DCO examination.
- 7.3.8 The Applicant has positively responded to comments from Thurrock Council about the timing of replacement open space for Ron Evans Memorial Field, which is owned by the Council. A commitment has been made in the SAC-R [[REP9A-060](#)] (SACR-014) to laying out and making no less than 33,000sqm of replacement open space available for use by the public prior to access to existing open space being restricted by the Project. Similar commitments have been made in relation to Thames Chase (SACR-015), no less than 16,000sqm of replacement open space shall be provided and Folkes Lane Woodland (SACR-016) access to replacement open space at Hole Farm shall be provided before the Project restricts access to existing open spaces, in both these cases the land is owned by the Forestry Commission.
- 7.3.9 There is extensive agreement between the Applicant and landowners of existing special category land, for which replacement land is being provided. This is evidenced in Statements of Common Ground with landowners, specifically:

- a. Item 2.1.54 of Statement of Common Ground between National Highways and Kent County Council [[REP9A-052](#)] in relation to replacement land for Shorne Woods Country Park
- b. Item 2.1.197 of Statement of Common Ground between National Highways and Gravesham Borough Council [[REP9A-050](#)] in relation to land to the rear of Gravesend Golf Centre
- c. Item 2.1.15 of Statement of Common Ground between National Highways and Cole Family [[REP9A-096](#)] in relation to Tilbury Green
- d. Item 2.1.4 of the Statement of Common Ground between National Highways and Forestry England [[REP9A-056](#)] in relation to Thames Chase (Broadfields)
- e. Item 2.1.34 of the Statement of Common Ground between National Highways and Essex County Council [[REP9A-048](#)] in relation to Thames Chase Forest Centre
- f. Item 2.1.7 of the Statement of Common Ground between National Highways and Forestry England [[REP9A-056](#)] in relation to Folkes Lane Woodland

7.3.10 There is no agreement between Applicant and landowners of existing special category land, for which replacement land is being provided, in relation to:

- a. Item 2.1.324 of the Statement of Common Ground between National Highways and Thurrock Council [[REP9A-040](#)] with respect to Ron Evans Memorial Field. Thurrock Council have, however, confirmed they're "*satisfied with the proposed quantity and quality*" (Thurrock Council Comments on Applicant's Submissions at Deadline 7 (D7) and Deadline 8 (D8) [[REP9-299](#)]) of the replacement land and that it is of "...*suitable size, location and purpose*" (Response to ExQ1 [[REP4-351](#)]). The Council have also confirmed SAC-R commitment SACR-014 "*partially mitigate[s] the [temporary] loss of [Public Open Space] POS*" (paragraph 9.4.11 of Thurrock Council's Comments on Applicant's Submissions at Deadline 4 (D4) and Deadline 5 (D5) [[REP6-164](#)]) and is effectively secured via article 61 of the draft DCO [[REP9-107](#)] (paragraph 5.4.5 of Thurrock Council Comments on Applicant's Submissions at Deadline 7 (D7) and Deadline 8 (D8) [[REP9-299](#)]).
- b. Item 2.1.14 of Statement of Common Ground between the Applicant and the Cole Family [[REP9A-096](#)], who own the majority rights (273 of 303 rights) of the Orsett Fen Rights Holders. Although the replacement land was designed in consultation with the Rights Holders (see paragraph 7.3.15 below), the Cole Family object to the compulsory acquisition of their Freehold land for the replacement land which would be vested with the

Orsett Fen Rights Holders. It is noteworthy however that Natural England, the body responsible for common land regulation, agree at item 2.1.14 of the Statement of Common Ground between National Highways and Natural England [[REP9A-014](#)] that the replacement land for Orsett Fen “*would be no less advantageous to the public and those with rights of common than the existing Common Land provision*”.

- 7.3.11 The Applicant is providing 92,124sqm of replacement open space for Ron Evans Memorial Field in exchange for 82,670sqm of open space that needs replacing. The replacement land is adjoining the existing open space and would be more accessible to the public because of its location closer to surrounding settlements. The existing open space is in a relatively poor condition. In comparison, the replacement land would be laid out as high-quality Open Mosaic Habitat that could be used for the same outdoor recreational purposes that the existing open space is currently. The design principles (S11.06 [[REP9-227](#)]) and management requirements for the replacement land (Section 5.12 of the outline Landscape and Ecology Management Plan [[REP9-207](#)]), secured through Requirements 3 and 5 of the draft DCO [[REP9-107](#)], ensure it would sensitively tie into the surrounding landscape.
- 7.3.12 The greater quantity and quality of replacement land accounts for the fact some of it is anticipated to be available for public use five years after the existing open space is impacted by the Project, based on the preliminary construction programme for the Project. The Applicant has introduced SACR-014 [[REP9A-060](#)] to address the temporary loss of open space during construction, which would result in an area almost half the size of the existing Ron Evans Memorial Field remaining open to the public at all times during the construction period.
- 7.3.13 For the reasons above, set out in full in Planning Statement Appendix D: Open Space [[REP7-136](#)] and Planning Statement Appendix D: Open Space Addendum [[REP6-097](#)], the replacement land for Ron Evans Memorial Field complies with paragraphs 5.166 and 5.174 of the NPSNN (DfT, 2014) and paragraphs 5.10.6 and 5.10.14 of NPS EN-1 (Department of Energy and Climate Change, 2011a) as well as sections 131(4) and 132(4) of the PA 2008.
- 7.3.14 The Applicant is providing 619,671sqm of replacement common land for Orsett Fen in exchange for 523,107sqm of common land that needs to be replaced. The existing common is farmed by the Cole Family as tenant with two PRoWs passing through it. The replacement land could be used for the same purpose as it is in a comparable agricultural use for growing crops and would be designated with the same rights, trusts and incidents pursuant to article 40 of the draft DCO [[REP9-107](#)]. It would be equally or more accessible to the public because it would be located adjacent to upgraded and new WCH routes. Furthermore, the area of existing common to be deregistered would be used to create a mosaic of wet grassland, that would be accessible to the public (in accordance with article 54 of the draft DCO [[REP9-107](#)]). Severance of the common land by the Project would be offset by the provision of replacement land that is greater in size. Access to the remaining Common is maintained during construction though a commitment in the SAC-R and discussed in more detail in Section 9 at paragraph 9.9.14 of this Closing Submission.

- 7.3.15 The Applicant has developed the layout of the replacement land for the Orsett Fen in consultation with the Orsett Fen Rights Holders including the Cole Family (owner of 273 of the 303 rights), Thurrock Council (owner of 7.5 rights) and other stakeholders. This resulted in majority of the replacement land being located west of the proposed route alignment to address the Cole Family's comments and concerns as majority rights holder and tenant farmer of the common. Although the layout of the replacement land was designed in consultation with the Cole Family, the Applicant understands that they object to the principle of the compulsorily acquisition of their Freehold land which would be vested with the Orsett Fen Rights Holders, thus 'diluting' their interest in the land. This is a separate matter to whether the proposed replacement land is acceptable in planning policy and legal terms.
- 7.3.16 For the reasons above, set out in full in Planning Statement Appendix D: Open Space [[REP7-136](#)] and Planning Statement Appendix D: Open Space Addendum [[REP6-097](#)], the replacement land for Orsett Fen complies with paragraphs 5.166 and 5.174 of the NPSNN (DfT, 2014) and paragraphs 5.10.6 and 5.10.14 of NPS EN-1 (Department of Energy and Climate Change, 2011a) as well as section 131(4) of the PA 2008.
- 7.3.17 The Applicant provides details of the open space impacted by the Project where there is no requirement, under sections 131 and 132 of the Planning Act 2008, to provide replacement land in Appendix D of the Planning Statement [[REP7-136](#)].

Topic conclusion

- 7.3.18 Consequently, the Applicant is satisfied that the condition in section 122(2)(c) is met. The assessment of the impact of the Project on Open Space and the Applicant's approach to replacement land demonstrates accordance with the requirements of sections 131 and 132 of the Planning Act 2008 and satisfies the policy tests set out in paragraphs 5.166 and 5.174 of the NPSNN as set out in Planning Statement Chapter 6 [[REP9-215](#)], Appendix D: Open Space [[REP7-136](#)] and Appendix A: National Policy Statement for National Networks (NPSNN) Accordance Table [[REP9-217](#)].

Private recreational facilities and replacement recreational land

- 7.3.19 The Applicant requires the temporary possession, temporary possession with permanent rights and/or permanent acquisition of land currently in recreational use to construct and operate the Project. Justification for the land powers sought are set out in the Statement of Reasons [[REP9-114](#)].
- 7.3.20 The Applicant has engaged extensively with landowners and operators of private recreational facilities affected by the Project throughout the DCO process to ensure their needs are properly considered in the design development process.
- 7.3.21 ES Chapter 13: Population and Human Health [[APP-151](#)] provides an assessment of the Project on population and human health receptors including private recreational facilities for the construction and operational phases of the Project.

- 7.3.22 Planning Statement Appendix G: Private Recreational Facilities [[APP-502](#)] provides an assessment of the Project's effects on private recreational facilities against national planning policy.
- 7.3.23 The Project complies with paragraphs 5.166, 5.174 and 5.181 of the NPSNN. Any temporary disruption to Private Recreational Facilities would be outweighed by the benefits of the Project, taking into account the positive proposals made by the Applicant both specifically in relation to the private recreational facilities affected by the Project, as noted in Planning Statement Appendix G: Private Recreational Facilities [[APP-502](#)], and generally in relation to the delivery of two new publicly accessible outdoor recreational spaces either side of the River Thames at Chalk Park and Tilbury Fields.
- 7.3.24 The Applicant has continued to constructively engage with landowners and operators of private recreational facilities during the DCO examination, which has resulted in new or enhanced mitigations and agreement on key issues including but not limited to:
- a. Agreement between the Applicant and Gravesham Borough Council at Item 2.1.200 of the Statement of Common Ground between (1) National Highways and (2) Gravesham Borough Council [[REP9A-050](#)] with respect to the replacement recreational land proposed to compensate for the loss of the closed nine-hole golf course at Gravesend Golf Centre.
 - b. Inclusion of a commitment in the outline Traffic Management Plan for Construction (oTMPfC) [[REP9-235](#)] at Deadline 7 for the Contractor to phase the movement of construction vehicles crossing Thong Lane and review the impacts resulting from the crossing point in order to implement suitable restrictions, where necessary, to minimise disruption to Thong Lane generally, including access to the Cascades Leisure Centre. In Gravesham Borough Council's Deadline 8 Submission, responding to proposed changes to control documents [[REP8-131](#)], the Council expressed its satisfaction with the proposed modification aimed at addressing concerns related to minimising disruption along Thong Lane, a frequently used road for accessing Cascades Leisure Centre.
 - c. Amendment EA04 submitted at Deadline 3 comprising a reduction in the land required for construction of temporary utility works affecting the Condozers Scout Activity Centre. Condozers Scout and Activity Centre confirmed they welcome the change in correspondence with the Applicant dated 13 July 2023.
 - d. Agreement between the Applicant and Orsett Golf Club to provide additional mitigation (refer to Post-event submissions, including written submission of oral comments, for CAH3 [[REP6-087](#)]) to reduce the Project's impacts on the golf course. These include the provision of planting outside the Order Limits prior to the main works to screen the new road from the golf course and erection of rabbit fencing between the boundary of Orsett Golf Club and the proposed nitrogen deposition compensation land to the

south. These would be subject to an agreement between the Applicant and Orsett Golf Club which the Golf Club have confirmed they are satisfied with; see Deadline 7 Hearing Actions [[REP7-185](#)]. The Applicant met with the Golf Club on 5 December 2023 and will continue to progress the mitigation agreement in 2024.

Topic conclusion

- 7.3.25 Consequently, the Applicant is satisfied that the condition in section 122(2)(c) is met. The assessment of the impact of the Project on private recreational facilities and the Applicant's approach to securing appropriate provision of opportunities for recreation demonstrates accordance with the requirements of sections 131 and 132 of the Planning Act 2008 and satisfies the policy tests set out in paragraphs 5.166 and 5.174 of the NPSNN as set out in Chapter 6 of the Planning Statement [[REP9-215](#)], Planning Statement Appendix A: National Policy Statement for National Networks (NPSNN) Accordance Table [[REP9-217](#)] and Planning Statement Appendix G: Private Recreational Facilities [[APP-502](#)].

7.4 Acquisition of land for environmental purposes

- 7.4.1 Land for ecological compensation is required to offset the effects of the Project as set out in the Environmental Statement [[APP-138](#) to [APP-486](#)] and the Statement of Reasons [[REP9-114](#)] and this issue has been explored during Examination hearings. Where land has been sought for ecological purposes it has been done so as to mitigate or compensate for significant environmental effects and relates to the loss or potential degradation of designated habitats such as Sites of Special Scientific Interest and Ancient Woodland or undesignated habitats supporting species of conservation importance. Ecological land also comprises receptor sites for protected species which would have to be moved during the construction of the Project. Where land is required permanently for ecological purposes, some landowners have requested leasehold arrangements or section 253 agreements under the Highways Act 1980 ('S253 agreements') as an alternative to the compulsory acquisition of their land for environmental compensation.
- 7.4.2 The Applicant has, by exception on previous projects, agreed alternative delivery/ownership routes for permanent environmental compensation, including S253 agreements. However, in practice these have often led to non-conforming implementation and/or maintenance and required the Applicant to exercise step in rights incurring additional costs ultimately borne by the taxpayer.
- 7.4.3 It is therefore the Applicant's policy to only use S253 or other agreements for permanent environmental compensation in exceptional circumstances to ensure that compensation land is appropriately set out and managed in perpetuity, in accordance with the DCO. S253 agreements are only considered by the Applicant for fixed term environmental measures, such as the erection of bat boxes. This is outlined in Comments on WRs Appendix F: Landowners [[REP2-051](#)] and has also been raised at Examination hearings including CAH1; see Post-event submissions, including written submission of oral comments, for CAH1 [[REP4-177](#)], CAH2 [[REP4-178](#)] and CAH3 [[REP6-087](#)].

7.5 Statutory Undertakers

- 7.5.1 The Applicant has submitted updated revisions of the following documents throughout the examination process, detailing the positions of the Applicant and Statutory Undertakers impacted by the Project. Those documents should be read in conjunction with this Closing Submission. Where the position or status differs, this document shall take precedent:
- a. Status of Negotiations with Statutory Undertakers [[REP9-243](#)] (final submission at Deadline 9)
 - b. ExQ1.15.1.3 PA2008 s127 Statutory Undertakers' Land-Rights [[REP9-256](#)] (final submission at Deadline 9)
 - c. ExQ1.15.1.4 PA2008 s138 Statutory Undertakers' Rights and Apparatus [[REP9-258](#)] (final submission at Deadline 9)
- 7.5.2 As submitted at CAH1 [[REP4-177](#)] the Project interfaces with the assets or interests of 44 Statutory Undertakers or Electronic Communication Code Operators, to which s127 and/or s138 applies. At Deadline 9, negotiations were still underway with 14 interested parties who are represented by 10 undertakers which are the operating arm of, or are the controller of those other parties interests, insofar that they interface with the Project. Updated and associated closing positions are provided at paragraph 7.5.4 below.
- 7.5.3 The Applicant considers sufficient protections for the benefit of the Statutory Undertakers are contained with the draft DCO [[REP9-107](#)] at article 37 (Statutory Undertakers) and article 38 (Apparatus and rights of statutory undertakers in stopped up streets), within relevant parts of Schedule 14 (Protective Provisions), and where required, there are sufficient provisions contained within the Register of Environmental Actions and Commitments (REAC) [[REP9-184](#)] to mitigate any potential impacts that could give rise to a serious detrimental effect to that undertaker.
- 7.5.4 Those remaining undertakers and the Applicant's closing position, or update regarding those objections, following Deadline 9, are:
- a. Environment Agency (EA). The Applicant and the EA have engaged since the Project's inception. The application contains the Protective Provisions (at schedule 14, Part 9 of the draft DCO [[REP9-107](#)]) to authorise the works required within or adjacent to main rivers which the EA may have relevant rights or apparatus over or within, which are agreed between the parties.
 - b. Northumbrian Water Limited (operating as Essex and Suffolk Water (ESW)). The Applicant and ESW have engaged since the Project's inception. The application contains the necessary provisions to authorise the works required to ESW's network for the purposes of the Project, and for the acquisition or creation of necessary rights to operate and maintain that network, and provisions to protect the statutory undertaking of ESW are included at Schedule 14, Part 1 of the draft DCO [[REP9-107](#)]. The parties have also been discussing a separate side agreement in which the

Applicant has made further commitments to address particular concerns which ESW have raised with the Project; that agreement is close to conclusion, with all substantive issues now resolved. In the absence of a finalised agreement, ESW object to the use of compulsory acquisition powers over Plot 24-133, the Linford Well site, or insofar that the undertaking of the works would give rise to a worsening of water quality or increase the pollution risk within land that is associated with the source of the Linford Well [REP1-265], which were responded to within the Applicants Comments on WRs Appendix B: Statutory Undertakers [REP2-047], and then further raised at CAH4 and responded to by the Applicant [REP6-088], and the Applicant has provided further response those submissions made at Deadline 9 and Deadline 9A [Document Reference 9.216]. These matters are also contained within the Statement of Common Ground between the parties [REP9A-034]. The Applicant does not consider the Project gives rise to serious detriment to ESW's undertaking and believes that sufficient provisions are contained within the application, within both the draft DCO and the REAC (notably RDWE012 and RDWE025) to satisfy those concerns of ESW. The Applicant understands ESW, following Deadline 9A, have submitted a letter to the ExA noting that formal completion of the agreement is the only outstanding matter and therefore whilst the objection remains pending, that ESW anticipates the agreement will be completed shortly after the end of the Examination and therefore it is anticipated that the objection from ESW will be withdrawn prior to the start of the decision period.

- c. HS1 Limited (including London and Continental Railways Limited). The Applicant and HS1 have engaged for an extensive period (since 2015). The application contains necessary provisions to protect the statutory undertaking of HS1 at Schedule 14, Part 4 of the draft DCO [REP9-107]. HS1's principal objection relates to the uncontrolled use of the compulsory acquisition powers by the Applicant insofar that they are exercised without the approval of HS1 Limited. The Applicant's position on this is set out in Section 3 of Deadline 9 Hearing Actions [REP9-279] and within the Statement of Common Ground between the parties [REP9A-022] (SoCG item 2.1.18). The Applicant is working with HS1 Ltd to agree a side agreement which contains further commitments. This agreement will not be concluded prior to 20 December 2023 (end of Examination); however, the Applicant is confident that these will be agreed following the end of the Examination. The Applicant considers that, absent of that agreement, those provisions and controls contained within the draft DCO suffice insofar that they would not give rise to serious detriment to the undertaking of HS1, in accordance with s127 and s138 of the Planning Act, and by according with legislation such as the Construction (Design and Management) Regulations

2015, that the works would be carried out in a safe and efficient manner to mitigate potential impacts to the operation of the railway.

- d. Lumen Technologies UK Limited (Lumen). The application contains necessary provisions to protect the statutory undertaking of Lumen within Schedule 14, Part 2 of the draft DCO [REP9-107]. The Applicant and Lumen have agreed a side agreement to resolve all of their concerns (initially raised within their Relevant Representation submission [RR-0618], none of which related to s138 matters, (s127 is not relevant to Lumen) and contained objections to the NRSWA cost sharing provisions), and as such the Applicant considers that Lumen have no outstanding objection to the Order. The Applicant understands that following Deadline 9A, following the completion of a side agreement between the parties, Lumen have submitted a letter to the ExA noting that formal completion of the agreement is the only outstanding matter and therefore whilst the objection remains pending, that Lumen anticipates the agreement will be completed shortly after the end of the Examination and therefore it is anticipated that the objection from Lumen will be withdrawn prior to the start of the decision period.
- e. National Gas Transmission (NGT). The Applicant and NGT (including National Grid PLC) have engaged since the Project's inception. The application contains the necessary provisions to authorise the works required to NGT's network for the purposes of the Project, and for the acquisition or creation of necessary rights to operate and maintain that network, and provisions to protect the statutory undertaking of NGT including (at Schedule 14, Part 6 of the draft DCO [REP9-107]) bespoke Protective Provisions, in an agreed form, for NGT's benefit. The parties have also been discussing a separate side agreement in which the Applicant has made further commitments to address particular concerns which NGT have raised with the Project, which can be viewed within the Statement of Common Ground between the parties [REP9A-084]. The Applicant expects that agreement to be concluded during the Recommendation stage. The Applicant understands NGT, following Deadline 9A, have submitted a letter to the ExA noting that formal completion of the agreement is the only outstanding matter and therefore whilst the objection remains pending, that NGT anticipates the agreement will be completed shortly after the end of the Examination and therefore it is anticipated that the objection from NGT will be withdrawn prior to the start of the decision period.
- f. National Grid Electricity Transmission (NGET). The Applicant and NGET (including National Grid PLC) have engaged since the Project's inception. The Application contains the necessary provisions to authorise the works required to NGET's network for the purposes of the Project, and for the

acquisition or creation of necessary rights to operate and maintain that network, and provisions to protect the statutory undertaking of NGET including (at Schedule 14, Part 7 of the draft DCO [REP9-107]) bespoke Protective Provisions, in an agreed form, for NGET's benefit. The parties have also been discussing a separate side agreement in which the Applicant has made further commitments to address particular concerns which NGET have raised with the Project, which can be viewed within the Statement of Common Ground between the parties [REP9A-082]. The Applicant expects that agreement to be concluded during the Recommendation stage. The Applicant understands NGET, following Deadline 9A, have submitted a letter to the ExA noting that formal completion of the agreement is the only outstanding matter and therefore whilst the objection remains pending, that NGET anticipates the agreement will be completed shortly after the end of the Examination and therefore it is anticipated that the objection from NGET will be withdrawn prior to the start of the decision period.

- g. Network Rail Limited (NR). The Applicant and NR have engaged since the Project's inception. The Application contains necessary provisions to protect the statutory undertaking of NR (at Schedule 14, Part 4 of the draft DCO [REP9-107]). NR object to the use of compulsory acquisition powers which they consider would give rise to a detrimental effect on the statutory functions of NR [REP1-264] and believe any use of their land by the Project can be acquired by agreement. The Applicant does not agree with this position, and for the reasons set out in Deadline 9 Hearing Actions [REP9-279] (paragraphs 3.2.3 to 3.2.16) and Post-event submissions, including written submission of oral comments, for CAH3 [REP6-087] (paragraphs B.2.3 to B.2.7), to HS1 Limited and the Port of Tilbury London Limited respectively, does not consider those powers should be granted. The parties have been discussing a separate side agreement in which the Applicant has made further commitments to address this matter, and other particular concerns which NR have raised with the Project, which can be viewed within the Statement of Common Ground between the parties [REP9A-024]. These matters include the acquisition of interests in NR land (SoCG item 2.1.1), the use of NR assets (SoCG item 2.1.12) and inclusion of protection agreements within the protective provisions (SoCG item 2.1.9). All other substantive issues are now resolved, however, these agreements will not be concluded prior to 20 December 2023 (end of Examination). Absent that agreement, the Applicant considers that those provisions and controls contained within the draft DCO suffice insofar that they would not give rise to serious detriment to the undertaking of HS1, in accordance with s127 and s138 of the Planning Act, and that by according with legislation such as the Construction (Design and Management) Regulations 2015, that

the works would be carried out in a safe and efficient manner to mitigate potential impacts to the operation of the railway.

- h. Port of London Authority Limited (PLA). The Applicant and the PLA have engaged since the Project's inception. The application contains provisions to protect the statutory undertaking of PLA (at Schedule 14, Part 8 of the draft DCO [REP9-107]) which are agreed with the exception of two provisions (paragraph 99(6) and 104). In principle the PLA object to the use of compulsory acquisition powers that would give rise to a detrimental effect on the statutory functions of the PLA [REP1-269]. The Applicant addresses these matters in Section 10 below.
- i. Port of Tilbury London Limited (PoTLL). The Applicant and PoTLL have engaged since the Project's inception. The application contains provisions to protect the statutory undertaking of PoTLL (at Schedule 14, Part 10 of the draft DCO [REP9-107]). The parties have also been discussing a separate side agreement in which the Applicant has made further commitments to address particular concerns which PoTLL have raised with the Project. PoTLL objects to the use of compulsory acquisition powers, or any of the wider Project proposals that would impact the statutory functions of the Port of Tilbury [REP1-274] and its proposed expansion. PoTLL are seeking consent provisions that are not agreeable to the Applicant, for those reasons stated in Post-event submissions, including written submission of oral comments, for CAH3 [REP6-087] (paragraphs B.2.3 to B.2.7). Other outstanding matters are addressed in Sections 8, 10 and 11 below.
- j. Southern Water Services Limited (SW). The Applicant and SW have engaged since the Project's inception. The application contains the necessary provisions to authorise the works required to SW's network for the purposes of the Project, and for the acquisition or creation of necessary rights to operate and maintain that network, and provisions to protect the statutory undertaking of SW at Schedule 14, Part 1 of the draft DCO [REP9-107]. A Statement of Common Ground between the parties, with all matters agreed, was submitted at Deadline 8 [REP8-096]. The parties have also agreed a separate side agreement in which the Applicant has made further commitments to address particular concerns which SW have raised with the Project. The Applicant understands that following Deadline 9A, SW have submitted a letter to the ExA noting that formal completion of the agreement is the only outstanding matter and therefore whilst the objection remains pending, that SW anticipates the agreement will be completed shortly after the end of the Examination and therefore it is anticipated that the objection from SW will be withdrawn prior to the start of the decision period.

- k. Thurrock Flexible Generation Limited (TFG). The Applicant understands TFG, at Deadline 9A, have submitted a withdrawal of their representations to the ExA and no longer object to the Order.

7.5.5 In all instances, the Applicant believes that its compulsory acquisition powers are proportionate, justified and are required for the construction and operation of the Project, and that the Project would not give rise to a serious detrimental effect to the undertakings of any of those parties listed above.

7.6 Human Rights Act 1998

7.6.1 The public benefits that the Project would deliver outweigh the loss of private land as there is a compelling case in the public interest for the compulsory acquisition of land, and rights over land, required to deliver the Project.

7.6.2 The Applicant's approach to compulsory acquisition is consistent with the relevant duties in the Human Rights Act 1998 and the Equality Act 2010. The Applicant has also set out its obligations in detail in Section 6 of the Statement of Reasons [[REP9-114](#)].

7.6.3 Article 8 of the European Convention on Human Rights protects the right of the individual to respect for their private and family life, their home and their correspondence. The Project requires the permanent acquisition of residential dwellings within the Order Limits and the Applicant has sought to acquire these properties.

7.6.4 Properties have been acquired by the Applicant via the statutory blight process following the receipt of a valid blight notice from the occupier. They have also been acquired via the Applicant's discretionary purchase process or by voluntary agreement.

7.6.5 The Applicant has provided details of the status of the acquisition of residential properties in Section 6.3 of the Statement of Reasons [[REP9-114](#)]. As of Deadline 10 the Applicant has acquired 46 of the 76 residential properties within the Order Limits and has committed to purchase a further six.

7.6.6 Regarding Article 1 of the First Protocol, it has been demonstrated that the compulsory acquisition of land is necessary and proportionate to the public interest in the Project, and owners will be compensated for land acquired. As to Article 6, landowners have been able to challenge the acquisition and extent of land required during the development of the Project's proposals, consultations and throughout the Examination process.

Travellers

7.6.7 Under the Equality Act 2010 and the Human Rights Act 1998 (the 1998 Act), Travellers are a protected group. The Applicant has engaged with traveller communities within the Order Limits regarding the Project.

7.6.8 The Gammon Field Travellers' site is to be relocated as part of the Project. The residents and Thurrock Council have been consulted on the proposals which they are comfortable with as outlined during OFH5; see Post-event submissions, including written submission of oral comments, for OFH5 [[REP8-112](#)].

- 7.6.9 The site has been assessed as high sensitivity because it covers an area of 1.6ha. As detailed in ES Chapter 13: Population and Human Health [APP-151] construction impacts on the existing travellers' site relate to changes in quality/amenity as a result of the proximity of construction activities. The travellers would remain at their existing site during enabling works for the Project, which include utilities diversions, and while the replacement site is constructed.
- 7.6.10 The Applicant and Thurrock Council have agreed a SAC-R commitment [REP9A-060] that ensures the replacement Gammon Field travellers site is capable of occupation by the residents of the existing site prior to the commencement of Work No.7R of the draft DCO [REP9-107].
- 7.6.11 The Applicant has also agreed with Thurrock Council an amendment to Requirement 13 of the draft DCO which transposes the planning conditions from the original consent for the existing site onto the new site.
- 7.6.12 Once residents have relocated to the replacement site, Long Lane compound A, which would primarily be used for earthwork stockpiles, would provide acoustic separation from the rest of the construction works. The magnitude of impact associated with these changes has been assessed as minor, resulting in effects that would be slight adverse and therefore not significant.
- 7.6.13 Other travellers sites have been assessed in ES Chapter 13: Population and Human Health [APP-151] and would experience effects that are not significant.

8 Traffic matters

8.1 Introduction

- 8.1.1 The Applicant's fundamental position on traffic matters remains unchanged from that set out in the Application Document submissions.
- 8.1.2 The transport impacts of the Project are presented in the Transport Assessment (TA) [[REP4-148](#) to [REP4-152](#)] for both the construction phase of the Project and the operational phase. Section 4.4 of the TA sets out the guidance documents to which the Applicant has had regard in the preparation of the TA.
- 8.1.3 The transport model built to support the DCO application is the Lower Thames Area Model (LTAM). This is a strategic transport model designed for use in forecasting the impact of providing a new road crossing of the River Thames between Gravesend and Tilbury. The Applicant considers the LTAM to be suitable for forecasting the impact of the Project on the performance of the transport network.
- 8.1.4 Transport Analysis Guidance (TAG) issued by the DfT forms the basis for the approach to traffic modelling and economic assessment, in accordance with paragraphs 4.5 and 4.6 of the NPSNN. This is explained in the Combined Modelling and Appraisal Report (ComMA) [[APP-518](#) to [APP-527](#)]. Paragraph 4.6 of the NPSNN makes it clear that the Examining Authority and Secretary of State (SoS) do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. The Applicant notes that this form of strategic modelling is highly precedented, and has been used, and relied upon, in all DCOs granted by the SoS in relation to strategic road network (SRN) DCOs.
- 8.1.5 The traffic forecasts presented in the TA [[REP4-148](#) to [REP4-152](#)] come directly from the LTAM, which is compliant with TAG. The development of the LTAM and how it accords with TAG are set out in the ComMA [[APP-518](#) to [APP-527](#)].
- 8.1.6 The Applicant has also built a series of localised traffic models, both during design development and as a result of engagement with stakeholders, as set out in Section 3.2 of Localised Traffic Modelling [[REP6A-004](#)].
- 8.1.7 The Applicant recognises that as a result of the Project, traffic flows and patterns across the Lower Thames area will change as motorists take advantage of the additional cross-river capacity, and as journey times at the Dartford Crossing become quicker and more reliable. In some locations this results in a reduction in traffic flows leading to beneficial impacts, whilst in other locations traffic flows increase leading to adverse impacts.
- 8.1.8 This chapter identifies some of the traffic matters raised during the Examination and describes the Applicant's response.

8.2 The Applicant's approach to traffic modelling

Overview

- 8.2.1 Transport modelling has been undertaken to consider how travel across the Lower Thames area would change as a result of the Project, to help determine the performance of the highway network and to allow for the assessment of benefits and disbenefits. The forecast impacts on traffic are measured in the form of increased and decreased journey times, vehicle operating costs, reliability and accidents which can then be quantified as an economic benefit or disbenefit.
- 8.2.2 There is clear support in policy terms for the approach taken to the transport modelling. TAG forms the basis for the Applicant's approach to transport modelling and economic assessment in accordance with paragraphs 4.5 and 4.6 of the NPSNN.

Strategic transport modelling

- 8.2.3 The LTAM is the primary analytical tool used to assess the impact of the Project on the highway network. The LTAM forms the basis of the assessments included in the DCO application and is considered an appropriate model to determine the impacts of the Project and to inform the planning decision.
- 8.2.4 The strategic modelling work undertaken is appropriate and proportionate to the scale of the Project. The LTAM covers the whole of England, Scotland and Wales in order to represent the full length of trips which might wish to use the Project or the Dartford Crossing. It was built to cover a large area in detail and enables the forecasting of traffic movements across a large modelled area. In particular, it is able to reflect area-wide re-routing of trips which could affect a considerable part of Kent and Essex. It is also the only modelling approach capable of modelling drivers' behavioural responses to the provision of a substantial increase in road capacity across the river.
- 8.2.5 The LTAM is based on the number and pattern of trips in 2016 which is considered a robust representation of travel patterns in the area.
- 8.2.6 The LTAM is a reliable and robust variable demand model built in accordance with TAG. It is used to forecast the traffic flows, travel times, speeds and levels of congestion on the road network in future years and enables modelling of how people change their behaviour in response to a change in the transport network. It models drivers' response to a change in travel times, such as changing their destination, time of travel and mode of travel and it selects the best route for vehicles based on the time and cost of the alternative routes, given the other traffic on the network. The strength of the response of drivers to changes in time and cost of journeys is calibrated using sensitivity tests set out in TAG.
- 8.2.7 Within the Application, model information is provided for 2030, 2037, 2045 and 2051. The models provided set out sufficient information to understand the performance of the Project throughout that period.
- 8.2.8 The LTAM is fully compliant with TAG. Following TAG guidance, the Applicant has set out the forecasts, traffic flows and journey times, for a core scenario within the application (as well as for high and low growth scenarios) which

support many other areas of the application, including some topics within the Environmental Statement. The derivation and outputs from these scenarios are reported in the Transport Forecasting Package [[APP-522](#)] and its annexes [[APP-523](#)]. Any suggestion not to rely upon the methodology in TAG should be dismissed and would cause damaging uncertainty on development in the UK.

- 8.2.9 The LTAM provides a consistent way to look at the impacts of the Project over a wide area and highlights both those junctions where travel times would increase and those where it will decrease as a result of the Project.
- 8.2.10 The adverse impacts on traffic flows have been assessed and considered against NPSNN (see Sections 8.3 and 8.4 of this Closing Submission for more information).
- 8.2.11 The forecasts developed using the LTAM provide appropriate and robust information to support the decision-making process. The model validation and realism tests undertaken to ensure that the LTAM is robust and suitable for use are described in the Transport Model Package (Appendix B of the ComMA [[APP-520](#)] and paragraph 3.1.13 of Localised Traffic Modelling [[REP6A-004](#)]).

Localised traffic modelling

- 8.2.12 Localised traffic modelling has been undertaken to develop and test highway designs for various elements of the Project as part of the iterative design process and to explore and further understand the findings from the LTAM.
- 8.2.13 Localised traffic models have been developed and utilised as follows:
- Firstly, during the development of the Project, the Applicant used localised traffic modelling to develop and test highway designs for various elements of the Project as part of the iterative design process.
 - Secondly, the Applicant recognised the desire for certain stakeholders (planning authorities, highways authorities, Transport for London (TfL) and the operators of two ports: Port of Tilbury London Limited (PoTLL) and DP World London Gateway) to understand the changes in traffic flows that would result from the construction and operation of the Project. Where requested and considered proportionate, the Applicant has prepared and shared localised traffic models (microsimulation and junction models) of selected junctions. The models that have been produced and shared are set out in Table 3.1 of Localised Traffic Modelling [[REP6A-004](#)].
- 8.2.14 VISSIM, LINSIG and Junctions software has been used as appropriate for the operational phase of the Project. It is standard industry practice to use modelling tools together and to take insights from a variety of models.
- 8.2.15 While localised traffic modelling may be helpful for the purposes of considering the sensitivity of individual junctions, in addition to the work already completed using the LTAM and reported in the TA [[REP4-148](#) to [REP4-152](#)], further traffic analysis must not be taken as bringing into question the use of the national methodology (i.e. TAG) in respect of the modelling provided in the TA.
- 8.2.16 The localised traffic modelling has been used to check the robustness of the findings of the LTAM as set out in Chapter 4 of Localised Traffic Modelling

[[REP6A-004](#)]. The work supports and validates the findings of the LTAM and does not conflict with the material set out in the Application. The comparison exercise provided within Chapter 4 of that report provides confidence in the use of the LTAM for the appraisal of the Project. Localised traffic modelling will continue to be used to inform the detailed design of the Project.

VISSIM modelling during design development

- 8.2.17 VISSIM models covering the extent of the Project route were used in the design development of the Project to look at the performance and safety of individual junctions by taking the outputs from the LTAM and putting them into a VISSIM model to check the performance of an individual junction. This helped to identify concerns in the way that a junction is forecast to perform and to develop the highways design. The revised highways design was then remodelled using the LTAM to deliver the final assessment of the proposals as set out in the DCO application. Further details of this work is set out in Localised Traffic Modelling Appendix G: Traffic Operational Appraisal – VISSIM Local Model Validation Report [[REP1-193](#)] and Localised Traffic Modelling Appendix H: Traffic Operational Appraisal – VISSIM Forecasting Report [[REP1-194](#)].

Consideration of traffic modelling during the Examination

- 8.2.18 The Applicant has worked with stakeholders on an ongoing basis to share, explain and interrogate the Project's transport model and forecasts. As a result, the Applicant has made a number of changes and agreed to the insertion of additional commitments in the draft DCO (dDCO) in response to the traffic discussions held through the Examination.
- 8.2.19 Concerns were raised throughout Examination related to the suitability of the LTAM for the purposes of assessment. The modelling set out in the application is robust, sets out the impacts of the Project on the performance of the transport network, and is suitable for the consideration of the Project. The LTAM has been developed in compliance with TAG and the Applicant has undertaken realism tests which have demonstrated that the modelling work undertaken is robust, appropriate and proportionate to the scale of the Project. The Applicant has demonstrated that a decision made in using the LTAM for its purpose as a tool to inform decision making would be robust.
- 8.2.20 Some of the concerns raised by Interested Parties in relation to the strategic modelling and its outputs were as follows:
- a. That the base year of the LTAM (2016) is too old and predates the COVID-19 pandemic

As explained in paragraph 3.1.28 of the Post-event submission for ISH4 [[REP4-180](#)], the Applicant considers the base year model to be suitable for use as a base for forecasting since the current traffic numbers and travel patterns are similar to those from before the COVID-19 pandemic.

In Applicant's comments on Interested Parties' submissions at Deadline 6 [[REP7-187](#)] the Applicant provided, in response to Thurrock Council, mapping from TomTom which demonstrated a very close match of distribution patterns using the Dartford Crossing between 2019 and 2023.

At other locations presented, using National Highways TRIS data, some locations showed an increase in traffic over the period, whilst others a slight reduction. However the Applicant noted that in some of these locations roadworks would have affected the flows in both years.

Overall, the Applicant considers that the base model as presented remains an appropriate and robust tool on which to assess the forecast impacts of the Project on the road network.

- b. That the model has not been considered against the latest guidance and DfT traffic forecasts

The Applicant produced the transport model and accompanying analysis and appraisal in line with the guidance and forecasts that were current at the time of the DCO application in October 2022. Since the submission of the DCO application, DfT published TEMPro version 8 for growth in car trips, National Road Traffic Projections 2022 for growth in goods vehicles and also growth factors for the modelling of the Common Analytical Scenarios (CAS) described in TAG Unit M4. During the Examination, the Applicant undertook sensitivity tests to incorporate updates and reflect different scenarios published by DfT post-submission of the DCO application. The results for the core scenario and the CAS were presented in NTEM 8 and Common Analytical Scenarios [REP3-145] which was submitted at Deadline 3. Overall, the Applicant considered that neither the update to the DfT traffic forecasts or the CAS resulted in significant changes to the relief provided by the Project at the Dartford Crossing. The NTEM 8 test confirmed the need for the Project at the Dartford Crossing and on the Project itself that the Applicant's proposed design was still consistent with the level of forecast demand.

The Applicant does not consider it would have been proportionate to carry out a full social, environment and economic appraisal of the CAS tests (as per paragraph 4.6 of the NPSNN) and considers that those assessments as presented to the Examination remain appropriate for considering the forecast impacts of the Project.

However, at Deadline 7 the Applicant submitted Sensitivity Analysis on Environmental Assessments for 2 Year Rephasing, NTEM 8 and Revised Traffic Forecasts for Goods Vehicles [REP7-194] in which the Applicant presented sensitivity analysis with respect to the air quality and noise models to consider the effect of traffic data reflecting the two-year rephasing, NTEM 8 and revised traffic forecasts for goods vehicles. This confirmed that, whilst there are some localised changes to modelled traffic-related impacts, both positive and negative the findings would not change the overall conclusions of the assessments reported in the Environmental Statement (ES).

- c. That the growth in the model does not match the levels of growth contained within local plans or align with government housing targets

The growth included within the Applicant's transport model is in line with TAG and uses the DfT NTEM 7.2 forecasts as its basis. The Applicant has adjusted this growth through the Uncertainty Log, and the criteria that the Applicant has used for the inclusion of sites and infrastructure within the core scenario are set out within Chapter 4 of ComMA Appendix C: Transport Forecasting Package [[APP-522](#)].

Growth within local plans (irrespective of their status) do not carry a sufficient level of certainty to be included in the core scenario. The Applicant offered to test the emerging local plans of all local authorities in the LTAM outside of the DCO process in order to assist them in their development. Thurrock Council was the only authority to accept this offer and the Applicant ran five alternative Local Plan scenarios for the Council in 2022.

Overall, the Applicant considers that it has appropriately and robustly considered the effects of future growth on the road network, in line with TAG.

- d. That the relief provided by the Project at the Dartford Crossing is limited and short-lived

A number of Interested Parties have asserted that the relief that the Project would bring to the Dartford Crossing would only last for a small number of years, and in particular that this betterment would cease when traffic flows return to above those in the base year (2016). The Applicant has been clear, as set out in Annex A.2 of Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)] and in Section 8.6 of this Closing Submission that the benefits that the Project would bring to the Dartford Crossing would continue beyond this time. Indeed, whilst the traffic forecasts show this to occur in the mid-2040s, flows at the Dartford Crossing would remain up to 13% lower in the peak hours than if the Project had not been built.

In addition, Thurrock Council have made repeated assertions about the lack of benefit that the Project would bring to the road network and have supported their analysis by making comparison between say the opening year of the Project (2030 within the DCO application) and 2016 (the base year of the Applicant's transport model). Such comparisons are considered illogical and misrepresent the situation as they ignore the growth that would occur in the intervening period, irrespective of whether the Project was operational or not.

Location-specific assessment following stakeholder engagement

- 8.2.21 The Applicant maintains that the LTAM is appropriate for the consideration of the benefits and impacts of the Project. Nevertheless, the Applicant agreed to undertake junction-specific assessments to support the consideration of issues raised through the Examination.
- 8.2.22 The Applicant developed a series of localised traffic models in response to stakeholder engagement to address concerns related to specific Project junctions. These have been valuable to provide further insights and assurance and have supported the LTAM output. In most cases, the localised model output remains a matter of disagreement between the Applicant and key stakeholders.
- 8.2.23 Localised models allow substantial modification of parameters and each element is a matter of professional judgement. The Applicant maintains that the outcomes of the localised modelling would not reach a different conclusion to that reached by examination of the LTAM outputs.
- 8.2.24 Some Interested Parties made submissions into the Examination that the Applicant should undertake considerable additional localised traffic modelling. One example of the requests submitted is contained in Appendix B of Thurrock Council's Deadline 5 submission Comments on Applicant's submissions at Deadline 4 [[REP5-112](#)], which proposed a seven step programme of further modelling at the Asda roundabout, which the Council considered would last some 10 to 12 weeks.
- 8.2.25 Submissions were made both for locations already covered by localised models produced by the Applicant as well as at additional, new locations. The Applicant did not agree to undertake this work as to do so would not have been proportionate given the extensive transport modelling and assessment work already before the Examination, and that if it was to do so would not have resulted in different conclusions being reached.
- 8.2.26 Whilst the Applicant has produced a suite of localised traffic models as set out in Table 3.1 of Localised Traffic Modelling [[REP6A-004](#)], the Applicant's assessment of the Orsett Cock junction (in the operational phase of the Project) and the Asda roundabout (in the construction phase of the Project) were discussed at length during the Examination and are therefore set out in further detail below.

A13 Orsett Cock junction

- 8.2.27 The Applicant has always acknowledged that there would need to be modifications made at the Orsett Cock junction. This was included in the Works Plans [[REP9-032](#) to [REP9-042](#)] and Schedule 1 of the dDCO [[REP9-107](#)]. This has been secured through Requirement 18 of the dDCO [[REP9-107](#)].
- 8.2.28 The Applicant set out the forecast impacts at the Orsett Cock junction in the TA. This acknowledges minor to moderate adverse impacts in 2030, as shown in Plates 7.25, 7.26 and 7.27 [[REP4-152](#)], and that the performance of the junction worsens in 2045, but is not considered unacceptable. The Applicant developed VISSIM modelling of the junction to support this assessment [[REP1-188](#)] following engagement with Thurrock Council prior to the submission of the DCO application.

- 8.2.29 During the Examination, the Applicant identified that modifications to the Orsett Cock junction and the approaches would be required to optimise flows. These modifications are set out in Section 3.9 of Localised Traffic Modelling Appendix C: Orsett Cock Forecasting report [[REP6A-006](#)]. The Applicant set out that further work would be undertaken during detailed design and could include other measures to minimise delays to traffic beyond those identified.
- 8.2.30 As set out in Localised Traffic Modelling Appendix C: Orsett Cock Forecasting report [[REP6A-006](#)], overall delays and queueing are forecast to increase at the Orsett Cock junction with the Project in 2030 and 2045, particularly in the PM peak period. However, the queues do not extend to the mainline A13 or A122 in either forecast year or modelled time period. The queues have been considered in terms of potential impacts on severance and safety, which the environmental impacts of the traffic are considered within the environmental assessment.
- 8.2.31 The Applicant set out at ISH13 that while there is increased traffic on the roundabout which could lead to a concern about severance due to the current uncontrolled crossings, the proposed Requirement 18, along with provision on Rectory Road secured through Design Principle S11.14 [[REP9-227](#)], would provide for non-motorised users. In consequence, the Applicant considers that congestion is the residual effect of concern, and as characterised in Section 2.4 of the Wider Network Impacts Position Paper [[REP6-092](#)], congestion or increased delay is not the test to be applied when considering the need for mitigation as set out in the NPSNN.
- 8.2.32 During Examination the Applicant held a number of discussions with Thurrock Council, Essex County Council, DP World London Gateway and PoTLL regarding detailed technical matters relating to the VISSIM model and whether the results from the VISSIM modelling and the LTAM demonstrated sufficient convergence to give confidence in their results. With respect to convergence between the LTAM and the VISSIM modelling, the Applicant has set out that whilst the two models give different outputs (as would be expected across different modelling platforms), seeking convergence between them is not in line with guidance nor industry best practice, would take many years to complete and would be required at multiple junctions across the Lower Thames area, which the Applicant considers would not be proportionate. This is important, as while the models do show different results, the outputs would not have resulted in a different conclusion.
- 8.2.33 These parties, together with the Applicant, submitted the Joint Position Statement: Orsett Cock junction [[REP5-084](#)] at Deadline 5 which set out a number of actions for the Applicant which were subsequently completed.
- 8.2.34 As part of the actions, the localised traffic modelling was used to check the robustness of the findings of the LTAM. The Applicant undertook a run of the LTAM incorporating the delays of the Orsett Cock junction VISSIM model. As set out in Appendix N of Localised Traffic Modelling [[REP6A-004](#)], this work supports and validates the findings of the LTAM and supports the conclusions drawn from the LTAM about the overall performance of the Project at a local level.
- 8.2.35 The Applicant has tested all other adverse impacts on the road network against policy. The Applicant considers that such tests show that none of the impacts

were unacceptable and as such the Applicant does not consider it necessary for any additional physical interventions to be secured as part of the DCO.

- 8.2.36 Whilst the Applicant completed the actions agreed in the Joint Position Statement, differences between the Applicant's and some Interested Parties' views of the acceptability of the modelling (mainly relating to the driver behaviour parameters) and its outputs remain. The Applicant considers that the driver behaviour it has selected reflects industry standard practice and a cooperative style of driver behaviour that is reflective of a busy junction. The Applicant set out a range of examples where National Highways, local authorities and developers had used similar driver behaviour within Annex A.10 of Post-event submissions, including written submission of oral comments, for ISH13 [[REP8-113](#)].
- 8.2.37 In addition, the Applicant considers that increases in delay at one junction should be seen in the context of the reductions in journey time across many routes and journeys.
- 8.2.38 Notwithstanding the above, the Applicant put forward Requirement 18 into Schedule 2 of the dDCO [[REP9-107](#)] following engagement with the relevant Interested Parties in relation to the operation of the Orsett Cock junction to address this.
- 8.2.39 Following a request from the Examining Authority, the Applicant made further changes to the Requirement securing consultation on the monitoring to be carried out pursuant to that Requirement, and secured further relevant considerations. The Applicant has explained in Applicant's responses to Interested Parties' comments on the dDCO at Deadline 6 [[REP7-190](#)] and Deadline 9 Hearing Actions [[REP9-279](#)] why the proposed Requirement put forward by PoTLL, DP World and Thurrock Council is not appropriate. Further responses to the parties deadline 9 responses are provided in Applicant's comments on Interested Parties' submissions at Deadlines 9 and 9A [**Document Reference 9.216**].
- 8.2.40 The Manorway junction continues to operate acceptably following the opening of the Project. Within Appendix N of Localised Traffic Modelling [[REP6A-004](#)], the Applicant addressed concerns raised by Interested Parties related to queues at the Orsett Cock junction leading to increases in traffic flows around Manorway. Marginal changes, or even improvements in the movement through the Manorway junction for the traffic leaving London Gateway were shown.
- 8.2.41 As set out in the Joint Position Statement: Orsett Cock junction [[REP5-084](#)], whilst there were areas of disagreement with aspects in the VISSIM model, the Applicant maintains that the VISSIM model design is appropriate and the outcomes of the modelling are realistic.

A1089 Asda roundabout

- 8.2.42 The Asda roundabout is the first at grade junction on the A1089 when travelling from the A13 to the Port of Tilbury/Tilbury2.
- 8.2.43 Both Thurrock Council and PoTLL expressed concerns relating to the operation of the Asda roundabout during the construction phase of the Project. The A1089 is the main access route to the Port of Tilbury, would provide a primary

construction route to the northern tunnel entrance compound and is an at grade priority controlled junction.

- 8.2.44 The Applicant considers that until the Contractor has developed more detailed construction plans, the use of the LTAM is appropriate for the consideration of the construction impacts, presenting a highly precautionary worst case. Nevertheless, in response to discussions at Issue Specific Hearing 1, the Applicant agreed to produce localised traffic modelling of the Asda roundabout during the critical construction traffic modelling phases.
- 8.2.45 The construction of the Project would lead to increases in traffic flows through the Asda roundabout as a result of construction vehicles associated with the Project or construction impacts away from the roundabout, including the implementation of temporary traffic management (TTM).
- 8.2.46 The Applicant's position is set out in Applicant's submissions on construction impacts and management at Asda roundabout [\[REP6-123\]](#). This provides more clarity on the nature of the impacts on the Asda roundabout and confidence that the impacts can be managed through the operational controls provided by the Control Plan documents. This document also contains a table in which the proposed Requirement put forward by PoTLL and Thurrock Council is shown to be inappropriate, and contains measures which are already secured in the oTMPfC [\[REP9-235\]](#). This matter was addressed again in Post-event submissions, including written submission of oral comments, for ISH13 [\[REP8-113\]](#) and Applicant's Responses to Interested Parties' comments on the Draft Development Consent Order at Deadline 8 [\[REP9-275\]](#), in which the Applicant set out its position that a bespoke Requirement would cause confusion and undermine the beneficial goal of ensuring usability and coherence in the management of construction traffic impacts.
- 8.2.47 The Applicant provided further analysis and commentary within the Asda roundabout construction impact assessment [\[REP6A-008\]](#) which demonstrates that a robust approach has been applied to the development of controls to manage construction traffic impacts, both generally and specifically at the Asda roundabout.
- 8.2.48 During both the morning and evening peak hours, the results show that the Asda roundabout junction performance is likely to have limited capacity without the Project, and as such implementation of construction traffic management controls are likely to be required. These would be developed during the preparation of the Traffic Management Plan and informed on a dynamic basis by traffic monitoring throughout the construction phase. These controls are secured within the oTMPfC [\[REP9-235\]](#) and the Framework Construction Travel Plan (FCTP) [\[REP9-233\]](#).

8.3 Economic appraisal and the role of the BCR in the examination

- 8.3.1 The Applicant has undertaken a TAG compliant economic appraisal as set out in Appendix D of the ComMA [\[APP-524\]](#) to [\[APP-527\]](#).
- 8.3.2 The appraisal presents a Benefit Cost Ratio (BCR) of 1.22 for the Project based on a 60-year standard appraisal period.

- 8.3.3 The stated economic benefits and BCR of the Project are robust, measurable and have been undertaken in line with TAG, as presented in Appendix D of the ComMA [[APP-526](#)]. Paragraph 4.6 of the NPSNN provides clear national policy support for the use of TAG as the appropriate appraisal methodology.
- 8.3.4 The standard appraisal period in TAG is 60 years but DfT considers that some items of investment have a greater lifespan, such as the tunnels that form part of the Project. The Applicant has therefore also presented a BCR of between 1.66 and 1.72 (depending on the implementation of the Transport Decarbonisation Plan) for the Project based on a 100-year appraisal period.
- 8.3.5 The appraisal takes into account both the benefits and disbenefits of the Project and as such the Applicant does not consider any adjustment to the stated economic benefits to be necessary.
- 8.3.6 The Applicant has undertaken a series of sensitivity tests to test the robustness of the assessment to changes in input data. These consider the impact of changes in capital costs including inflation on the BCR. The sensitivity tests are set out in the ComMA, Appendix D: Economic Appraisal Package [[APP-526](#)].
- 8.3.7 The Applicant has concluded that there would be an overall substantial benefit as a result of the Project, with the vast majority of the benefits falling within the Lower Thames area in which the Project is located.
- 8.3.8 Thurrock Council have raised a number of matters in relation to the robustness and validity of the Applicant's economic appraisal and have sought to question whether the Project offers value for money. The Applicant has been able to demonstrate that much of the key analysis presented by the Council in making such claims contained errors. In respect of other issues put forward by the Council, the assessment presented by the Applicant reflects the assumptions that were valid at the time of the DCO application and were undertaken in accordance with TAG.
- 8.3.9 Overall, the Applicant has made representations during the Examination relating to the robustness of its approach and the resulting BCR and considers that this follows TAG, is robust, measurable and demonstrates that the Project would offer value for money.

8.4 Wider Network Impacts

- 8.4.1 The traffic modelling presented in the TA [[REP4-148](#) to [REP4-152](#)] identifies a number of areas where forecast changes in traffic flows create performance effects on the wider road network. In many places the changes in traffic flows would lead to beneficial impacts on the network, and in some cases they would lead to adverse impacts. Overall, the benefits on the road network substantially outweigh the adverse impacts.
- 8.4.2 The Applicant has examined each of the forecast adverse impacts and considered them against policy (as set out within TA Appendix F: Wider Network Impacts Management and Monitoring Policy Compliance [[APP-535](#)]). The Applicant does not consider that any of these impacts are unacceptable nor do they require intervention as part of the application for development consent for the Project. Instead, they fall to be weighed in the balance, in accordance with NPSNN paragraph 4.3.

- 8.4.3 The Applicant is confident that the application has understood and reported on the impacts and fully taken them into account.
- 8.4.4 Within the dDCO [\[REP9-107\]](#) Requirement 14 requires the Applicant to prepare an operational traffic impact monitoring scheme, which will put in place a traffic monitoring programme across the SRN and the local road network, commencing prior to the opening of the road and continuing after opening for up to five years. Further specification of this scheme is set out in the control document secured by this requirement, the Wider Network Impacts Management and Monitoring Plan [\[REP9-231\]](#).
- 8.4.5 If monitoring identifies that there is a need for intervention, funding for such an intervention can be brought forward through the existing funding mechanisms, in accordance with the existing funding framework that has been put in place by Government.

Consideration of the wider network impacts on highways during the Examination

- 8.4.6 During the Examination a number of representations were made by Interested Parties challenging the position set out by the Applicant in the following areas:
- a. Policy support – Interested Parties challenged the Applicant’s interpretation of the NPSNN
 - b. Sufficiency of the Wider Network Impacts Monitoring and Management Plan [\[REP9-231\]](#)

Policy support

- 8.4.7 The Applicant has provided further submissions on the consideration of highways impacts on the wider road network by the NPSNN within the Wider Network Impacts Position Paper [\[REP6-092\]](#).
- 8.4.8 Interested Parties have made a number of arguments in relation to the Applicant’s interpretation. They contend that:
- a. The structure and headings within the NPSNN are not to be used to interpret the policy. Specifically, they argue that paragraphs 5.213 and 5.214 should apply to all schemes and not just to Strategic Rail Freight Interchanges
 - b. The term accessibility used within the NPSNN at paragraph 5.216 should be interpreted in the broadest sense, disregarding any precise meaning provided within the wider policy document
- 8.4.9 For nationally significant road projects and their impact on the transport network, the specific test on mitigation for road and rail developments is provided at paragraphs 5.125 of the NPSNN:
- “5.215 Mitigation measures for schemes should be proportionate and reasonable, focussed on promoting sustainable development.”*
- 8.4.10 The Applicant set out within the Wider Network Impacts Position Paper [\[REP6-092\]](#) how the drafting of the NPSNN provides clear direction on the

requirement to consider and mitigate impacts arising from increased traffic flows. The NPSNN contains five references to impacts which may make development ‘unacceptable’ unless they are mitigated. These relate to different environmental topics such as pollution or land stability but not to traffic impacts. In relation to the need to mitigate impacts associated with changing traffic flows that must be considered in the decision making process, there are clear requirements in relation to environmental impacts associated with changing traffic flows, issues relating to severance and safety considerations. These are considered specifically in turn, and compliance with the requirements is set out in Appendix F of the Transport Assessment, Wider Network Impacts Management and Monitoring Policy Compliance [[APP-535](#)]. Further consideration and demonstration that the Project is compliant with policy in relation to severance and safety is set out for key corridors raised as concerns by Interested Parties in the Wider Network Impacts Update [[REP5-085](#)].

8.4.11 Paragraph 5.216 of the NPSNN sets out the need to mitigate impacts on accessibility:

“5.216 Where development would worsen accessibility such impacts should be mitigated so far as reasonably possible. There is a very strong expectation that impacts on accessibility for non-motorised users should be mitigated.”

8.4.12 Interested Parties have contended that in this paragraph the term “accessibility” should apply to consideration of congestion and delay on the highways network. The NPSNN provides a specific section on accessibility within paragraphs 3.19 to 3.22. This clearly sets out that accessibility means accessibility for non-motorised users and for people with mobility impairments.

8.4.13 With regards to decision making, the NPSNN sets out the requirement for road and rail developments:

“5.212 Schemes should be developed and options considered in the light of relevant local policies and local plans, taking into account local models where appropriate, however the scheme must be decided in accordance with the NPS except to the extent that one or more of sub-sections 104(4) to 104(8) of the Planning Act 2008 applies.”

8.4.14 A highways development impacts differently on the highway network to other developments. Additions to the national network, such as the A122 Lower Thames Crossing, add capacity and relieve strategic congestion by redistributing existing traffic and as such are likely to have very different characteristics and effects from other types of development. The Applicant sets out within the Economic Appraisal Report (Appendix D of the ComMA [[APP-526](#)]) how the transport benefits of the Project significantly outweigh the adverse impacts.

Sufficiency of the Wider Network Impacts Monitoring and Management Plan

8.4.15 The Applicant has secured a requirement to deliver a traffic monitoring programme following the opening of the new road on both the SRN and local highway network. Local impacts are part of the monitoring process and the results will be made available to support future investment decisions. National Highways’ licence (DfT, 2015) obliges the Applicant to work with local highway

authorities and as such, there are existing engagement groups, along with local highway authorities, and also industry bodies, to look at the performance of the road network. These can be seen to be operating, for example, through current engagement in Route Strategies, which will inform the next round of roads investment. If monitoring identifies opportunities to further optimise the road network, as a result of traffic growth or new third-party developments, then local authorities would be able to use this evidence to support scheme development and case-making for existing funding mechanisms and processes.

8.4.16 Interested Parties have proposed that:

- a. The Wider Network Impacts Monitoring and Management Plan [\[REP9-231\]](#) should secure provision of mitigation on the highways network following the opening of the new road, citing Requirement 7 of the Silvertown Tunnel DCO (the “Silvertown Tunnel approach”) as a precedent
- b. A Requirement should be included within the dDCO [\[REP9-107\]](#) securing funding for the A229 Blue Bell Hill Improvement Scheme being developed by Kent County Council
- c. A programme of funding for further interventions on the road network in Kent should be secured via S106 agreement

8.4.17 The Applicant has set out within the Wider Network Impacts Position Paper [\[REP6-092\]](#) an analysis of the Silvertown Tunnel approach and how the Project differs from the Silvertown Tunnel.

8.4.18 With specific regard to impacts on traffic, the provisions provided for by the Silvertown Tunnel are not dissimilar to those for the Project. The SoS decision regarding the Silvertown Tunnel identified that there are unknown factors that may arise, through:

- a. Developments that are currently insufficiently defined to meet the requirements for consideration
- b. Changes in Government policy
- c. Other factors that could, in combination with the changes to the traffic flows arising from the Silvertown Tunnel, lead to the need for further interventions on the highways network

8.4.19 This led to the SoS determining that a post-opening monitoring framework was necessary for the Silvertown Tunnel, and this is secured for the A122 Lower Thames Crossing by Requirement 14 of the dDCO [\[REP9-107\]](#).

8.4.20 The Silvertown Tunnel approach places the determination of the need for mitigation with TfL and places the decision making authority with either the SoS or the Mayor of London. While a consultation body is formed (the Silvertown Tunnel Implementation Group), this is only consulted.

8.4.21 The Applicant has demonstrated that this simply reflects the national position, whereby the SoS is the decision maker on delivery of any future interventions, through the funding decision that is made either via the Road Investment

Strategy, through direct funding of projects undertaken by the local highway authorities or TfL, or through general highways funding to those same bodies. This funding framework has been developed in a purposeful manner to allow for the prioritisation of investment across the country.

- 8.4.22 Nevertheless, the Applicant has provided a ‘without prejudice’ position that creates a group to mirror the function of the Silvertown Tunnel Implementation Group, by providing a Network Management Group. This is set out in Section 4.2 of the Wider Network Impacts Position Paper [[REP6-092](#)]. This Requirement would allow for a focussed view on the investment needs on the highway network in the Lower Thames area but would continue to rely on the SoS as the decision making authority on investments, to reflect the necessity of taking a national view and prioritisation to highways funding.
- 8.4.23 Kent County Council set out a request for a Requirement within the dDCO that would require the Applicant to fund any elements of the Outline Business Case for the A229 Blue Bell Hill Improvement Scheme that are not otherwise funded by the DfT, and to fund part or all of the delivery of the scheme in the event that the DfT did not fund it in full. Gravesham Borough Council proposed a similar Requirement, but in their drafting allowed the SoS to make a decision that the Project could open in the event that a decision was made not to fund the A229 Blue Bell Hill Improvement Scheme.
- 8.4.24 The A229 Blue Bell Hill Improvement Scheme is being developed by Kent County Council. The DfT announced in October 2023 that the Strategic Outline Business Case (SOBC) had been approved, and at ISH13 Kent County Council stated their understanding that the Outline Business Case would be, at least in part, eligible for DfT funding. The assessments set out across the application do not rely on the delivery of the A229 Blue Bell Hill Improvement Scheme to achieve any of the benefits, or for mitigation of any of the impacts, and as such the Project does not rely on the delivery of this scheme. The Applicant considers this approval of the SOBC to be a demonstration that the Government process for prioritising investment onto the highways network functions correctly and can be relied on by all parties. It would be inappropriate to make a procedural link between the funding of the Project and the A229 Blue Bell Hill Improvement Scheme in the way this proposed Requirement would seek to achieve.
- 8.4.25 Kent County Council also proposed that a package of future highways interventions be incorporated into the S106 agreements that the Applicant entered into during the Examination. The proposed package does not provide mitigation that is necessary or relied on by the Project, and as such an inclusion of this kind into the S106 would, similarly to the A229 Blue Bell Hill Improvement Scheme, bypass the existing funding framework put in place by the Government.

8.5 Construction traffic modelling

Overview

- 8.5.1 The Applicant has undertaken construction modelling and operational modelling across the Lower Thames area using the LTAM.

Purpose

- 8.5.2 The purpose of the construction modelling that has been submitted into Examination is to help refine the anticipated resource levels and to identify particular locations where the Contractors should focus their efforts to reduce the forecast impacts on the road network.
- 8.5.3 The Project's construction programme would be complex and involve works associated with both the construction of the new highways and the tunnel, and the provision of new, and diversion of, utility connections. This work would result in new, temporary vehicle movements associated with the construction works, as well as changes to existing traffic flows through the introduction of TTM across the road network.
- 8.5.4 The construction scenario represents a temporary period of time and is presented as a precautionary assessment. The assessment presented is based on the information known at the time of the application and includes a number of assumptions, such as a 20% uplift in earthworks related heavy goods vehicle (HGV) movements, no benefit of the implementation of the travel plan, and the realignment of selected shift times so that they are included in the modelled hours (whereas the Applicant has set out in the Code of Construction Practice [\[REP9-184\]](#) that they would fall outside of these times). To enable proportional assessment, the construction scenario has been rationalised to allow for it to be represented in a model, while ensuring that it provides assessments of both the transport and environmental impacts associated with the works. It has been divided into 11 phases, each containing a representative set of TTM measures and Project related construction traffic demand (worker and HGVs).

Construction phase impacts on the transport networks

- 8.5.5 The Applicant recognises that construction of the Project would have an impact on some of the following four groups of users of the transport network in the Lower Thames area:
- a. Users of the highway network due to construction works and the presence of construction traffic on the network
 - b. Passengers on parts of the public transport network
 - c. Walkers, cyclists and horse riders (WCH)
 - d. Users of the River Thames
- 8.5.6 Chapter 8 of the TA [\[REP4-150\]](#) presents:
- a. The forecast change in traffic flows
 - b. The forecast change in traffic flows as a percentage
 - c. Impacts on journey times
 - d. Impacts on rail services
 - e. Changes in bus journey times

- f. A statement that there would be no impacts on existing users of the River Thames

- 8.5.7 Whilst the assessments of the construction scenario show that there would be impacts on many of the above groups, the Applicant has a number of operational controls as set out in the oTMPfC [REP9-235] and the FCTP [REP9-233]. These would enable controls on the movement of the construction workforce and HGVs or would minimise the impact of TTM measures (the Applicant set out a worked example of this within Chapter 4 of Applicant's submissions on construction impacts and management at Asda roundabout [REP6-123]).
- 8.5.8 Should the DCO be granted, the Applicant would work with the Contractors to develop more detailed construction plans with a more refined construction plan designed to reduce the impacts on the highway network. The Applicant has secured controls on this process through the oTMPfC [REP9-235] and the FCTP [REP9-233]. Further details about the Applicant's control plan is set out in Chapter 11 of this document.
- 8.5.9 The Applicant's delivery partners will develop the construction programme further and the oTMPfC [REP9-235] states at paragraph 2.4.20 that in some instances it may be deemed appropriate that junction modelling is carried out prior to works.
- 8.5.10 The Applicant has a licensed obligation to continue to collaborate and work with local authorities and will continue to do so through the delivery of the Project, and subsequently through into operation.

Consideration of construction traffic during the examination

- 8.5.11 Interested Parties have not made detailed comments about the methodology employed by the Applicant to develop the assessment of the construction scenario, nor have they disagreed with the principle that the construction of the Project would result in adverse impacts in a number of locations across the construction phase.
- 8.5.12 Interested Parties have, however, set out concerns primarily relating to inputs into the modelling, such as the length of road closures and the impacts on WCH. The Applicant has undertaken a highly precautionary assessment of the construction scenario. Whilst this assessment has shown some impacts on some user groups, the Applicant has secured a suite of operational controls to control the movement of the construction workforce and HGVs or minimise the impact of temporary traffic management measures as set out in the oTMPfC [REP9-235] and FCTP [REP9-233].
- 8.5.13 The Applicant has been clear that the control documents, particularly the oTMPfC [REP9-235] would seek to minimise the impacts of the construction activities. The Applicant has however sought to amend the controls and its proposals where possible, for example the closure of Ockendon Road which has been reduced from 19 to a maximum of 10 months. In addition, the Applicant has as set out above, in relation to the Asda roundabout, additional information (including a worked example) as to how the control documents and the detailed design process would minimise the impacts.

- 8.5.14 Thurrock Council and PoTLL have raised concerns relating to the routing freedom that workforce traffic has been able to take within the Applicant's assessment and have suggested that the workforce should be limited to set routes. The Applicant has not applied this within the assessment as it does not consider that it would be practicable nor reasonable to restrict worker access in this way. This is because the Project's workforce will be based across the length of the Project route, and will live in a variety of areas, as set out in the Workers Accommodation Report [[APP-551](#)]. In addition, many will have a reasonable need to make use of existing leisure, education and commercial facilities and so utilise a variety of routes which would unlikely be those set routes. Such trips may also be linked trips and so the Applicant contends that it would be unreasonable and unpracticable to restrict its workforce in this manner.
- 8.5.15 In addition, Thurrock Council and PoTLL have raised concerns relating to the operation of the Asda roundabout during construction. The Applicant has set out a summary of the work undertaken at this location and its response to their concerns in Section 8.2 of this Closing Submission.

8.6 Long lasting transport benefits

Overview

- 8.6.1 The Applicant has presented a TAG compliant transport appraisal of the forecast changes to the road network as a result of the Project.
- 8.6.2 The Applicant has set out how the Project would provide alternative and faster route options for many trips, and that this would allow road users to make different decisions about their destinations and the routes they choose. As a result of this, there would be changes in the amount of traffic flowing at many locations across the road network. In many places, and notably at the Dartford Crossing, this would lead to significant beneficial impacts on both journey times and journey reliability. In some locations this change in road user decisions could lead to adverse changes.
- 8.6.3 Overall, the benefits across the road network outweigh any adverse impacts, which is reflected in both the economic benefit of the Project within each local authority area and on an aggregated basis.
- 8.6.4 It is important when considering the benefits that the Project would bring to the road network to compare the Do Minimum scenario (where the Project is not built), to the Do Something scenario (where the Project is built), in the same forecast year (so 2030, 2037, 2045 or 2051 within the Applicant's DCO application).

Support from Interested Parties in the Applicant's position regarding transport benefits

- 8.6.5 Within their local impact reports, submitted at Deadline 1, the local authorities of Kent County Council, Essex County Council and Dartford Borough Council all expressed a range of positive views about the Project and the transport benefits it would bring to those who live and work in their respective areas. The Applicant has reproduced some of their comments below
- 8.6.6 Kent County Council stated in their Local Impact Report [[REP1-241](#)]:

- a. Paragraph 8.4 *“The LTC provides relief to the restricted capacity of the existing Dartford Crossing and therefore reduces journey time delays. The effect of reduced journey time delays is reduced associated costs (value of time) for businesses and individuals, and ultimately encouraging economic growth both regionally and nationally, therefore this is a positive impact.”*
- b. Paragraph 8.5 *“The LTC in creating increased crossing capacity of the Lower Thames, results in greater journey time reliability. Whereas currently with the existing Dartford Crossing, there is variability in journey times due to capacity restrictions and the resulting delays, creating uncertainty for how long trips will take. Greater journey time reliability provided by the additional capacity of the LTC will therefore create greater confidence in the time that journeys will take. This will provide residents and businesses with a much greater range of opportunities for work, education and leisure, a positive impact.”*

8.6.7 Essex County Council stated in their Local Impact Report [[REP1-226](#)]:

- a. Page 3 *“The as proposed development would alleviate the long-standing transport problems at the Dartford Crossing, which constrain the economy, the free flow of people, goods and services through Essex.”*
- b. Page 3 *“LTC, if consented, would provide a practical alternative for people and goods to crossing the Thames in this location east of London and overcome current high levels of congestion at peak times which affects the M25 and linked highways network on both sides of the Thames.”*
- c. Page 4 *“Reduced congestion and delays and improved journey time reliability and cross river connectivity would aid the growth potential for the local economies on both sides of the River Thames, including those in Essex, by helping to form a single market with enhanced labour market, competition and efficiencies to drive up productivity. The benefits would extend across the London region by creating a greater synergy and across the country where the economy relies on road connectivity for international trade via the ports.”*

8.6.8 Dartford Borough Council stated in their Local Impact Report [[REP1-223](#)]:

- a. **Paragraph 5.7** *“The Project would not only relieve current conditions and make it easier to do business in Dartford, but also provide for the suppressed demand and open up new opportunities for growth and regeneration in the Thames Estuary. It will provide maximum economic benefit to the Borough but also several other locations in the southeast and London”*
- b. **Paragraph 5.8** *“The Project would provide an alternative to the existing crossing, particularly for journeys which can be made more directly via a*

crossing further east, such as with the Port of Dover traffic. It would free up capacity on the existing Dartford Crossing, increase the resilience of the strategic and local road network in the area, and allow residents to plan their day to day movements with certainty and allow local businesses to function normally and plan for growth, unfettered by the costs imposed by a regularly malfunctioning road network.”

- c. Paragraph 6.3 *“There is overwhelming evidence that the Proposal will have significant local and wider benefits for the residents of Dartford.”*

8.6.9 Medway Council within their Local Impact Report [[REP1-256](#)] stated:

- a. Section 8.2 *“Most areas are expected to see improvements in accessibility to jobs and workers, with the greatest improvements in Rochester, Gillingham and the Hoo Peninsula.”*

Journey time savings across the Lower Thames area

8.6.10 The Project would almost double the amount of highway capacity across the River Thames to the east of London, provide shorter routes for many journeys and provide relief to many sections of road (away from the Dartford Crossing). As such journey times for many routes would reduce as a result of the Project across the Lower Thames area.

8.6.11 Some journey times would however increase as traffic takes advantage of the new and improved journey opportunities.

8.6.12 The Applicant has set out the forecast changes to journey times across a number of routes, including within:

- a. Section 7.7 of the Transport Assessment [[REP4-148](#)]
- b. Transport Assessment Appendix B: Journey Time Changes 2030 [[REP4-154](#)]
- c. Transport Assessment Appendix C: Journey Time Changes 2045 [[REP4-156](#)]

8.6.13 These journey time forecasts show that for many journeys across the Lower Thames area, there would be a reduction in journey time, either as a result of the relief provided to existing roads (such as the A2 and A13 to the west of the Project, and the M25 between junctions 2 and 29), or where the Project enables a shorter route, such as between the Medway Towns and Basildon. This shorter routing for many trips means that even with the additional traffic that is forecast on some roads, the overall journey time would be reduced.

8.6.14 The Applicant recognises that the efficient operation of Ports, notably London Gateway and Port of Tilbury are important for the local and regional economies. Within Appendices B and C of the TA [[REP4-154](#) and [REP4-156](#)] both ports are included as an origin/destination and journey times to 11 other locations are provided. The output shows that, other than for journeys to Basildon and between the two ports, journey times are forecast to reduce in all modelled time periods.

- 8.6.15 Within comments on Written Representations (WRs) Appendix E: Ports [[REP2-050](#)], the Applicant presented a series of tables (Tables A.3 to A.7 inclusive). These demonstrated that journeys to the ports, via the routings considered by the Applicant to represent the shortest route, did indeed reduce journey times and that concerns from DP World London Gateway and PoTLL that traffic would route via the Manorway junction were not reflective of forecast journey times from the LTAM.

Improvements to the operation of the Dartford Crossing

Traffic relief

- 8.6.16 The Project will provide relief to the Dartford Crossing. At Dartford, for the modelled opening year of 2030 there is forecast to be an average 19% reduction in traffic using the crossing in the peak hours. While it is recognised that the 2045 forecasts show an increase in traffic flows across the Dartford Crossing, as would be expected, the overall reduction in traffic at the Dartford Crossing in 2045 remains up to 13% lower in the peak hours compared to without the Project.

Significant journey time savings

- 8.6.17 Traffic modelling demonstrates that there would still be significant journey time savings in 2045 – for example, a journey across the Dartford Crossing from M25 junction 2 to junction 29 in the AM peak would fall from 20.5 minutes without the Project to just over 14 minutes with the Project. Indeed, analysis on this route shows that there would be significant journey time savings in all modelled time periods and in all forecast modelled years (as set out in Table A.2 of Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)]). The journey time reliability assessment shows that reliability gains continue to be found in all of the modelled years to 2051 (and likely beyond) (as set out in the ComMA Appendix D: Economic Appraisal Package – Economic Appraisal Report [[APP-526](#)]).

Making local trips easier

- 8.6.18 The largest group of people who would choose to make journeys across the Dartford Crossing after the opening of the Project would be making journeys from the local areas north and south of the river, as demonstrated in Tables 8.50 and 8.52 of the ComMA Appendix C: Transport Forecasting Package [[APP-522](#)]. This represents a large increase in journeys for users from these local areas who currently do not choose to make the short journey across the River Thames.

Reduction in the proportion of HGVs

- 8.6.19 There would also be a reduction in the proportion of vehicles using the Dartford Crossing which are HGVs. Table 5.3 of the Traffic Forecasts Non-Technical Summary [[APP-528](#)] shows that there is forecast to be an average reduction of 31% in 2030, and 25% in 2045, in the number of HGVs across the peak hours. This would lead to changes in the operation and user experience for drivers currently using the Dartford Crossing.

Beneficial and adverse impacts

- 8.6.20 Using the outputs from the LTAM, the Applicant applied a scoring methodology to help identify locations with beneficial or adverse impacts of the Project on the road network, taking into account the existing operation and the change as a result of the Project. These are set out in Chapter 7 of the TA [\[REP4-148\]](#). Overall, the benefits on the road network outweigh the adverse impacts, although the Applicant does recognise that there will be adverse impacts in some locations as traffic takes advantage of the increased cross river capacity and for many journeys, improved journey times.
- 8.6.21 The adverse impacts on traffic flows across the road network have been assessed and considered against the policy requirements set out in the NPSNN to demonstrate compliance against planning policy. Due regard has therefore been had to such impacts. The Applicant's consideration is that none of the adverse impacts identified are unacceptable in planning policy terms. This is set out in TA Appendix F: Wider Network Impacts Management and Monitoring Policy Compliance [\[APP-535\]](#).
- 8.6.22 The Wider Network Impacts Management and Monitoring Plan [\[REP9-231\]](#) sets out the Applicant's approach to wider network impacts and is secured by Requirement 14 of the dDCO [\[REP9-107\]](#).

Economic benefits

- 8.6.23 Substantial economic benefits arise from the Project as set out in the ComMA Appendix D: Economic Appraisal Package – Economic Appraisal Report [\[APP-526\]](#). This shows that the Project would deliver economic benefits, both to the country as a whole but also to each of the assessed areas individually, including all of the local authorities, and that these continue through the period assessed.

8.7 Conclusions

- 8.7.1 Chapter 6 of the Planning Statement [\[REP9-215\]](#) paragraphs 6.5.309 to 6.5.335 and Appendix A of the Planning Statement [\[REP9-217\]](#) sets out compliance with the NPSNN, and demonstrates that the Project is in accordance with relevant policy and there is clear support in policy and guidance terms for the approach taken by the Applicant to traffic modelling.
- 8.7.2 Through the process of Examination, the Applicant has provided additional information to further explain the benefits and impacts of the Project, and where appropriate modified the proposals through the provision of additional commitments.
- 8.7.3 Although Interested Parties have put forward arguments through the Examination that the Applicant's position is non-compliant, the Applicant has provided comprehensive submissions that demonstrate that the Applicant's position is aligned with policy, and consequently the assessment of compliance provided within the Planning Statement remains unchanged.
- 8.7.4 The National Highways' licence (DfT, 2015) as a strategic roads company obliges the Applicant to work with local authorities and the dDCO and the control documents provide further security that the Applicant would, following consent, engage as appropriate to deliver this transformational road scheme.

9 Environmental and Social matters

9.1 Introduction

- 9.1.1 The chapters of the Environmental Statement (ES) [[APP-139 to APP-143](#), [REP4-116](#), and [APP-145 to APP-155](#)] (as amended by the Environmental Statement Addendum [[REP9-245](#)]), the Habitats Regulations Assessment (HRA) [[APP-487](#)] and the Health and Equalities Impact Assessment [[REP7-144](#)] set out the anticipated environmental and social impacts as a result of the Project. Proposed mitigation is identified within those documents and secured via the documents detailed in the Control Plan in Section 11. Each of the technical chapters of the ES includes an appendix which sets out the legal and policy context including how the NPSNN (Department for Transport, 2014) has been considered within the assessment. Further detail on the accordance of the environmental assessment with national policy is presented in the Planning Statement [[REP9-215](#)] and NPSNN accordance tables in Appendix A to the Planning Statement [[REP9-217](#)].
- 9.1.2 This section of the document presents each environmental topic, in the same order as they are presented in the ES before discussing the HRA and impacts on the Green Belt. Taking the DCO application as the starting point, the narrative for each topic below summarises the key matters raised during Examination and the responses of the Applicant, and confirms the Applicant's case at the end of Examination having regard to compliance with legislation and policy.

Two year construction rephasing

- 9.1.3 Prior to the Examination of the Project there was a ministerial statement (UK Parliament, 2023b) which indicated that there would be a two-year rephasing in capital funding for the Project, this was also subject of discussion at ISH1 (Item 4(c)), as reported in Section 4.3 of the Applicant's post-event submission for ISH1 [[REP1-183](#)]. In that submission, the Applicant expressed its position that the two-year rephasing in capital funding does not constitute a material change to the application for Development Consent and would not give rise to any additional likely significant effects. The draft DCO permits a period of five years to begin the development which is considered to allow a proportionate degree of flexibility around the timing of construction. The Applicant is confident that the five year period would allow sufficient time for the two-year rephasing to be worked into the programme. In response to post-hearing actions arising from Issue Specific Hearing 1, the Applicant submitted an update to the Environmental Statement (ES) Addendum at Deadline 2 [[REP2-040](#)], Appendix D of which provided an appraisal of the environmental effects arising from the Written Ministerial Statement. Paragraph D.4.3 confirmed, '*In conclusion, the appraisal has confirmed the Applicant's position that the ES as submitted, reflects a worst-case scenario and accommodates a proportionate degree for flexibility around the timing of construction, which would allow for the two-year rephasing of construction. The Applicant considers that the ES provides conclusions that remain robust for the purpose of making a decision on the Project, despite a change to the dates for construction and opening of the road to traffic*'. This position remains unchanged. At Deadline 7 the Applicant

submitted a sensitivity analysis [REP7-194] of the two-year rephasing which concluded that, after analysing the environmental implications of the updated traffic data, there would be no material change to the conclusions presented in the Environmental Statement and as reported in the Planning Statement [REP9-215].

9.2 Air Quality

Air quality assessment

- 9.2.1 The air quality assessment is reported in ES Chapter 5: Air Quality [APP-143]. The relevant policy framework is contained in paragraphs 5.6 to 5.15 of the NPSNN. Compliance with legislation and policy is outlined in ES Appendix 5.5: Air Quality Legislation and Policy [APP-349] and in the Planning Statement [REP9-215].
- 9.2.2 The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 and the Environmental Improvement Plan (2023) were published following submission of the Environmental Statement, but the Project is not expected to impact on the achievement of the associated PM_{2.5} targets, as outlined in Responses to the Examining Authority's ExQ1 Appendix C: 5. Air Quality [REP4-190].
- 9.2.3 The effects on air quality of the construction phase are not predicted to be significant due to secured mitigation. Mitigation measures are detailed in the Register of Environmental Actions and Commitments (REAC) in ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP9-184].
- 9.2.4 The effects on air quality during operation are not significant in relation to human health and the Project will not affect compliance with Limit Values. The air quality effects on designated habitats for ecology are considered to be significant in some locations and as a result a Project Air Quality Action Plan (PAQAP) has been provided in accordance with DMRB LA 105 (Highways England, 2019). The PAQAP is provided in Appendix 5.6: Project Air Quality Action Plan [APP-350]. The PAQAP identifies proposed mitigation to reduce those significant effects. Where mitigation is not possible, compensation for those residual effects in the form of habitat creation has been proposed.
- 9.2.5 The Applicant has taken on board comments through stakeholder engagement regarding changes in pollutant concentrations below Air Quality Strategy (AQS) objectives and during the Examination undertook a voluntary Air Quality Quantitative Health Impact Assessment (AQQHIA [REP3-141]) which considers all changes in concentrations as a result of the Project, regardless of whether there are exceedances of air quality thresholds. The AQQHIA confirmed the conclusion that the Project would not have a significant effect on human health (i.e. consistent with the outcome of the significance test in DMRB LA 105 in relation to the NPSNN), as the assessment demonstrated that the Project would have no measurable effect on public health.

Wider network impacts

- 9.2.6 The air quality assessment has identified two areas where the operation of the Project leads to worsenings of exceedances of the annual mean AQS objective

for nitrogen dioxide (NO₂), but this is not considered to result in significant air quality effects against guideline bands and criteria in DMRB LA 105 (Highways England, 2019). These areas are confined to the A228 and the A2 London Road (Strood) in Medway, and the Applicant has undertaken work to determine whether there are any quantifiable mitigation measures that could reduce the Project impacts in these areas. Various mitigation measures have been identified and investigated, including installation of vertical barriers, implementation of a ULEZ and speed restrictions and all the measures are considered to either be ineffective or undeliverable.

- 9.2.7 Latest air quality monitoring data from local authorities has been analysed which demonstrates that the Applicant's air quality model outputs are pessimistic where the Project has the largest impact on pollutant concentrations and there are also exceedances of the AQS objective for annual mean NO₂ (i.e. the A228). The most recently available annual mean monitoring data confirms Medway Council's view SoCG (2.1.13) [\[REP9A-040\]](#) that there is no current need for an Air Quality Management Area and that there is unlikely to be a need for one in the future as pollutant concentrations reduce, even with the Project in operation.
- 9.2.8 It should be noted that the operation of the Project also leads to improvements in air quality at receptors that are predicted to exceed the annual mean NO₂ AQS objective, specifically near the A282 Dartford Crossing, A228 Castle Way and near the M25 Holmesdale Tunnel.
- 9.2.9 In response to concerns raised by LPAs, as noted above the Applicant undertook a AQQHIA [\[REP3-141\]](#) to quantify health effects associated with the absolute change in air pollutant concentrations across the population studied as a whole. The AQQHIA concluded that the potential impacts of the Project on mortality, and respiratory and cardiovascular hospital admissions are neither measurable nor material in the context of public health.

Air quality mitigation

- 9.2.10 Mitigation measures for air quality effects during construction are outlined in the Register of Environmental Actions and Commitments (REAC) in ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [\[REP9-184\]](#).
- 9.2.11 The Project does not require mitigation for operational air quality effects for human health or compliance with Limit Values. Mitigation measures for air quality effects on designated habitats for ecology are outlined in the PAQAP, which is provided in Appendix 5.6: Project Air Quality Action Plan [\[APP-350\]](#).
- 9.2.12 Although mitigation is not required in relation to air quality effects on human health, the Environment Act 2021 introduces a new concept of 'air quality partners' (AQP) into the Local Air Quality Management framework, which would apply to National Highways. This means that if exceedances of AQS objectives (including any future AQS objectives) occurred as a result of emissions from road traffic associated with National Highways managed roads, there would be a statutory requirement for National Highways to engage and contribute action to achieve the AQS objectives. AQPs are required to assist local authorities with reasonable requests, such as information within the AQP's control and knowledge (for example by providing information on a source of air pollution)

and contribute to action plans being developed by local authorities. National Highways can be designated an Air Quality Partner as a designated relevant public authority.

- 9.2.13 There is no requirement for operational monitoring as no significant effects have been identified. In addition, given the relatively small changes in pollutant concentrations on the existing network as a result of the Project, it is not possible to robustly separate Project impacts from other influences such as meteorological effects, impacts of other development on the road network and other emission sources using monitoring data.

Consideration of Air Quality matters during Examination

- 9.2.14 During Examination the following issues were raised in relation to this topic:
- a. Air quality assessment methodology in relation to determination of likely significant effects and PM_{2.5} concentrations considered through PM₁₀ modelling was raised by Thurrock Council in their Local Impact Report [REP1-281] and SoCG [REP9A-040]; SoCG with Transport for London [REP7-114], SoCG with Gravesham Borough Council [REP6-024] and the ExA's First Written Questions [PD-029].
 - b. PM_{2.5} targets was raised by raised by Thurrock Council in their Local Impact Report [REP1-281] and SoCG [REP9A-040]; SoCG with Gravesham Borough Council [REP6-024] and the ExA's First Written Questions (ExQ1) [PD-029] and Second Written Questions [PD-040].
 - c. At Deadline 3, Thurrock Council [REP3-211] made a request for the Applicant to produce an air quality model verification zone figure to better understand the reported predicted changes in air quality within Thurrock. The ExQ1_5.1.8 [PD-029] also made a request to the Applicant for receptor IDs to be cross-referenced and for re-ordered tables within ES Appendix 5.4.
 - d. Nitrogen deposition matters are covered in Sections 9.5: Biodiversity and 9.13: HRA below.
 - e. Construction and operational monitoring was raised by Thurrock Council in their Local Impact Report [REP1-281] and SoCG [REP9A-040]; Transport for London in their Written Representation [REP1-304] and SoCG [REP7-114]; SoCG with Gravesham Borough Council [REP6-024]; and the ExA's First Written Questions (ExQ1) [PD-029].
- 9.2.15 In response the Applicant:
- a. Has provided responses to the issues raised by referring to the assessment made in ES Chapter 5: Air Quality [APP-143], supporting ES appendices, Project Air Quality Action Plan [APP-350], ES Chapter 8: Terrestrial Biodiversity [REP9-120] and REAC.

- b. Considers the air quality assessment methodology to be appropriate with responses set out in the Relevant Representations Report [REP1-180], Comments on LIRs Appendix H – Thurrock Council (Part 3 of 5) [REP2-064], SoCG with Thurrock Council [REP9A-040]; SoCG with Transport for London [REP7-114], SoCG with Gravesham Borough Council [REP6-024] and Responses to the Examining Authority's ExQ1 Appx C - 5. Air Quality [REP4-190].
- c. Considers the Project is not expected to impact on the achievement of the associated PM_{2.5} targets as outlined in Responses to the Examining Authority's ExQ1 Appx C - 5. Air Quality [REP4-190] and Responses to the Examining Authority's ExQ2 Appendix C – 5 Air Quality [REP6-109].
- d. Provided Thurrock Council with an air quality model verification zone figure at Deadline 5 within Appendix A of Applicant's Comments on IP submissions at Deadline 1 to 3 [REP5-088], and provided an amended version at Deadline 7 [REP7-187].
- e. Provided the ExA with cross-referenced and re-ordered tables at Deadline 5 in Annex A to ES Appendix 5.4 in response to ExQ1 5.1.8 [REP5-093].
- f. Considers nitrogen deposition matters in Sections 9.5: Biodiversity and 9.13: HRA.
- g. Considers the position on construction and operational monitoring to be robust with responses set out in Comments on LIRs Appendix H – Thurrock Council (Part 3 of 5) [REP2-064] and Responses to the Examining Authority's ExQ1 Appx C - 5. Air Quality [REP4-190].
- h. Amended commitments in the REAC including extending the baseline dust monitoring period from three to six months as part of AQ007 at Deadline 6 and amended AQ001 at Deadline 7 in relation to use of ultra-low sulphur fuels in plant and vehicles in response to comments raised by Thurrock Council.
- i. Has gone beyond the requirements in the DMRB LA 105 Standard to provide stakeholders with additional information in relation to the impacts of Project. This has included undertaking a AQQHIA [REP3-141] in relation to changes in pollutant concentrations below legal thresholds for human health, which was submitted at Deadline 3.

9.2.16 For this topic the only areas that are not agreed at the end of Examination are as follows:

- a. Assessment methodology in relation to determination of significance and PM_{2.5}, and operational air quality monitoring, as discussed in Thurrock Council's SoCG [REP9A-040].

- b. Assessment methodology in relation to PM_{2.5}, as discussed in Gravesham Borough Council's SoCG [[REP6-024](#)].
- c. Assessment methodology and operational air quality monitoring, as discussed in Transport for London's SoCG [[REP7-114](#)].

Topic conclusion

- 9.2.17 The output of the air quality assessment has been used to determine compliance with the NPSNN. Compliance against the policy requirements of the NPSNN is reported in paragraphs 6.5.28 to 6.5.32 of the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. It is the Applicant's position that nothing has materially changed during the course of the Examination Hearings which fundamentally alters that assessment of policy accordance.
- 9.2.18 In relation to the key tests in paragraphs 5.12 (reporting of whether the Project leads to a significant air quality impact) and 5.13 (reporting whether the Project impacts on compliance with Limit Values), the Project does lead to a significant air quality effect as a result of the impacts on designated habitats. In relation to compliance with Limit Values, the Project would neither delay compliance with Limit Values nor affect the ability of a non-compliant zone/agglomeration to become compliant.
- 9.2.19 In accordance with paragraph 5.12 of the NPSNN it is acknowledged that the SoS must give air quality considerations substantial weight where a project would lead to a significant air quality impact. The identification of proposed nitrogen deposition compensation areas with habitat creation, described in Section 9.5 Biodiversity, would provide sufficient permanent compensation for these effects.
- 9.2.20 Having regard to the air quality matters raised during Examination, the Project has demonstrated accordance with the policies relating to air quality in the NPSNN.

9.3 Cultural heritage

- 9.3.1 Cultural heritage effects arising from the Project are presented in ES Chapter 6: Cultural Heritage [[REP4-116](#)] and have been assessed in accordance with DMRB LA 106 Cultural heritage assessment (Highways England 2020), the Principles of Cultural Heritage Impact Assessment (IEMA 2021) and guidance from Historic England and the Chartered Institute for Archaeologists.
- 9.3.2 The relevant parts of the NPSNN (Department for Transport, 2014) relating to decision making and the policy tests to be applied for the historic environment (Cultural Heritage) are detailed in paragraphs 5.120 to 5.142. Chapter 6 of the Planning Statement [[REP9-215](#)] and Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)] present the Applicant's assessment of the Project's accordance with NPSNN policy in respect of cultural heritage.
- 9.3.3 The focus of the Project has been to avoid or minimise the impact on cultural heritage. However, the East of England and the South East have some of the highest densities of archaeological sites and historic buildings in England. Within the study area there are 24 scheduled monuments, 293 listed buildings,

13 conservation areas, three Registered Parks and Gardens and 1991 non-designated heritage assets of archaeological interest. Therefore, the Project has also focussed on developing robust mitigation, set out in the draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP9-197] and legally secured by Requirement 9 of the draft DCO [REP9-107].

Scheduled Monuments

- 9.3.4 Construction of the Project will result in the loss of one scheduled monument, the Orsett Cropmark Complex (SM1). Paragraph 5.131 of the NPSNN (Department for Transport, 2014) states that heritage assets are irreplaceable and harm or loss affecting any designated heritage asset should require clear and convincing justification. The paragraph goes on to explain that loss or substantial harm to a Scheduled Monument should be wholly exceptional.
- 9.3.5 Planning Statement [REP9-215] paragraphs 6.5.175 to 6.5.182 address this policy test in relation to the Orsett Cropmark Complex. Paragraph 6.5.179 demonstrates that the loss of the Scheduled Monument is unavoidable and paragraph 6.5.180 states that the lack of feasible alternatives “*represented a clear and convincing justification*” for the loss. Paragraphs 6.5.181 and 6.5.182 show that loss is necessary to deliver the substantial public benefit. In summary, the need for and benefits of the Project together with the absence of feasible alternatives provide wholly exceptional circumstances justifying the loss of the Orsett Cropmark Complex scheduled monument.
- 9.3.6 Historic England in their Written Representation [REP1-240] requested the Applicant be clear that the scheduled monument was being lost and that recording would be carried out to the appropriate standards. They also pointed out that Asset 247, which is virtually contiguous with the scheduled monument, should be regarded as a “heritage asset of archaeological interest of equivalence to a scheduled monument”.
- 9.3.7 The Applicant has included Asset 247 within REAC commitment Ref CH003 and considers it equivalent to a scheduled monument. For the same reasons as set out above in respect of Orsett Cropmark Complex scheduled monument, the loss of Asset 247 is considered to be unavoidable, and the lack of feasible alternatives to represent clear and convincing justification for the loss of a heritage asset of archaeological interest of equivalence to a scheduled monument.
- 9.3.8 The Applicant recognises the policy protection afforded to Scheduled Monuments under the NPSNN and therefore identified a specific REAC commitment Ref CH003 that ensures that the detailed Project design is undertaken in accordance with Historic England’s procedural model Management of Research Projects in the Historic Environment (MoRPHE). This is a project management guide that complements existing standards and guidance. By setting out clear milestones and objectives it will allow Historic England to carry out detailed monitoring of works on the scheduled monument. The Applicant has, as noted above, included Asset 247 within REAC commitment Ref CH003. This approach has been agreed with Historic England and is recorded in item 2.1.33 of their Statement of Common Ground [REP5-036].

Listed buildings

- 9.3.9 Three Grade II listed buildings, Nos. 1 and 2 Grays Corner Cottages (LB89), Thatched Cottage (LB58) and Murrells Cottages (LB96) would be demolished during construction to enable construction of the A13/A1089/A122 Lower Thames Crossing junction and associated link roads. This loss would represent substantial harm in planning terms. Paragraph 5.131 of the NPSNN provides that substantial harm to or loss of Grade II listed buildings should be exceptional.
- 9.3.10 In accordance with paragraph 5.131 great weight has been attached to the conservation of these heritage assets as highlighted in the Scheme Objectives for Project set out in Table 4.1 of the Planning Statement [[REP9-215](#)] which demonstrates consideration throughout the design development and route selection.
- 9.3.11 However, in accordance with paragraph 5.133 of the NPSNN, the Applicant has carefully considered alternatives before adopting the proposed route as expressed in ES Chapter 3: Assessment of Reasonable Alternatives [[APP-141](#)] and Chapter 5 (Project Evolution and Alternatives) of the Planning Statement [[REP9-215](#)]. The specific details for each listed building are set out below.
- 9.3.12 **Nos. 1 and 2 Grays Corner Cottages (LB89):**
- Paragraph 6.4.352 of ES Chapter 6: Cultural Heritage [[REP4-116](#)] describes the setting of 1 and 2 Grays Corner Cottages confirming that whilst the buildings retain some evidential, aesthetic and historic interest the cottages are located on the west side of Baker Street, south-west of the centre of Orsett, where the setting has been highly eroded and truncated by the surrounding junction between the A1089 and A13.
 - The Project alignment places the listed building within the centre of the proposed A13/A1089 junction and to provide links that meet highway safety technical standards to the existing A13/A1089 roads; there is no reasonable alternative route or design for the Project to avoid the designated asset that would meet the need and deliver the substantial public benefits of the Project.
- 9.3.13 **Thatched Cottage (LB58):**
- Paragraph 6.4.353 of ES Chapter 6: Cultural Heritage [[REP4-116](#)] provides details on the setting of Thatched Cottage and highlights the proximity of the nearby junction between the A1089 and A13.
 - The Project alignment places the listed building within an embankment of the proposed A13/A1089/A122 junction and to provide links that meet highway safety technical standards to the existing A13/A1089 roads; there is no reasonable alternative route or design for the Project to avoid the designated asset that would meet the need and deliver the substantial public benefits of the Project.

9.3.14 Murrells Cottages (LB96):

- a. Paragraph 6.4.358 of ES Chapter 6: Cultural Heritage [[REP4-116](#)] describes the setting of Murrells Cottages confirming that the buildings are located on the south side of Stanford Road, south of Orsett, although the traffic on the A13 disturbs the tranquillity of the setting, harming the building's aesthetic value.
- b. The Project is constrained by the existing A13 alignment and the position of the existing Orsett Cock junction. To accommodate the Project link roads from the Orsett Cock junction to the A13 and the A1089, the Rectory Road bridge needs to be lengthened and raised. This is to provide space for the new link road in place of the existing west boundary slip road onto the A13 which needs to be removed to provide space for the A13 west bound link roads to the A122 both north and south bound. This consequently relocates the A1013 Stanford Road southwards, to accommodate the new link road and the new bridge piers resulting in a direct conflict between Murrells Cottages and the relocated A1013 Stanford Road and new embankments to accommodate the raised road profile. The design and positioning of the Project link roads are constrained by highway safety standards to ensure there is sufficient distance and sightlines to allow weaving space for diverging and emerging traffic from the link roads and the A13.
- c. An alternative design that would have avoided the loss of Murrells Cottages was considered during the route consultation in 2016. Instead of providing free-flowing link roads from the A13 to A122, the alternative design provided a link from the A122 to the A13 via an upgraded section of Brentwood Road south of the A13 to the grade separated Orsett Cock junction. Subsequent traffic modelling for this alternative option predicted high flows of traffic onto the Orsett Cock junction which would have caused highway safety concerns and capacity issues for the link between the A122 and A13.

9.3.15 The Applicant considers that, with regard to the Project alignment and its impact on the designated assets being located within the proposed A13/A1089/A122 Lower Thames Crossing junction and to provide links that meet highway safety technical standards to the existing A13/A1089 roads; there is no reasonable alternative route or design for the Project to avoid the designated assets that would meet the need and deliver the substantial public benefits of the Project as set out in Chapter 4 (Needs and Benefits) of the Planning Statement [[REP9-215](#)]. and Application Document 7.1: Need for the Project [[APP-494](#)].

9.3.16 The Applicant considers that the public benefit of the Project outweighs the harm to the significance of the three listed buildings and therefore accords with paragraph 5.132 of the NPSNN.

9.3.17 Accordingly, it is considered that the substantial harm to the designated heritage assets is necessary to deliver the substantial public benefits, as set out in Chapter 4 (Needs and Benefits) of the Planning Statement [[REP9-215](#)] and

the Need for the Project [[APP-494](#)], that outweigh that harm and it is, therefore, considered that the Project accords with paragraph 5.133 of the NPSNN.

- 9.3.18 It is recognised that substantial harm to a Grade II listed building should be 'exceptional'. The specific circumstances of this Project, taking into account the compromising effect of the existing A13/A1089 junction layout and the constraints of the existing road infrastructure links, the mitigation measures, the overriding need for the Project and lack of feasible alternative routes, represent a clear and convincing justification which is considered to be 'exceptional' and therefore the policy test of 5.131 is satisfied.

Mitigation for the Listed Buildings

- 9.3.19 As set out in paragraph 6.6.127 of ES Chapter 6: Cultural Heritage [[REP4-116](#)] building recording (REAC Ref. CH004, REAC Ref. CH001; AMS-OWSI No.2) would take place for the three listed buildings. However, the ES concludes that the total removal of these assets would result in a permanent impact of major adverse, and a large adverse effect.
- 9.3.20 During the Examination Historic England has agreed that the appropriate mitigation for the loss of Nos. 1 and 2 Grays Corner Cottages (LB89), Thatched Cottage (LB58) and Murrells Cottage (LB96) is a Historic Buildings Record prepared to Historic England's Level 4 standard. This is secured through REAC commitment CH004. This approach has been agreed with Historic England and is recorded in item 2.1.42 (Nos. 1 and 2 Grays Corner Cottages (LB89)) item 2.1.22 (Thatched Cottage (LB58)) and item 2.1.43 (Murrells Cottage (LB96)) of their Statement of Common Ground [[REP5-036](#)].
- 9.3.21 In their first round of written questions the Examining Authority also asked whether the Applicant had considered relocating the three listed buildings (ExQ1_Q12.1.13 to ExQ1_Q12.1.15). The Applicant responded in the Responses to ExQ1 Appendix H [[REP4-200](#)] that, while this was not the required mitigation for the loss of the listed buildings, they had assessed the initial potential. Of the three listed buildings only one, the Thatched Cottage (LB58) was considered a likely candidate for relocation. Such relocation would be dependent on finding a suitable new site and the condition of the building. Relocation would also remove the building from its original setting and any contribution to the value of the building made by its setting would be lost.
- 9.3.22 The Applicant has worked with Historic England and Essex Place Services to identify a selection of sites which would consider taking the property. However as Historic England point out in their response to the Examining Authority's third round of questions [[REP7-197](#)] any relocation would be "*subject to the findings of the investigation proposed in the ES and secured through the DCO*". In other words, the true suitability of the building will only become apparent as it is dismantled.

The potential impact of vibration on designated and non-designated heritage assets

- 9.3.23 The Examining Authority's second round of written questions [[PD-040](#)] Q9.1.5 asked the local authorities whether the controls associated with the impact of vibration on heritage assets was sufficient. The Applicant was requested to provide a list of those heritage assets with potential to be affected. The

Applicant sets out these heritage assets within the draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (dAMS-OWSI) [REP9-197] and has committed to carry out a condition survey prior to any activities likely to cause an impact from vibration. Historic England has confirmed that such a survey would be an “*appropriate way of providing a baseline assessment and thereby managing potential impacts of vibration*” in their response to the Examining Authority’s third round of questions [REP9-197].

Non-designated heritage assets

- 9.3.24 As set out above, Asset 247 is the only non-designated asset of archaeological interest that is demonstrably of equivalent significance to Scheduled Monuments and is therefore considered as set out above against the tests for designated assets.
- 9.3.25 In accordance with NPSNN paragraph 5.125, the impacts on other non-designated assets have been considered and the value, impact and effect on the Project has been agreed for most of the 2,324 heritage assets assessed within the application.
- 9.3.26 Historic England, in their Written Representation [REP1-240], requested that the Applicant review the value assigned to four historic Buildings in Thong. The non-designated Homes for Heroes were assessed as being low value in line with guidance. Historic England suggested the value could be medium and that the Applicant had not considered their group value.
- 9.3.27 The Applicant considers the assessment of value to be accurate and explained that the buildings were within the Thong Conservation Area that had been assessed as medium value. Historic England has confirmed that the low value has now been agreed and is recorded in item 2.1.45 of their Statement of Common Ground [REP5-036].
- 9.3.28 Historic England, in their Written Representation [REP1-240], requested that the Applicant considered the group value of a small number of non-designated historic buildings on the North Ockendon Road. These seven estate-style buildings have all been assessed as low value, but Historic England suggested the Applicant considered them as a group and also include the additional buildings, Nos 1 and 2 Cherry Orchard Cottages.
- 9.3.29 The Applicant has assessed Nos 1 and 2 Cherry Orchard Cottages as being low value and part of the same group of buildings. The Applicant revised the proposed mitigation for the loss of these buildings to include documentary research into their development as a group, which is presented in the dAMS-OWSI [REP9-197] and legally secured by Requirement 9 of the draft DCO [REP9-107]. This approach has been agreed with Historic England and is recorded in item 2.1.44 of their Statement of Common Ground [REP5-036].
- 9.3.30 Gravesham Borough Council Local Impact Report Appendix 6 Cultural Heritage Assessment [REP1-232] raised concerns that cultural heritage assets have been undervalued. These focussed on the former Cobham Hall/Darnley Estate, the Homes for Heroes and the Thong Conservation Area.
- 9.3.31 Gravesham Borough Council prepared a very valuable history of the development of the Cobham Hall/Darnley Estate and explained that in their

view the Applicant had underestimated the impact of the Project on the Cultural Heritage of the area.

- 9.3.32 Paragraph 4.49 of GBC’s Local Impact Report Appendix 6 Cultural Heritage Assessment [REP1-232] concluded “*Whilst there has been a cumulative environmental degradation over time which has been harmful to the way in which cultural heritage in this area is seen, understood and appreciated, the historic connection between the areas to the north and south of the A2 is still tangible and the requirement under national policy that applicants should look for opportunities for new development within Conservation Areas and within the setting of heritage assets to enhance or better reveal their significance applies.*”
- 9.3.33 The Applicant does not consider the cultural heritage of the historic landscape in Gravesham has been undervalued or the impact of the Project underestimated. The landscape has experienced much change and the main area of the Project, as it crosses the former Cobham Hall/Darnley Estate, has over the past 100 years been in part, an airfield, a golf course and is now dominated by modern prairie style fields with no surviving historic features. The impact on this landscape has been assessed as not significant. However, the permanent impact on Thong Conservation Area through changes to its setting is described as Moderate Adverse which is a significant effect.
- 9.3.34 However, the Applicant considers that the mitigation presented in the dAMS-OWSI [REP9-197] will ensure the recording of the setting of the Homes for Heroes and further documentary research into the former Cobham Hall/Darnley Estate. This is presented in the dAMS-OWSI.

Cultural Heritage mitigation

- 9.3.35 The Applicant has been engaged in consultation with Kent County Council, Essex Place Services and the Greater London Archaeological Advisory Service as they formally advise the local planning authorities across the Project on archaeological and heritage matters. Historic England has provided additional advice on designated assets and archaeological science.
- 9.3.36 The dAMS-OWSI [REP9-197] has been refined throughout the Examination through further consultation with Kent County Council, Essex Place Services, the Greater London Archaeological Advisory Service and Historic England.
- 9.3.37 The dAMS-OWSI presents 330 mitigation sites across the Project covering archaeological remains, historic buildings and historic landscapes. The location of these and the type of mitigation have been agreed with Kent County Council, Essex Place Services, the Greater London Archaeological Advisory Service and Historic England.
- 9.3.38 The dAMS-OWSI also includes an Outline Palaeolithic Written Scheme of Investigation. This is an important and very specialised area looking at those Pleistocene deposits with the potential to hold information and material from our distant past. This was specifically requested by the London Borough of Havering at ISH12. Deadline 8 Submission - Written Summary of oral comments made at Issue Specific Hearing 12 and 14 [REP8-146].

Consideration of Cultural Heritage matters during Examination

- 9.3.39 During Examination the following issues were raised in relation to this topic:

- a. Asset 247 to be considered as being of equivalent value to a scheduled monument
- b. The value assigned to the non-designated Homes for Heroes buildings in Thong Conservation Area and the historic landscape of Gravesham
- c. The value assigned to the group of non-designated historic buildings on North Ockendon Road and Nos 1 and 2 Cherry Orchard Cottages
- d. The potential impact of vibration on historic buildings
- e. The potential for relocation of listed buildings, Palaeolithic archaeology and the need for further investigation

9.3.40 In response the Applicant:

- a. Agreed with the submission by Historic England regarding the need to treat Asset 247 as equivalent value to a scheduled monument and updated the dAMS-OWSI [[REP9-197](#)] and REAC CH003 accordingly.
- b. Considers the assessment of value and impact to be appropriate and will ensure that the mitigation proposed captures the current significance of the setting of these assets before it is altered.
- c. Considers the assessment of value and impact to be appropriate and will ensure that the mitigation proposed captures the relationship between each asset prior to its loss. The Applicant agrees that Nos 1 and 2 Cherry Orchard Cottages should be included within the scope of the mitigation proposals.
- d. Will ensure that a condition survey of any heritage asset with the potential to be impacted by vibration is carried out prior to those works taking place.
- e. Considers that recording is the appropriate mitigation for the loss of the three listed buildings but will continue to work with Historic England, Essex Place Services and others to investigate the capacity for the Thatched Cottage to be relocated.
- f. Has presented an Outline Palaeolithic Written Scheme of Investigation within the dAMS-OWSI [[REP9-197](#)].

9.3.41 For this topic the only area that is unlikely to be agreed by end of Examination is the following:

- a. Gravesham Borough Council may still consider the impact of the Project on cultural heritage matters has been underestimated. The Applicant disagrees as set out in paragraph 9.3.33 and considers that the mitigation set out in paragraph 9.3.34 is sufficient.

Topic Conclusion

- 9.3.42 The cultural heritage assessment in ES Chapter 6: Cultural Heritage [[REP4-116](#)] has been used to determine compliance with the NPSNN. Compliance with the NPSNN is reported in ES Appendix 6.17: Cultural Heritage Legislation and Policy [[APP-375](#)] and summarised in paragraphs 6.5.222 to 6.5.225 of the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. It is the Applicant's position that nothing has materially changed during the course of the Examination Hearings which fundamentally alters that assessment of policy accordance.
- 9.3.43 In accordance with paragraph 5.131 it is acknowledged that the Secretary of State must give great weight to the conservation of heritage assets, and that substantial harm to the Grade II listed buildings should be exceptional and substantial harm to the scheduled monument should be wholly exceptional. The Applicant has demonstrated that the substantial harm is necessary in order to deliver substantial public benefits that outweigh that harm.
- 9.3.44 Having regard to the cultural heritage matters raised during Examination, the Project would accord with the policies relating to the historic environment (cultural heritage) in the NPSNN.

9.4 Landscape and visual

- 9.4.1 Landscape and visual effects arising from the Project are presented in ES Chapter 7: Landscape and Visual [[REP9-118](#)] and have been assessed in accordance with DMRB LA 107 Landscape and Visual Effects (Highways England, 2020), also having regard to the Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment, 2013).
- 9.4.2 The relevant parts of the NPSNN (Department for Transport, 2014) relating to decision making and the policy tests to be applied for landscape are paragraphs 5.144 to 5.161. The Project response to these paragraphs of the NPSNN has been presented in ES Appendix 7.14: Landscape and Visual Legislation and Policy [[APP-389](#)].
- 9.4.3 During the Examination, several landscape and visual related matters were raised by Interested Parties and the Examining Authority, as noted below.

Effects on Kent Downs AONB

M2/A2 corridor

- 9.4.4 Representations were received from Interested Parties during the Examination process regarding the M2/A2 corridor within the Kent Downs AONB. These were largely related to the loss of vegetation within the central reservation of the A2 and between the HS1 railway line and A2 corridors, which together with the proposed road widening were said to result in increased physical severance between the two parts of the Kent Downs AONB to the north and south of the A2 corridor. In addition, Interested Parties considered that vegetation loss would result in increased urbanisation of the A2 corridor and increased perception of elements such as highway infrastructure. It is acknowledged that vegetation loss and the resulting increased perception of severance, urbanisation and highway infrastructure would result in significant adverse

residual effects within the Kent Downs AONB, as noted in ES Appendix 7.9: Schedule of Landscape Effects [REP9-201] for the West Kent Downs (sub area Shorne) Local Landscape Character Area (LLCA) and the overarching West Kent Downs Landscape Character Area (LCA) 1A.

- 9.4.5 The increased perception of severance, urbanisation and highway infrastructure would, however, be principally limited to the M2/A2 corridor and the adjoining realigned Darnley Lodge Lane between Thong Lane green bridge south and the Halfpence Lane roundabout. Retained woodland within Shorne Woods Country Park to the north and within Ashenbank Wood and Cobham Hall Registered Park and Garden to south would reduce the perception of severance, urbanisation and highway infrastructure within the wider AONB.
- 9.4.6 The two proposed green bridges (Brewers Road green bridge and Thong Lane green bridge south) would help to reduce the effect of physical and visual severance resulting from the widened A2 corridor by creating new green links connecting the northern and southern parts of the Kent Downs AONB. The proposed planting on the green bridges would help screen views of the widened A2 corridor for users of the bridge, thereby also helping to reduce the perception of severance. For details of discussions held during the Examination with regard to the design of green bridges, refer to the Applicant's Deadline 4 post-Issue Specific Hearing 6 submission [REP4-182] and Deadline 8 post-Issue Specific Hearing 11 submission [REP8-110].
- 9.4.7 Proposed native tree and shrub planting alongside the widened A2 corridor would reinstate some of the existing planting removed during construction, helping to restore the enclosed character of the highway corridor. An example can be seen in the photomontage at Representative Viewpoint S-05a within ES Figure 7.19 Photomontages - Winter Year 1 and Summer Year 15 (1 of 4) [REP9-160]. The overall amount of vegetation along the A2 corridor would reduce, which is reflected in the assessment of significant adverse residual effects on the West Kent Downs (sub area Shorne) LLCA and the overarching West Kent Downs LCA 1A. However, the characteristic wooded enclosure would be maintained along the highway corridor. In addition, the green bridges would help to reduce the perception of landscape severance resulting from the widened road corridor. Effects at design year (summer) within the West Kent Downs (sub area Shorne) LLCA and the overarching West Kent Downs LCA 1A are therefore considered to reduce compared to those assessed 15 years earlier at the opening year (winter) in ES Appendix 7.9.
- 9.4.8 In terms of the potential for further mitigation along the A2 corridor to reduce landscape and visual effects, the loss of the central reservation vegetation allows a greater amount of woodland, including ancient woodland, to be retained along the edges of the A2 corridor. Proposals have therefore not been made to provide replacement planting within the central reservation. Replacement planting along the edges of the A2 corridor has already been maximised, having regard to constraints related to utility easements and planting in proximity to road carriageways. The use of visual and acoustic barriers along the A2 corridor to provide additional screening and help reduce changes in tranquillity have been discounted, as a request was made by Natural England and Kent Downs AONB Unit to remove an acoustic barrier along Park Pale, proposed to be constructed from or faced with materials appropriate to the context, due to concerns over its potential urbanising effect.

9.4.9 Significant adverse residual effects would remain at design year in the Kent Downs AONB, within the West Kent Downs (sub area Shorne) LLCA and the overarching West Kent Downs LCA 1A, and from Representative Viewpoints S-04, S-05, S-05a, S-11, S-17 and S-18. In accordance with paragraphs 5.151 to 5.153 of the NPSNN, these significant residual effects need to be balanced against other relevant factors. This is discussed further in the Planning Statement: Appendix F [REP9-225], which concludes that ‘*exceptional circumstances*’ exist for the development of the Project, there are ‘*compelling reasons*’ for the Project and the Project ‘*would be carried out to a high environmental standard*’.

Local Landscape Character Area boundaries

9.4.10 Representations were received from Interested Parties throughout the Examination process regarding the difference in the LLCA boundary shown on ES Figure 7.2: Local Landscape Character Areas [APP-198] between the West Kent Downs (sub area Cobham) and West Kent Downs (sub area Shorne) LLCAs compared to that shown on the location map on page 13 of the Kent Downs AONB Landscape Character Assessment Update 2020 (Kent Downs AONB Unit, 2023). The LLCA boundary on ES Figure 7.2 largely follows the southern edge of the HS1 corridor, whereas the published boundary follows the A2 corridor.

9.4.11 The Applicant confirmed the approach to determining the LLCA boundary in its Deadline 2 responses [REP2-046 and REP2-058], Deadline 8 submission on Issue Specific Hearing 11 [REP8-110] and Deadline 9 response to Interested Parties’ submissions [REP9-276]. In brief, the Applicant reviewed existing landscape character, informed by field survey work, and concluded that the HS1 corridor and associated planting strongly define the northern extent of the West Kent Downs (sub area Cobham) LLCA, segregating the character area from the A2 corridor to the north.

9.4.12 In its Deadline 9 response to Interested Parties’ submissions [REP9-276], the Applicant noted the following guidance in An Approach to Landscape Character Assessment (Natural England, 2014) in relation to landscape character area boundaries:

‘...boundaries are rarely precise and generally represent zones of transition...Detailed, district and local assessments often link boundaries to specific features in the landscape, e.g. @ 1:25,000 or 1:10,000 scale, but even at this scale the boundary line may mark a zone of transition.

Mapped boundaries may suggest that there is a sharp change from one landscape to another, generally however, on site it can be seen that a boundary line represents a zone of transition from one landscape to another - character rarely changes abruptly’.

9.4.13 The Gravesham Landscape Character Assessment (Gravesham Borough Council, 2009) which describes the geographical area of ‘Shorne Woodlands’ (the Gravesham landscape character area corresponding to the Kent Downs AONB Unit Local Landscape Character Area of the West Kent Downs sub-area Shorne), states at page 27:

‘Shorne Woodlands is located to the south east of Gravesend. **The combined corridor of the Channel Tunnel Rail Link and the A2 form the**

southern boundary, with the A289 forming the boundary to the east.’
(Applicant’s emphasis).

- 9.4.14 The Kent Downs AONB Landscape Character Assessment Update 2020 description for the West Kent Downs (sub area Cobham) LLCA on page 18 does not mention the A2 or HS1 corridors. The description for the West Kent Downs (sub area Shorne) LLCA notes on page 19 ‘*There are few roads within the area, although the busy A2 runs along its southern boundary*’.
- 9.4.15 Gravesham Borough Council has further contested the use of the revised boundary in their Deadline 9 response [[REP9-281](#)] to the Applicant’s submissions on Issue Specific Hearing 11 [[REP8-110](#)], stating that the central reservation planting forms a strong landscape boundary. As stated in the Applicant’s submissions on Issue Specific Hearing 11, it was not only the strong landscape boundary of the HS1 corridor that informed the revised LLCA boundary, but also that the ‘*A2 and HS1 corridors were largely obscured [from the sub area Cobham LLCA] by woodland and that the transport infrastructure corridor was considered to be separate from the LLCA*’. The transport infrastructure corridor is considered to relate more to the adjoining sub area Shorne LLCA to the north, despite the central reservation tree belt which only extends through part of the LLCA.
- 9.4.16 The Applicant considers that the approach undertaken for the identification of LLCA boundaries is in line with best practice guidance and aligns with the descriptions in published landscape character assessments, noting the difficulty of determining landscape character area boundaries from the published landscape character assessments due to the small-scale mapping and noting the Natural England guidance that there is generally a zone of transition from one landscape to another (Refer to Applicant’s Deadline 9 response to Interested Parties’ submissions [[REP9-276](#)]).
- 9.4.17 As stated in its Issue Specific Hearing 11 submission [[REP8-110](#)], the Applicant also considers that effects on the overarching West Kent Downs LCA 1A would not change when using the published landscape character area boundary in the Kent Downs AONB Landscape Character Assessment Update 2020. Notwithstanding, the exact location of the boundary between LLCA sub areas in the combined West Kent Downs Landscape Character Area 1A, the effects of the Project on the landscape character of the Kent Downs AONB have been fully assessed in ES Appendix 7.9. This includes the loss of vegetation within the central reservation and along the A2 corridor.
- 9.4.18 In whichever sub area LLCA the Project elements between the eastbound carriageway of the A2 and HS1 are deemed to lie, the effects of the Project on the West Kent Downs (sub area Cobham) LLCA would not extend south of the HS1 corridor, except for a very small area adjacent to Brewers Road green bridge embankment and a limited location along Footpath KT/NS179 bordering HS1 to the south.

Land east of Brewers Wood

- 9.4.19 Representations were received from Interested Parties throughout the Examination process regarding ancient woodland compensation planting in the land east of Brewers Wood, to the north of Park Pale and potential adverse effects on landscape character and views from Representative Viewpoint S-03.

- 9.4.20 Paragraph 5.3.4 of the outline LEMP [REP9-207] sets out management requirements of relevance to land east of Brewers Wood as follows:
- a. *'to provide woodland linking Shorne Woods SSSI with Great Crabbles Wood SSSI...*
 - b. *to provide woodland for screening of the Project route whilst retaining key views from the upper slopes of new woodland across to the Darnley Mausoleum*
 - c. *to establish open rides and glades along utility diversion routes and along the proposed footpath routes for public access*
 - d. *to provide a structurally diverse and graduated woodland edge to the rides'*.
- 9.4.21 In line with the management requirements stated above, the photomontage from Representative Viewpoint S-03 submitted in ES Figure 7.19 [REP9-160] illustrates proposed woodland areas bordered by a graduated woodland edge, an open ride along footpath NS161 and the retention of views towards Darnley Mausoleum and woodland within Cobham Hall Registered Park and Garden.
- 9.4.22 The LE8.2 Ancient Woodland Compensation Planting typology shown on ES Figure 2.4 Environmental Masterplan (Sections 1 and 1A) [REP9-130] is a broad hatch type denoting where ancient woodland is located. The LE8.2 hatch is offset from existing mature trees to create a series of glades. However, as stated in Clause S1.08 of the Design Principles [REP9-227], *'The design shall be developed through collaboration and engagement with Shorne Woods Country Park, Natural England, Kent Downs AONB and relevant local stakeholders...'*
- 9.4.23 Paragraph 8.24.1 of the outline LEMP [REP9-207] sets out the overarching aims for the proposed LE8.2 Ancient Woodland Compensation Planting typology, advising that *'This typology builds on that for woodland (LE2.1 in Section 8.5), aiming to develop broad-leaved native species woodland which develops into the NVC communities of adjacent woodland blocks...'* The outline measure of success for LE2.1 Woodland set out in paragraph 8.50.10 of the outline LEMP [REP9-207] is for *'Temporary open space recorded across 21% to 40% of the woodland'*. The overarching aims and outline measure of success for the proposed ancient woodland compensation planting is therefore to achieve a minimum of 60% woodland cover. As such, the Applicant considers that sufficient scope exists to maintain a degree of openness, as sought by Kent Downs AONB Unit and Natural England.
- 9.4.24 At Deadline 9, Natural England [REP9-291] commented that individual Project elements had not been assessed, specifically in relation to the ancient woodland compensation planting north of Park Pale. The Applicant confirms that all relevant Project elements, including compensation planting plots, have been assessed; however, they have been considered as a whole rather than as separate Project elements. As stated in the Applicant's response to ExQ3 12.2.1 [REP8-115], this is in accordance with DMRB LA 107 Landscape and Visual Effects. Changes in individual landscape features and elements as a result of individual Project elements have been specifically described in the

commentaries in ES Appendix 7.9 [REP9-201]. For example, page 104 of ES Appendix 7.9 describes changes in the West Kent Downs (sub area Shorne) LLCA, including changes in land use type, vegetation, severance and tranquillity, specifically noting the change in land use as a result of the ancient woodland compensation planting. Similarly, ES Appendix 7.10 [REP9-203] assesses changes in views based on all relevant Project elements, including compensation planting plots. The ancient woodland compensation planting east of Brewers Wood is specifically mentioned on page 76, in relation to effects from Representative Viewpoint S-03.

- 9.4.25 Despite the positive contribution that this small part of the LLCA makes to the AONB, the existing landscape and views east of Brewers Wood and north of Park Pale are influenced by some detracting features including buildings at Harlex Haulage and infrastructure along the A2 and HS1 corridors. In the summer months, vegetation softens the appearance of built elements, however, these detracting elements are still evident, especially in winter.
- 9.4.26 Once planting has established in the ancient woodland compensation site, it would help screen existing buildings at Harlex Haulage and infrastructure along the A2 and HS1 corridors, thereby reducing the perception of these features in the surrounding landscape. In addition, long-range views would also be maintained to the Kent Downs AONB south of the A2 corridor, helping to limit the perception of increased severance between the north and south parts of the AONB resulting from road widening.
- 9.4.27 The ancient woodland compensation site is located within the West Kent Downs (sub area Shorne) LLCA, with residual effects assessed in ES Appendix 7.9: Schedule of Landscape Effects [REP9-201] at design year (summer) as moderate adverse. As stated in ES Appendix 7.9, a moderate adverse landscape effect is anticipated to remain due to the permanent reduction in vegetation along the A2 corridor, rather than the establishment of planting in the ancient woodland compensation site. Although the ancient woodland compensation planting would result in the landscape east of Brewers Wood and north of Park Pale being less open in character, the management requirements stated above from the outline LEMP [REP9-207] would ensure the proposed planting is in keeping with local landscape character as far as reasonably practicable.
- 9.4.28 Furthermore, the greater enclosure created in the landscape by the ancient woodland compensation planting is considered to align with the key characteristics of the West Kent Downs (sub area Shorne) LLCA stated in ES Appendix 7.9 (in column 1 on page 103), which were summarised from the description of the Shorne Local Character Area on page 19 of the Kent Downs AONB Landscape Character Assessment Update 2020 (Kent Downs AONB Unit, 2023). Natural England has contested this in their Deadline 9 comments on the Applicant's ExQ3 12.2.1 response [REP9-291], stating that the Landscape Management Recommendations on page 25 of the Kent Downs AONB Landscape Character Assessment Update 2020 note the intent to '*Protect the extent of woodland and shaws, and the small-scale pastures and enclosures*'. However, these Landscape Management Recommendations are for the West Kent Downs area as a whole and '*smaller scale field patterns*', '*small irregular pastures*', '*pastures*' and '*wood pasture*' are only mentioned in the landscape character area descriptions for the Kingsdown, Luddesdown and

Cobham sub areas. The description for the Shorne sub area focuses on the wooded character of the area. The Applicant's response to ExQ3 12.2.1 [REP8-115] noted that the landscape east of Brewers Wood has changed over time from being predominantly wooded to the informal parkland visible today.

- 9.4.29 Visual effects from Representative Viewpoint S-03 were assessed as moderate beneficial in ES Appendix 7.10: Schedule of Visual Effects [REP9-203] at design year (summer), on account of a perceptible minor beneficial change in views from this very high sensitivity viewpoint.
- 9.4.30 The Applicant therefore considers that, subject to sensitive detailed landscape design, the proposed ancient woodland compensation site east of Brewers Wood to the north of Park Pale would be appropriate in terms of local landscape character.

Localised effects

- 9.4.31 Issue Specific Hearing 11 agenda item 3a.i sought comments from stakeholders on whether they considered the adverse landscape effects on the Kent Downs AONB to be localised or whether there would be an adverse effect on the character and integrity of the AONB overall.
- 9.4.32 The Applicant considers that effects on the Kent Downs AONB would be localised during construction and operation. This is because there are extensive areas of woodland to the north and south of the M2/A2 corridor within Shorne Woods Country Park to the north and Ashenbank Wood and Cobham Hall Registered Park and Garden to the south. Young, establishing woodland is also present within Jeskyns Community Woodland to the south. These woodland areas would prevent the perception of the Project within the wider AONB, during construction and operation. This is discussed in ES Appendix 7.9: Schedule of Landscape Effects [REP9-201] for the West Kent Downs (sub area Cobham) Local Landscape Character Area (LLCA) and the West Kent Downs (sub area Shorne) LLCA, with the special qualities of the Kent Downs AONB discussed for the overarching West Kent Downs Landscape Character Area (LCA) 1A. Although significant effects have been assessed within the Kent Downs AONB, these effects would be limited to the M2/A2 corridor and the western edge of the Kent Downs AONB.
- 9.4.33 ES Appendix 7.11: Traffic and Noise Effects on the Kent Downs Area of Outstanding Natural Beauty [REP1-162] considers tranquillity within the wider Kent Downs AONB beyond the M2/A2 corridor. The assessment concludes that in some localised areas within the wider AONB, there would be a reduction in tranquillity during construction and/or operation as a result of increases in existing noise and/or visual disturbance. However, there would also be other localised areas of increased tranquillity due to predicted reductions in traffic flows.
- 9.4.34 At Deadline 9, the Kent Downs AONB Unit [REP9-287] commented that they did not agree effects would be localised and therefore result in a reduced significance of effect, stating that the Project would affect 'a length of approximately 2.5km of land within the AONB'. In this respect, the Applicant clarified that the term 'localised' is intended to refer to the fact that effects on the landscape character and visual amenity of the AONB would be largely confined to the immediate vicinity of the existing M2/A2 road corridor. The

effects would therefore be localised along an approximately 2.5km length of existing highway corridor that currently influences existing landscape character. The Project would therefore only affect the northern margin of the West Kent Downs (sub area Cobham) LLCA and the southern margin of the West Kent Downs (sub area Shorne) LLCA.

- 9.4.35 In conclusion, the Applicant does not consider that there would be a significant adverse effect on the landscape character and integrity of the wider Kent Downs AONB or on visual amenity within the wider Kent Downs AONB, due to the localised nature of effects arising from the Project during construction and operation.

The Levelling-up and Regeneration Act 2023 (LURA) – section 245 (5) & (6)(a)

- 9.4.36 During the course of the Examination LURA was enacted. Section 245 (5) & (6)(a) of LURA, will amend the Countryside and Rights of Way Act 2000 (CROW) in respect of the “general duty” imposed on Public Bodies dealing with functions in an AONB. Commentary on the effect of this for the development and the assessments which have been submitted was requested by ExA and responded to in Annex A to Post-event submissions, including written submissions of oral comments, for ISH11 [\[REP8-110\]](#) and in response to interested party submissions at Deadline 9 and 9A.
- 9.4.37 The Applicant’s conclusion is that paragraphs 5.130 to 5.153 of the NPSNN – which must be read and applied in their totality, not as individual components – have a combined effect and outcome that is consistent with the LURA amendment to section 85 of CROW. It follows that, in the Applicant’s view, the LURA amendment has no material effect on the existing assessments contained in the Environmental Statement and Planning Statement [\[REP9-215\]](#).
- 9.4.38 The Applicant has noted the comments made by Kent Downs AONB on this matter [\[REP9-287\]](#) and does not consider they affect the force of the Applicant’s arguments made in its Deadline 8 submission [\[REP8-110\]](#). The Applicant has provided further response to Kent Downs AONB on this issue in its Deadline 10 submission. **[Document Reference: 9.216 Applicant’s comments on Interested Parties’ submissions at Deadlines 9 and 9A].**

M2/A2/A122 Lower Thames Crossing junction

- 9.4.39 Representations were received from Interested Parties throughout the Examination process regarding the M2/A2/A122 Lower Thames Crossing junction and effects on the setting of the Kent Downs AONB and views of local residents.
- 9.4.40 Extensive woodland planting is proposed at the M2/A2/A122 Lower Thames Crossing junction, supplemented by ancient woodland compensation planting along the eastern edge of Gravesend and replacement planting east of Claylane Wood and a landscaped false cutting on the north-eastern edge of the junction.
- 9.4.41 By the design year, extensive woodland planting would help to integrate the M2/A2/A122 Lower Thames Crossing junction into the setting of the Kent Downs AONB, in keeping with the densely wooded character of the adjoining Shorne Woods Country Park within the AONB to the east and establishing

wooded character of Jeskyns Community Woodland to the south. There are few locations within the AONB with views towards the proposed junction due to the presence of woodland at Shorne Woods Country Park, Ashenbank Wood and Jeskyns Community Woodland. Within the AONB, the M2/A2/A122 Lower Thames Crossing junction would be mainly visible from the western edge of the AONB and from elevated areas such as at Randall Heath, although views would be glimpsed in nature due to intervening vegetation and the proposed false cutting and associated woodland at the north-east of the junction.

- 9.4.42 Views for Residents in Thong village would be similarly screened by the proposed false cutting and associated woodland at the north-east of the M2/A2/A122 Lower Thames Crossing junction, as noted in the commentary for Representative Viewpoint S-25 in ES Appendix 7.10: Schedule of Visual Effects [REP9-203]. A moderate adverse effect would remain on views from the eastern edge of Gravesend due to the presence of the M2/A2/A122 Lower Thames Crossing junction, as stated for Representative Viewpoint S-28 in ES Appendix 7.10. However, ancient woodland compensation planting adjoining the eastern edge of Gravesend would provide greater visual screening for residents compared to the worst-case location assessed at Representative Viewpoint S-28.
- 9.4.43 Paragraph 5.154 of the NPSNN discusses development outside of nationally designated areas, such as AONBs, which might affect them. The Applicant considers that, with the extensive mitigation proposed at the M2/A2/A122 Lower Thames Crossing junction and due to the limited locations where the junction is visible from the AONB, effects on the setting of the AONB would be limited. Planning Statement: Appendix F [REP9-225] discusses this further in terms of the AONB designation.
- 9.4.44 Paragraph 5.158 of the NPSNN discusses visual impact. The Applicant considers that the combination of extensive mitigation proposed at the M2/A2/A122 Lower Thames Crossing junction, ancient woodland compensation planting along the eastern edge of Gravesend and replacement planting east of Claylane Wood would reduce effects on most residents to non-significant. Where significant effects remain, these will need to be balanced with the benefits of the development. This is discussed further in the Planning Statement: Appendix A [REP9-217], which concludes that '*the overriding need for the project outweighs the significant residual effects*'.

Landscape and visual impact assessment

- 9.4.45 Representations were received from Interested Parties throughout the Examination process regarding the differences in the landscape and visual impact assessment in the ES submitted as part of the DCO Application withdrawn in 2020 and that re-submitted in 2022. Detailed responses have been provided during the Examination [REP4-200, REP6-115 and REP8-110], which stated that the differences were a result of a thorough review of the ES as a whole in conjunction with the revised Project design and relate to a re-evaluation of either sensitivity, magnitude of effect or significance of effect, or to a combination of two or more of these assessment steps. The detailed responses confirmed that the Applicant stands by the landscape and visual impact assessment in ES Chapter 7 [REP9-118] and that effects, including those within the Kent Downs AONB, have not been underassessed.

- 9.4.46 During the Examination, the need for a small number of updates to the visual impact assessment in ES Appendix 7.10 [REP9-203] was identified by the Applicant and reported in ES Addendum 1 [REP1-181], ES Addendum 6 [REP6-054] and ES Addendum 7 [REP7-154]. The updates included the addition of seven visual receptors, the change in the visual sensitivity of Tilbury Fort at Representative Viewpoint N-01 and Coalhouse Fort at Representative Viewpoint N-05 from high to very high, and an update to the significance of effect level at Representative Viewpoint S-03 in opening year (winter) from slight adverse to large adverse.
- 9.4.47 Following submission of the additional photomontage within the Kent Downs AONB at Representative Viewpoint S-03 in Figure 7.19 [REP9-160], a review of the visual impact assessment in ES Appendix 7.10: Schedule of Visual Effects [REP9-203] was undertaken. It was acknowledged that at opening year (winter) the Project could be noticeably more visible in the view. As a result of combining the very high sensitivity of this Representative Viewpoint with a moderate rather than negligible magnitude of effect, this would increase the visual effect reported in ES Appendix 7.10 from a slight adverse to a large adverse significance of effect at opening year (winter). However, this is a worst-case assessment, because with the implementation of REAC commitments LV001 and LV037 in ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [REP9-184], effects at opening year (winter) are likely to be lower.
- 9.4.48 The Applicant considers that ES Appendix 7.10: Schedule of Visual Effects [REP9-203] robustly assesses the effects arising from the Project, in accordance with NPSNN paragraph 5.146. Where significant effects remain, these will need to be balanced with the benefits of the development. This is discussed further in the Planning Statement: Appendix A [REP9-217] in relation to paragraph 5.158 of the NPSNN, which concludes that ‘*the overriding need for the project outweighs the significant residual effects*’.

Overall significance of landscape and visual effects

- 9.4.49 Issue Specific Hearing 11 agenda item 3b.i sought comments from stakeholders on whether they agreed with the conclusion of an overall moderate adverse impact on the landscape, in relation to the Appraisal Summary Table within Appendix D Economic Appraisal Package of the Combined Modelling and Appraisal Report [APP-524]. This was followed up by Hearing Action Point 8 [EV-084a], which asked stakeholders for their comments on the Applicant’s conclusions within paragraph 7.9.22 of ES Chapter 7 [REP9-118].
- 9.4.50 As stated in the Applicant’s Deadline 9 response on Interested Parties’ submissions [REP9-276], the conclusion in the Appraisal Summary Table was undertaken for the economic case for the Project rather than for Environmental Assessment purposes, using a different prescribed methodology, so is not directly comparable to the assessment in ES Chapter 7: Landscape and Visual [REP9-118].
- 9.4.51 The single conclusion of landscape and visual effects reported within paragraph 7.9.22 of ES Chapter 7 is required by paragraph 2.7 of DMRB LA 107 Landscape and Visual Effects (Highways England, 2020). This conclusion was

reached following a review of the residual effects of the Project set out in ES Appendix 7.9: Schedule of Landscape Effects [REP9-201] and ES Appendix 7.10: Schedule of Visual Effects [REP9-203]. Due to the extensive mitigation measures proposed as part of the Project, most landscape and visual effects would reduce to moderate or below at design year (summer). Adverse effects remaining above moderate would relate to two LLCAs, five Representative Viewpoints and one visual receptor group out of a total of several hundred landscape and visual receptors. An overall moderate adverse effect was therefore considered to be a fair reflection of the overall effects of the Project.

- 9.4.52 However, ES Chapter 7 presents all landscape and visual effects arising from the Project for Environmental Assessment purposes, which are reported in the summary Tables 7.33, 7.34 and 7.35. All significant landscape and visual effects (moderate and above) reported in ES Chapter 7 are material to decision-making, as stated in Table 3.7 of DMRB LA 104 Environmental Assessment and Monitoring (Highways England, 2020). The Applicant therefore considers that ES Chapter 7 robustly assesses likely significant landscape and visual effects arising from the Project, in accordance with NPSNN paragraph 5.144.

Consideration of Landscape and Visual matters during Examination

- 9.4.53 During Examination the following issues were raised in relation to this topic:
- a. The effect on the AONB along the M2/A2 corridor
 - b. LLCA boundaries within the Kent Downs AONB
 - c. The effect of ancient woodland compensation planting on land east of Brewers Wood, north of Park Pale
 - d. The geographical extent of the landscape effects on the AONB
 - e. The landscape and visual effects of the M2/A2/A122 Lower Thames Crossing junction
 - f. The changes in the landscape and visual impact assessment since the withdrawn 2020 DCO application
 - g. The single conclusion presented in ES Chapter 7: Landscape and Visual [REP9-118]
- 9.4.54 The position of the Applicant is as follows:
- a. The Applicant acknowledges that significant adverse landscape and visual effects would remain along the M2/A2 corridor through the Kent Downs AONB in the design year. However, in accordance with paragraphs 5.151 to 5.153 of the NPSNN, these significant residual effects need to be balanced against other relevant factors. This is discussed further in the Planning Statement: Appendix F [REP9-225] which explains the exceptional circumstances justifying the Project.

- b. The Applicant considers that the LLCA boundary shown on ES Figure 7.2 [APP-198] between the West Kent Downs (sub area Cobham) and West Kent Downs (sub area Shorne) LLCAs is appropriate and that the difference to the published boundary in the Kent Downs AONB Landscape Character Assessment is justified and supported by best practice guidance.
- c. The Applicant considers that the landscape design of the proposed ancient woodland compensation planting to the east of Brewers Wood, north of Park Pale is in keeping with the existing wooded character of the West Kent Downs sub area Shorne LLCA and that an appropriate detailed landscape design is secured by paragraph 5.3.4 of the outline LEMP [REP9-207].
- d. The Applicant considers the landscape effects of the Project on the Kent Downs AONB to be principally localised to the widened M2/A2 corridor, as set out in the assessment contained in ES Appendix 7.9: Schedule of Landscape Effects [REP9-201] and that there would not therefore be an adverse effect on the character and integrity of the AONB overall.
- e. The Applicant considers that given the extensive landscape mitigation proposed for the M2/A2/A122 Lower Thames Crossing junction and given the limited locations where the junction is visible from the AONB, the effects of the proposed junction on the setting of the AONB would be limited. Planning Statement: Appendix F [REP9-225] discusses this further in terms of the AONB designation.
- f. The landscape and visual impact assessment was extensively updated since the withdrawn 2020 DCO application and the current assessments are fully detailed in the commentaries provided ES Appendix 7.9 Schedule of Landscape Effects [REP9-201] and ES Appendix 7.10 Schedule of Visual Effects [REP9-203] and should therefore be read on their own merits in conjunction with the current DCO application, rather than by comparison with the withdrawn DCO application.
- g. ES Chapter 7 [REP9-118] robustly reports all landscape and visual effects arising from the Project, as well as providing the single conclusion required by DMRB LA 107.

9.4.55 For this topic, the key areas that have not been agreed by the end of Examination are listed below. However, the Applicant has summarised its position on each of these issues above, together with supporting justification:

- a. The effect on the AONB along the M2/A2 corridor, as discussed in item numbers 2.1.26, 2.1.27 and 2.1.28 of the Statement of Common Ground between (1) National Highways and (2) Natural England [REP9A-014], item numbers 2.1.85 and 2.1.87 of the Statement of Common Ground between (1) National Highways and (2) Gravesham Borough Council [REP9A-050]

- and items 2.1.8 and 2.1.9 of the Statement of Common Ground between (1) National Highways and (2) Kent Downs AONB Unit [[REP9A-010](#)].
- b. The use of an LLCA boundary in the Kent Downs AONB that is different to the published LLCA boundary, as discussed in item number 2.1.105 of the Statement of Common Ground between (1) National Highways and (2) Natural England [[REP9A-014](#)] and item number 2.1.42 of the Statement of Common Ground between (1) National Highways and (2) Kent Downs AONB Unit [[REP9A-010](#)], as well as by Gravesham Borough Council in their submission on Issue Specific Hearing 11 [[REP8-127](#)].
- c. The effect of ancient woodland compensation planting on land east of Brewers Wood, north of Park Pale, as discussed in item number 2.1.110 of the Statement of Common Ground between (1) National Highways and (2) Natural England [[REP9A-014](#)] and item number 2.1.36 of the Statement of Common Ground between (1) National Highways and (2) Kent Downs AONB Unit [[REP9A-010](#)].
- d. The extent to which the landscape effects on the AONB are localised, as discussed in Issue Specific Hearing 11 [[REP8-110](#)].
- e. The landscape and visual effects of the M2/A2/A122 Lower Thames Crossing junction, as discussed in item numbers 2.1.26 and 2.1.27 of the Statement of Common Ground between (1) National Highways and (2) Natural England [[REP9A-014](#)], item numbers 2.1.87 and 2.1.88 of the Statement of Common Ground between (1) National Highways and (2) Gravesham Borough Council [[REP9A-050](#)] and item numbers 2.1.7 and 2.1.15 of the Statement of Common Ground between (1) National Highways and (2) Kent Downs AONB Unit [[REP9A-010](#)].
- f. The changes in the landscape and visual impact assessment since the withdrawn 2020 DCO application, as discussed in item number 2.1.106 of the Statement of Common Ground between (1) National Highways and (2) Natural England [[REP9A-014](#)], item number 2.1.184 of the Statement of Common Ground between (1) National Highways and (2) Gravesham Borough Council [[REP9A-050](#)] and item number 2.1.40 of the Statement of Common Ground between (1) National Highways and (2) Kent Downs AONB Unit [[REP9A-010](#)].
- g. The single conclusion of moderate adverse landscape and visual effects reported in paragraph 7.9.22 of ES Chapter 7, as discussed in Issue Specific Hearing 11 [[REP8-110](#)].

Topic Conclusion

- 9.4.56 The effects of the Project on the landscape and on visual amenity are considered in ES Chapter 7: Landscape and Visual [[REP9-118](#)]. Compliance

with the NPSNN is reported in paragraph 6.5.263 of the Planning Statement [REP9-215] and in Planning Statement Appendix A: NPSNN Accordance Table [REP9-217]. It is the Applicant's position that nothing has materially changed during the course of the Examination Hearings, which fundamentally alters that assessment of policy accordancy.

- 9.4.57 In relation to the key tests in paragraphs 5.149 and 5.157 of the NPSNN relating to landscape impact generally, extensive mitigation measures have been proposed to minimise harm to the landscape, as described in Section 7.5 of ES Chapter 7.
- 9.4.58 In relation to the key test in paragraphs 5.150 to 5.155 of the NPSNN relating to nationally designated areas of landscape, significant residual effects have been assessed on landscape character and views within the Kent Downs AONB in ES Chapter 7: Landscape and Visual, despite the extensive mitigation measures proposed. However, there are no reasonable alternatives to the project that would avoid an adverse impact on the AONB and the Planning Statement: Appendix F [REP9-225] concludes that:
- i. 'exceptional circumstances' exist for the development of the Project and 'to do so would be in the public interest'
 - ii. there are 'compelling reasons' for the Project and 'the benefits of the project significantly outweigh the costs'
 - iii. the Project 'would be carried out to a high environmental standard'; and
 - iv. the 'purpose of the AONB designation would not be compromised'.
- 9.4.59 In relation to the key test in paragraph 5.158 of the NPSNN relating to visual impact, significant residual effects have been assessed on visual amenity as a result of the Project despite the extensive mitigation measures proposed. However, the Planning Statement: Appendix A [REP9-217] concludes that 'the overriding need for the project outweighs the significant residual effects'.

9.5 Biodiversity

- 9.5.1 The impacts on biodiversity are documented in ES Chapter 8: Terrestrial Biodiversity [APP-146], which provides an assessment of the impacts on sensitive flora and fauna as a result of the construction and operation of the Project. It considers impacts including habitat loss and fragmentation, and potential species mortality, as well as disturbance through lighting, noise and vibration, and habitat degradation as a result of changes in air quality and hydrological conditions within the Project's Zone of Influence (Zol).
- 9.5.2 The following standards and guidance documents have been used in devising the methodology for data collection and assessment of terrestrial biodiversity impacts:
- a. Design Manual for Roads and Bridges (DMRB) LA 108 Terrestrial Biodiversity.

- b. Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (CIEEM, 2018) (hereafter referred to as the ‘CIEEM guidelines’).

- 9.5.3 Where impacts are considered likely, the assessment has identified measures to avoid or reduce potentially significant adverse effects. These measures have been designed iteratively during an integrated design process working with Project engineers to arrive at a Project design which incorporates embedded, good practice, and essential mitigation. If, after implementation of these measures, a significant residual effect remains likely, then compensation measures have been investigated and adopted where appropriate.
- 9.5.4 ES Chapter 8: Terrestrial Biodiversity [[REP9-120](#)] presents the proposed mitigation and compensation measures, with further information in the following documents:
- a. ES Appendix 2.2: Code of Construction Practice, First iteration of Environmental Management Plan [[REP9-184](#)] (secured via Requirement 4 of the draft DCO [[REP9-107](#)])
 - b. Outline Landscape and Ecology Management Plan [[REP9-207](#)]
 - c. Habitats Regulations Assessment – Screening Report and Statement to Inform an Appropriate Assessment [[APP-487](#)]
 - d. ES Natural England Protected Species Licences (Appendix 8.16: Bats [[REP8-050](#), [REP8-052](#), [REP8-054](#) and [REP8-056](#)], Appendix 8.17: Great Crested Newts [[REP8-058](#), [REP8-060](#), [REP8-062](#), [REP8-064](#), [REP8-066](#), [REP8-068](#), [REP8-070](#) and [REP8-072](#)], Appendix 8.18: Dormouse [[REP8-074](#)], Appendix 8.19: Badger [[REP8-076](#)] and Appendix 8.20: Water Vole [[REP8-078](#)])
- 9.5.5 In addition, compliance of the Project’s biodiversity impacts against the provisions within the NPSNN are set out in the following documents:
- a. Planning Statement [[REP9-215](#)] Chapter 6
 - b. Planning Statement – Appendix A – National Policy Statement for National Networks (NPSNN) Accordance Table [[REP9-217](#)].
- 9.5.6 The Project’s embedded mitigation measures are set out in the Design Principles [[REP9-227](#)] or as features presented in the Environmental Masterplan [[REP9-130](#) to [REP9-148](#)].
- 9.5.7 Good practice and essential mitigation are included in the Register of Environmental Actions and Commitments (REAC). The REAC forms part of ES Appendix 2.2, CoCP, First iteration of Environmental Management Plan [[REP9-184](#)].
- 9.5.8 Where the Project has the potential to impact on designated sites, the design has followed the mitigation hierarchy to first avoid those impacts, then lessen before finally compensating for them. The approach taken for each site directly

impacted is best summarised in the Applicant's response to the Examining Authority's third written questions [[REP8-115](#)], ExQ3_Q11.1.8.

- 9.5.9 As well as the mitigation proposed in the Application documents at submission, the following additional changes have been made to the Project and were submitted into Examination in the revised Design Principles document at Deadline 6 [[REP6-046](#)] (items a, b and d) and Deadline 7 [[REP7-140](#)] (item c), with an updated version of Chapter 8 being submitted at Deadline 9 [[REP9-120](#)]. These changes would further mitigate the Project's impacts on biodiversity in line with feedback from Interested Parties:
- a. A new culvert is being proposed, located at the southern end of Thong Lane South, under the Thong Lane feeder road, to provide connectivity from the green bridge into the wider landscape, reducing potential ecological severance caused by the feeder road.
 - b. There would be a similar culvert on the northern side of Brewers Road green bridge to connect woodland habitats west to east that are currently fragmented by Brewers Road.
 - c. There have been changes to the design of Thong Lane as it leads to Thong Lane South green bridge. This redesign has been proposed to reduce impacts on trees within Shorne and Ashenbank Woods SSSI.
 - d. A redesign of the Project around The Wilderness would reduce woodland loss at this location by 0.4ha.

Green bridges

- 9.5.10 There are seven green bridges proposed along the Project route, with these located where it is important to ensure connectivity of sensitive landscapes and habitats for animals such as bats, badgers and dormice, as well as mitigating landscape severance and providing an improved experience for WCHs.
- 9.5.11 Information about where these green bridges have been located and how they have been designed can be found in Chapter 8 [[REP9-120](#)] Section 8.5 - Project design and mitigation.

Sites of Special Scientific Interest

- 9.5.12 Having followed the mitigation hierarchy through the design process (see paragraph 9.5.8 above), the Project would still lead to the unavoidable loss of 6.97ha of habitat from within Shorne and Ashenbank Woods SSSI, south of the River Thames. The Applicant discussed the strategy to compensate these losses with Natural England which focuses on creating new high quality habitats aligning with those being lost and establish new links into the retained habitats within the wider landscape. At the request of Natural England, these new areas of compensatory habitat have been identified within the outline Landscape and Ecology Management Plan [[REP9-207](#)] in Section 5.17. Natural England has stated their support for the Project's "*significant package of mitigation and compensation*" as reported in the Statement of Common Ground between the Applicant and Natural England [[REP9A-014](#)] at item number 2.1.20.

Ancient woodland and replacement woodland

- 9.5.13 The design of the Project has focused on minimising impacts on irreplaceable habitats including ancient woodland. Where habitat loss has been unavoidable as a result of the design, this has been reported in the Applicant’s response to the Examining Authority’s third written questions [[REP8-115](#)], specifically ExQ3_Q11.1.8. Where losses are predicted, the Applicant has been in discussion with Natural England for a number of years around the approach the Project should take to compensating the loss of irreplaceable ancient woodland habitat. The guidance the Applicant has received goes back to advice from Defra in 2018, detailed in Annex One of Annex C1 to the Statement of Common Ground between the Applicant and Natural England [[REP9A-014](#)]. This highlights the importance of habitat connectivity, looking to extend and buffer existing habitats and, specifically, creating a strong link between Great Crabbles Wood and Randall Wood along the A2 corridor, all measures that have been adopted.
- 9.5.14 The Applicant has also followed published Government Guidance, developed by Natural England and the Forestry Commission on ancient woodland, ancient trees and veteran trees. The guidance states that, when looking to compensate for the loss of ancient woodland, measures could include:
- creating new native woodland and allow for natural regeneration
 - improving the condition of the woodland
 - connecting woodland and ancient and veteran trees with green bridges, tunnels or hedgerows
 - producing long-term management plans for new woodland and ancient woodland
 - planting or protecting individual trees that could become veteran and ancient trees in future
- 9.5.15 The creation of replacement habitat for lost ancient woodland was detailed in Section 8.23 of the outline Landscape and Ecology Management Plan [[REP9-207](#)].
- 9.5.16 The commitment to ensure the appropriate re-use of soils, aligned to the required land use/habitat, is set out in paragraph 10.5.8 (bullet g.) of ES Chapter 10: Geology and Soils [[APP-148](#)]. This paragraph references commitment GS009 as set out in the Register of Environmental Actions and Commitments (REAC) in the ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [[REP9-184](#)].
- 9.5.17 Section 8.23.2 of the outline Landscape and Ecology Management Plan [[REP9-207](#)] states that where practicable, the aim is to utilise as much of the existing soil resource as possible from the existing ancient woodland areas directly affected by the Project.
- 9.5.18 The details of ancient woodland compensation planting are in Section 8.24 of the outline Landscape and Ecology Management Plan [[REP9-207](#)]. Specific

updates have been made on the following points to address questions raised during Issue Specific Hearing 9 (ISH9):

- a. Paragraphs 8.24.2 to 8.24.6 now provide further information on the criteria which will be used to determine where it is practicable to salvage and re-use ancient woodland soils. In summary, soils would not be considered suitable if there is extensive weed growth, the presence of invasive non-native species or contamination.
- b. Paragraph 8.24.8 now includes two further references to best practice guidance, including the lessons learned review published by HS2.
- c. Paragraph 8.24.11 now includes an expanded approach to the assessment, planning, salvage and re-use of ancient woodland soils, stools and deadwood material.
- d. Paragraph 8.24.10 retains the commitment to develop detailed method statements taking into account guidance from the advisory group.

9.5.19 It is the Applicant's view that the ancient woodland compensation proposed for the Project offsets the overall loss. This landscape-scale compensation strategy is supported by Natural England, as reported within the Statement of Common Ground between the Applicant and Natural England [[REP9A-014](#)] at item number 2.1.20. This remains the position in light of the small increase in ancient woodland loss arising from the changed classification of The Wilderness as detailed in paragraph 9.5.52 below. This increase is small and it does not affect the nature and scale of compensation required.

Veteran trees

- 9.5.20 The removal of trees to facilitate construction of the Project is set out in ES Appendix 7.12: Arboricultural Impact Assessment [[APP-387](#)]. The worst-case assumption on the likely loss of trees in paragraph 5.2.11 of the Arboricultural Impact Assessment is that six potential veteran trees (trees identified during Project surveys as displaying the features of a veteran tree but not recorded on the Ancient Tree Inventory) would be removed to facilitate the Project. Three of these six potential veteran trees would be lost south of the River Thames and three north of the river.
- 9.5.21 However, commitment LV001 of the REAC [[REP9-184](#)] mandates an aim for the detailed design for the Project, including diverted utilities, to reduce the removal of trees and vegetation as far as reasonably practicable. This includes potential veteran trees.
- 9.5.22 In accordance with commitment LV032 set out in the REAC, a minimum of 30 specimen trees would be replanted as replacement for lost veteran trees, 15 of which would be replanted to the south of the River Thames in Kent, and 15 to the north of the river.
- 9.5.23 This specimen tree planting would be in addition to the extensive native woodland planting also proposed as part of the Project's package of compensation, as shown on the Environmental Masterplan [[REP9-130 to REP9-148](#)] and in ES Figure 8.33: Ancient Woodland Impacts [[REP9-172](#)].

- 9.5.24 Where felling of veteran trees cannot be avoided, the intact hulk would be retained and relocated in close proximity to a nearby veteran tree or within a parkland to allow fungi and invertebrates to relocate and promote habitat creation (in the form of standing dead wood). This measure is secured via the REAC commitment LV031.
- 9.5.25 The national need and benefits which would be delivered by the Project clearly outweigh the loss of ancient woodland and veteran trees, as per the policy test at NPSNN paragraph 5.32.

Nitrogen deposition compensation

- 9.5.26 In line with the requirements of DMRB standards LA 105 Air Quality and LA 108 Terrestrial biodiversity, the Applicant carried out assessments of the impact of nitrogen deposition on biodiversity in the vicinity of the Project's Affected Road Network. The methodology for undertaking this assessment followed discussions with Natural England, the Government's independent advisor on nature conservation. The methodology is set out in the Project Air Quality Action Plan [[APP-350](#)].
- 9.5.27 The methodology used is in line with emerging science, and the latest evidence and advice. The Statement of Common Ground between the Applicant and Natural England [[REP9A-014](#)] makes clear the support from Natural England for the Applicant's methodology.
- 9.5.28 Nitrogen deposition compensation sites were selected using a robust selection methodology agreed with Natural England. The methodology included an assessment of the ecological suitability of land parcels considering connectivity to other important existing ecological features, planting provided by the Project as part of the landscape design, and the area affected by potentially significant nitrogen deposition changes.

Reductions in compensatory land

- 9.5.29 When initially proposing 279ha of nitrogen deposition compensation land during the Local Refinement Consultation in May 2022 (during the pre-Application period), the Applicant noted that a reduction in the total area, to approximately 250ha, was likely in response to feedback during consultation. When the Application was submitted, a reduced area of land was proposed, in line with the Applicant's stated intentions.
- 9.5.30 At the Minor Refinement Consultation in May 2023, which took place during Examination, the Applicant proposed a further reduction in the amount of land from that presented in the Application documents. Acquiring some of the land proposed for nitrogen deposition compensatory purposes would have had a significantly detrimental impact on a landowner's business, potentially leading to business extinguishment. It was also considered that recent participation in the Countryside Stewardship scheme by a landowner would have reduced the value of any additional ecological connectivity achievable on parts of that site by the Project.
- 9.5.31 The Burham site (approximately 10ha) was removed from the Order Limits, while the Blue Bell Hill site was reduced by 29ha (leaving approximately 43ha). See change MRC01 in Chapter 15 below.

- 9.5.32 The proposed compensation sites, together with the relevant selection criteria, are reported in paragraphs 7.4.1 to 7.4.78 of the Project Air Quality Action Plan [APP-350]. To fully compensate for the significant effects, it was determined in consultation and agreement with Natural England that dual and parallel objectives must be achieved:
- a. The creation of new wildlife-rich habitats, predominantly woodland and grassland, to provide an area comparable to that which is adversely affected as a result of nitrogen deposition on designated sites. This acts to offset the degradation of these designated habitats.
 - b. The establishment of newly created wildlife-rich habitats in locations which link into and join up existing semi-natural habitats. This acts to build resilience and coherence into the ecological network.
- 9.5.33 The reduced area of compensatory land proposed is still considered appropriate and proportionate to offset the Project's significant effects on designated sites and habitats as a result of increased nitrogen deposition. This is because the land would fulfil the two key objectives for these compensatory sites: comparable areas of habitat creation to affected habitat across the Project; and additional ecological connectivity. These matters were examined during Issue Specific Hearings 6 and 11, and are reported in Applicant's Post-event submissions, including written submission of oral comments, for ISH6 [REP4-182] and ISH11 [REP8-110]. Nitrogen Deposition Compensation, with specific reference to this reduction in area, is a matter (Ref. 2.10.107) that has moved from 'Under Discussion' to 'Agreed' in the Final Agreed Statement of Common Ground between the Applicant and Natural England submitted at Deadline 9A [REP9A-014].
- 9.5.34 The overarching aims of the nitrogen deposition compensation habitat typology (included in Section 8.29 of the outline Landscape and Ecology Management Plan [REP9-207]) are that the mosaic of habitats is expected to achieve a ratio of approximately 70% woodland to 30% other associated habitats at a landscape scale. Each site may have a different ratio of habitats that is appropriate to that site, but the expectation across all compensation sites would be to provide an overall 70/30 split.
- 9.5.35 The approach was developed in consultation with Natural England to achieve the management requirements for each area including:
- a. providing permanent wildlife-rich habitat
 - b. habitats would be primarily woodland at a landscape scale
 - c. providing similar or more diverse habitats in recognition of habitats significantly affected by the Project's operational effects from nitrogen deposition
 - d. providing most ecologically appropriate mosaics of habitats / features for the site

- e. integrating objectives with local nature conservation plans and emerging local nature recovery strategy

9.5.36 Mosaics of habitats are more wildlife-rich due to the additional niches afforded by edge habitats and transitional zones. The highest proportion of significantly affected habitat is woodland and so the mosaics should be predominately woodland to reflect this. Other habitats such as grasslands are also affected and so should be reflected in the mosaics. A mosaic approach allows for greater flexibility to be appropriate to the ecological context of the site and integrate the objectives with local nature conservation plans.

Conclusion

9.5.37 The methodology involved in formulating the proposals for compensation land for nitrogen deposition has been developed after extensive engagement with Natural England, which supports the proposals, as set out in their Statement of Common Ground [\[REP9A-014\]](#).

9.5.38 Natural England's support extends to the revised area of land proposed during the Minor Refinement Consultation (see matter 2.10.107 in Final Agreed Statement of Common Ground [\[REP9A-014\]](#)). This is because the proposed land is still sufficient to offset the Project's impacts on nitrogen deposition, with the land creating new areas of habitat comparable to those affected habitat by the Project and providing additional ecological connectivity between new and existing habitats.

9.5.39 While still providing sufficient compensation, this revised area of land also further accounts for the needs of landowners potentially affected by compulsory acquisition.

9.5.40 As a result, there are no reasons why the proposals for nitrogen deposition compensation land or mitigation measures should form an impediment to the Project's consent.

The Wilderness

9.5.41 The Applicant recognises the ecological value of The Wilderness based on the habitats and species that it contains relative to the surrounding habitats, which consist primarily of arable farmland and an active landfill. As such, the Applicant has sought to minimise the impacts to the Wilderness. The Project's mitigation strategy is to provide resilience through the provision of high quality semi-natural habitats, to be managed in perpetuity, and to use these habitat creation areas to create new links between retained habitats and strengthen existing ecological networks. The mitigation planting in relation to the Wilderness is shown on ES Figure 2.4: Environmental Masterplan – Section 12 [\[REP9-144\]](#) sheets 5 and 6. This not only provides more habitat to support the range of wildlife recorded within the area, but also helps facilitate the movement of animals and the spread of seeds and spores across the wider landscape by linking – via hedgerow planting, into North Road Green Bridge and other areas of new habitat creation along the Project alignment.

9.5.42 To inform the baseline assessment, Phase 1 habitat surveys and bryophyte and lichen surveys of The Wilderness were completed and no ancient woodland

indicator species were found to be present (Environmental Statement – Appendix 8.2 – Plants and Habitats [[APP-391](#)]).

- 9.5.43 As part of the desk-based assessment, the ancient woodland inventory for England was examined and The Wilderness was not shown on the Natural England-Defra GIS map layers. Nor did a review of historic mapping provide evidence that The Wilderness is ancient woodland.
- 9.5.44 Further to the Accompanied Site Inspection No 2, the Applicant acknowledges the sensitivities of The Wilderness and the need to further minimise the loss of vegetation and tree clearance at this locality, which is in line with the existing REAC commitment LV001 [[REP9-184](#)]. The Applicant therefore introduced amendments secured via a new Design Principle and REAC commitment that will reduce the loss of woodland at The Wilderness by approximately 4,000m².
- 9.5.45 The new Clause S12.19 in the Design Principles [[REP9-227](#)] states that: “*The earthworks, retaining wall and watercourse diversion in the vicinity of The Wilderness shall be carefully coordinated and designed in such a way as to minimise the loss of vegetation and trees in The Wilderness as far as reasonably practical.*”
- 9.5.46 New REAC commitment LV034, submitted at Deadline 6 [[REP6-038](#)] states that “*No woodland within The Wilderness will be removed for the installation of Work No MUT27.*”
- 9.5.47 These commitments are in addition to those already set out in the REAC commitment LV028, which commits to an Arboricultural Method Statement and Tree Protection Plan to reduce the removal of trees and vegetation as far as reasonably practicable in line with LV001.
- 9.5.48 With regard to protection of watercourses and associated habitats at The Wilderness, the watercourse that flows from north to south through the Wilderness would largely remain undisturbed. It currently discharges into a watercourse that flows from east to west. This watercourse flows along the alignment of the proposed A122 Lower Thames Crossing and so requires diversion, together with a short reach of the downstream end of the watercourse that flows through the Wilderness. The diversion (Ref D-EFR-4-02) which is described in further detail in Part 10 of the Flood Risk Assessment [[REP7-130](#)] would not result in transfer of flow into or out of the hydrological catchment in which The Wilderness is located and, as a result, there would be no change overall to the current hydrological regime that supports water based habitat.
- 9.5.49 In line with best practice, the watercourse diversion would be established prior to the existing watercourse being removed. Watercourse diversion channels would be designed to reflect the size and form of existing channels to accommodate baseline flow and sediment regimes and would be naturalised (Ref Design Principle S9.10 [[REP9-227](#)]).
- 9.5.50 The watercourse network within the area of The Wilderness feeds the Mardyke, a Water Framework Directive designated waterbody. The impacts of the Project on this waterbody and the potential for Project activities to cause deterioration of any of the quality elements that support its status have been assessed in Section 4 of the Water Framework Directive Assessment [[APP-478](#)], which concludes that there is a negligible risk of waterbody deterioration.

- 9.5.51 Due to the highway alignment, the southernmost pond within The Wilderness would be lost under the footprint of the road. Provision of a replacement pond is proposed nearby, adjacent to North Ockendon Pit Metropolitan Site of Importance for Nature Conservation, which is an area of high-quality open mosaic habitat.
- 9.5.52 At Deadline 7, Natural England submitted a revised assessment of the Wilderness [REP7-215] which identified that the southern edge of the woodland block, measuring 0.44ha, met the criteria for designated ancient semi-natural woodland. The Applicant therefore revised its assessment of the Project impacts on this area at Deadline 9 [REP9-120]. As reported in the application documents, the overall Project impact on ancient woodland north of the River Thames is considered to be permanent major adverse which would result in a large adverse effect which is significant. That remains the case following Natural England's recent new advice in respect of The Wilderness submitted at Deadline 9A at the request of the Examining Authority in Procedural Decision 45 [PD-051].

Hole Farm Community Woodland

- 9.5.53 National Highways owns the agricultural land north of M25 junction 29 known as Hole Farm. The Project proposals at Hole Farm overlap with a legacy project being developed by National Highways for community woodland in the same location. Information on these proposals is provided in ES Chapter 2: Project Description [APP-140].
- 9.5.54 Using land already owned by National Highways for Project mitigation and compensation measures reduces the requirement for additional compulsory acquisition. This is in line with guidance that obliges acquiring authorities to consider alternatives to compulsory acquisition. The Applicant considers it appropriate and in accordance with that guidance to look to any suitable land already within its ownership, before seeking to acquire third-party land compulsorily.
- 9.5.55 Using Hole Farm also means that the delivery of compensation planting can start early, in advance of the environmental impact of the Project's construction.
- 9.5.56 National Highways is developing the proposals for Hole Farm in partnership with Forestry England and the wider Thames Chase Community Forest partners. The site would be managed by Forestry England on behalf of National Highways.
- 9.5.57 The long-term management of the woodland would be secured through the DCO process via the oLEMP [REP9-207].
- 9.5.58 It is proposed that the Hole Farm site would be utilised to offer multiple benefits, including as a nitrogen deposition compensation site, an ancient woodland compensation site, and as replacement special category land. The proposals at Hole Farm also include development as a community woodland as further discussed in the Benefits and Outcomes Document [APP-553].
- 9.5.59 The following areas of land at Hole Farm would be used for mitigation and compensation for the Project, as reported in the Applicant's Post-event submissions, including written submission of oral comments, for ISH9 [REP6-090]. The Project proposals at Hole Farm include the following:

- a. Approximately 75.2ha of the site has been identified to provide habitat creation as compensation for the potential impacts of nitrogen deposition on designated ecological sites caused by changes to traffic resulting from the Project. Further information on nitrogen deposition compensation is provided in Sections 2.3 and 2.4 of the ES Chapter 2: Project Description [[APP-140](#)].
- b. Approximately 26ha of woodland planting is proposed at Hole Farm to compensate for the effects of the Project on ancient woodland, with this new woodland planting also serving to integrate the Project road into the surrounding landscape, while at the same time respecting existing key views. This is described in Sections 2.3 and 2.4 of the ES Chapter 2: Project Description [[APP-140](#)].
- c. Approximately 2.9ha of Hole Farm is proposed as replacement special category land to compensate for the effects of the Project at Folkes Lane Woodland. Further information on special category land is available in Sections 2.3 and 2.4 of ES Chapter 2: Project description [[APP-140](#)] and Appendix D of the Planning Statement [[REP7-136](#)].

- 9.5.60 The Applicant has worked in partnership with Natural England and Forestry England to develop the DCO and the Community woodland project in parallel to maximise the compatibility between the projects.
- 9.5.61 The inclusion of Hole Farm in the Order Limits for the Project has materially changed the planting and ecological objectives from the original plans to meet the needs of the Project, and these objectives are secured by the draft DCO [[REP9-107](#)] through Requirement 4 of Schedule 2, and the Design Principles [[REP9-227](#)] or outline Landscape and Ecology Management Plan [[REP9-207](#)].
- 9.5.62 If the Project were not consented, the DCO commitments would fall away, meaning that Hole Farm could be planted in a different way. For instance, Forestry England could choose to plant different species, which did not meet the objectives of the nitrogen deposition compensation.
- 9.5.63 The Applicant demonstrated that its use of Hole Farm does not amount to ‘double counting’, and complies with compulsory acquisition law and guidance, at ISH 6 the ExA issued Action Points 6 and 7 regarding this issue, to which the Applicant responded in document 9.103 ISH6 Action 6 and 7 Hole Farm [[REP4-213](#)] stating ‘*There is no ‘double counting’ in terms of the benefits accrued from Hole Farm. The only element of development included in the planning application that is needed for the Project is the proposed creation of six new ecological ponds as set out in Section 1.3. The ponds are included in the Hole Farm planning application to enable their early construction alongside early tree planting to avoid damage to habitat and trees that their construction could cause if delayed until after the determination of the DCO and after the early tree planting. Otherwise, the development proposed by the Hole Farm planning application is not needed for the Project and accordingly has not been included in the DCO application.*’ and again at ISH9 the Applicant ‘*clarified that none of the elements above are claimed in relation to the Town and Country Planning*

Act 1990 (TCPA) planning application in respect of Hole Farm, nor are they claimed specifically against any wider National Highways environmental strategy’ as detailed in section 7 of the Applicant’s 9.132 Post-event submissions, including written submission of oral comments, for ISH9 [REP6-090].

- 9.5.64 As stated, Hole Farm would be leased and managed by Forestry England. The separate Hole Farm Town and Country Planning Act 1990 (TCPA) application submitted to Brentwood Borough Council by Forestry England, in partnership with National Highways, in July 2023 (planning reference number 23/00862/FUL), is solely related to the long-term legacy function of the site as part of the Thames Chase Community woodland and the associated visitor facilities required, which would be able to be delivered with or without the Project. This application was granted planning permission on 8 December 2023.
- 9.5.65 The works in the TCPA application (which are excluded from the Project’s DCO application) include ancillary hard infrastructure associated with a community woodland, such as a tree nursery, visitor centre and café, staff facilities, ponds, vehicular access from Great Warley Street, car parking (including EV charging points), and routes through the site for use by walkers, cyclists and horse riders.
- 9.5.66 The intention is for the works contained in the TCPA application to be delivered by spring 2025.
- 9.5.67 The creation of the woodland at Hole Farm would be through a combination of natural regeneration and planting. It has been agreed with Brentwood Borough Council that the planting would not require planning permission, and woodland planting started in winter 2022-23 and continues to progress in phases, as advanced delivery of the mitigation and compensation for the Project. The creation of new woodland would be undertaken in accordance with the Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999, where relevant. The winter 2023-24 planting plan has been prepared with Forestry England and shared with Natural England.
- 9.5.68 The environmental assessments presented in the ES have assumed that the mitigation and compensation planting areas are in place and have begun to establish prior to the start of construction.
- 9.5.69 The TCPA application has been included in the interproject cumulative effects assessment presented in ES Chapter 16 [APP-154]. Although the application was not submitted by the cut-off date used in the assessment, this has been included because National Highways is the Applicant and information on the proposals is available for inclusion in the assessment.
- 9.5.70 Further information on the Hole Farm proposal can be found in the Applicant’s Deadline 4 submission ISH6 Action 6 and 7 Hole Farm [REP4-213]. This document makes it clear that earlier proposals for Hole Farm are not being taken forward and should not form part of the baseline for the Project.
- 9.5.71 Hole Farm currently comprises agricultural land, and while the Applicant is bringing forward early planting to accelerate the establishment of habitats, that should not be taken as altering the baseline. To do so would disincentivise early establishment of compensatory habitats, which would not be in the public interest.

Conclusion

- 9.5.72 The Applicant has set out clearly why Hole Farm provides timely and significant ecological benefits as part of the Project, while also fulfilling an additional role as a community woodland. These roles and arrangements are fully compatible, clearly presented and should not pose any impediments to the Project gaining consent.

Protected species licensing

- 9.5.73 The Project would result on impacts to a number of legally protected species, these impacts potentially contravening the legislation providing the legal protection. The Applicant has therefore submitted draft protected species licence applications to Natural England to demonstrate that the Project's design, including mitigation and compensation strategies, maintain the favourable conservation status of the relevant species / species groups. Natural England has reviewed the draft licence applications and has issued Letters Of No Impediment for all applications, which are included in the Stakeholder Actions and Commitments Register [[REP9A-060](#)].

The draft mitigation licence applications which Natural England has reviewed and from which the Letters of No Impediment are secured are:

- a. Draft European Protected Species mitigation licence application – bats [[REP8-050](#); [REP8-052](#); [REP8-054](#); [REP8-056](#)].
- b. Draft European Protected Species mitigation licence application – great crested newt [[REP8-058](#); [REP8-060](#); [REP8-062](#); [REP8-064](#); [REP8-066](#); [REP8-068](#); [REP8-070](#); [REP8-072](#)].
- c. Draft European Protected Species mitigation licence application – dormouse [[REP8-074](#)]
- d. Draft badger development licence application [[REP8-076](#)]
- e. Draft water vole conservation licence application [[REP8-078](#)]

Summary of key Biodiversity matters raised during Examination

- 9.5.74 During Examination the following key topic areas were raised:
- a. The Applicant's overarching approach to mitigating and compensating adverse effects on biodiversity as a result of the Project
 - b. Impacts of the Project to SSSI, notably Shorne and Ashenbank Woods SSSI and the revised boundary which Natural England introduced.
 - c. Impacts to ancient woodland
 - d. The Wilderness and its designation
 - e. The impacts of nitrogen deposition on designated sites and habitats and how these were mitigated and compensated.

f. Biodiversity Net Gain

- 9.5.75 The ExA questioned the Applicant's approach to mitigation and compensation of adverse effects, how these had been designed and how they were identified within the application. Of particular focus was the approach to addressing impacts to designated ancient woodland and how impacts from increased nitrogen deposition on designated sites and habitats were being offset. The Applicant explained that the design of the Project's embedded, good practice and essential mitigation, as described in Chapter 8: Terrestrial Biodiversity [REP9-120], followed the principles of the mitigation hierarchy: avoid, lessen, compensate. Where impacts could be avoided, such as hydrological effects on the range of Thames Estuary and Marshes designated sites through moving the southern portal further south, these measures were adopted. Where mitigation to lessen an impact such as noise or visual disturbance on a sensitive ecological receptor could be achieved through the provision of screening, these were secured within the Register of Environmental Actions and Commitments in the Code of Construction Practice [REP9-184]. Where impacts could not be avoided or reduced, compensation such as the provision of ancient woodland or nitrogen deposition compensation planting was secured within the Project Order Limits, and through the Environmental Masterplan [REP9-130 to REP9-148] and the outline Landscape and Ecology Management Plan (oLEMP) [REP9-207].
- 9.5.76 Such large-scale compensation planting was developed in discussion with Natural England as is reported in the Statement of Common Ground [REP8-012]. A landscape-scale approach to habitat creation was adopted, designed to meet the overarching principles of creating new, high quality habitats appropriate to those impacted which link into the existing ecological network of habitats to build coherence and resilience. These newly created habitats would be monitored and managed in perpetuity to maintain their quality and ecological functionality, with the strategy for monitoring and managing habitat areas being included within the terms of reference for the oLEMP advisory group.
- 9.5.77 Where new information has come to light during the Examination, the Applicant has worked to include and update this information where appropriate. Natural England has raised two key issues in its submissions:
- An error in the published boundary dataset for Shorne and Ashenbank Woods SSSI
 - The inclusion of the southern 0.44ha of the Wilderness woodland in its ancient woodland inventory
- 9.5.78 In both instances, the Applicant has reviewed and revised the assessment for these ecological receptors to take this new data into account. These assessments were submitted into Examination for consideration and have been updated in the revised Chapter 8 [REP9-120]. At both sites, the overall extent of impact increased slightly but the overall assessment of likely significant effects remains as reported in Chapter 8 at the time of application. This is true for all the conclusions within Chapter 8.
- 9.5.79 The Applicant's position on Biodiversity Net Gain is set out in Post-event submissions, including written submission of oral comments, for ISH6 [REP4-

[182](#)]. Although, not mandated for Nationally Significant Infrastructure Projects such as this, the Applicant has, and will continue to design the Project to minimise impacts on biodiversity and increase biodiversity value where possible.

- 9.5.80 For terrestrial ecology, the key area that is not fully agreed by the end of Examination is the extent and location of areas of habitat creation for nitrogen deposition compensation planting. Affected parties including St John’s College Cambridge and Mr David South question the inclusion of their land as part of the overall strategy. Interested parties such as Kent County Council and the Kent Downs AONB unit question the allocation of compensation sites and their extent in relation to the AONB. The Applicant’s position is that the strategy for nitrogen deposition compensation planting is based on a Project-wide assessment as set out in the Project Air Quality Action Plan [[APP-350](#)], with compensation areas divided approximately equally between four main areas of impacts along the Affected Road Network. This approach meets the two key objectives:
- a. Creating new wildlife-rich habitats, predominantly woodland and grassland, to provide an area comparable to that of the adversely affected designated sites.
 - b. Positioning these new habitats to link into and connect existing, retained high quality habitats, strengthening and building resilience in the network of habitats at a landscape-scale.
- 9.5.81 This approach to landscape-scale compensation has been developed during a number of years’ discussion with Natural England and the Applicant’s position is that it is appropriate and proportionate to the potential adverse effects from the Project.
- 9.5.82 The Applicant notes that comments were made by St John’s College and Shorne Parish Council querying the extent of the nitrogen affected area at Halfpence Lane. The Applicant has addressed these queries in its Deadline 10 submission: 9.216 Applicant’s comments on Interested Parties’ submissions at Deadlines 9 and 9A.

Topic conclusion

- 9.5.83 The output of the terrestrial biodiversity assessment has been used to determine compliance with the NPSNN. Compliance against the NPSNN is reported in paragraphs 6.5.45 to 6.5.93 of the Planning Statement [[REP9-215](#)], in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)] and in the Terrestrial Biodiversity Legislation and Policy appendix [[APP-419](#)]. While there have been a number of changes made to the Project during the course of the Examination Hearings, not least those in respect of ancient woodland impacts and nitrogen deposition compensation, none of these changes alter that assessment of policy accordance.
- 9.5.84 The Applicant acknowledges that the NPSNN, at paragraph 5.29, states developments leading to an adverse effect on SSSI should not normally be consented except where the benefits of the Project outweigh the impacts on the SSSI. Also, at paragraph 5.32, the NPSNN states developments that would

result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland should not be granted consent unless the national need for and benefits of the development, in that location, clearly outweigh the loss should not normally be consented except where the benefits of the Project outweigh the impacts on the irreplaceable habitats.

- 9.5.85 It is the Applicant's position that the Need for the Project [[APP-494](#)], Section 3 sets out the needs case for the Project. The Planning Statement [[REP9-215](#)] sets out the planning balance between the economic, social and environmental benefits the Project would generate against any adverse effects resulting from its construction and operation. The benefits of the development are considered to clearly outweigh the impacts of the Project on qualifying features of the SSSI, and the unavoidable loss of irreplaceable habitats, including ancient woodland, aged (or ancient) trees and veteran trees.

9.6 Geology and soils

Soils

- 9.6.1 The Applicant followed, where possible, the methodology set out in Design Manual for Roads and Bridges (DMRB) LA 109 Geology and Soils (Highways England, 2019). Due to the pandemic, access restrictions and the potential presence of unexploded ordnance (UXOs) some land could not be surveyed; for these areas the Applicant agreed with Natural England a predictive approach to assessing land grade based on the following good practice guidance:
- Natural England Technical Information Note TIN049 (Natural England, 2012)
 - Code of Practice for the Sustainable Management of Soils on Construction Sites (Department for Environment, Food and Rural Affairs (Defra), 2009)
 - Good Practice Guide for Handling Soils (Ministry of Agriculture, Fisheries and Food (MAFF), 2000)
 - British Standard (BS) 3882:2015: Specification for topsoil (British Standards Institution, 2015)
- The relevant national policy framework is contained within paragraphs 5.168 and 5.176 of the NPSNN (Department for Transport, 2014).
- 9.6.2 The Applicant has assessed the effects on soil resources, including the permanent and temporary loss of Best and Most Versatile (BMV) land, and the impacts on soils supporting designated and non-designated notable habitats. These assessments are set out in Environmental Statement (ES) Chapter 10: Geology and Soils [[APP-148](#)]. The assessment is supported by the Agricultural Land Classification Factual Report [[REP9-205](#)].
- 9.6.3 ES Chapter 10: Geology and Soils [[APP-148](#)] clarifies that the principles of avoidance were applied during the selection of the preferred route which considered the presence of BMV land and areas of potential contamination risk.

Additionally, the existing baseline conditions have helped to inform the siting of construction compounds, the construction approach and the development of the Project design. Overall, the Project is assessed as having a very large adverse significant effect in terms of the loss of BMV land during the construction phase and the permanent loss of BMV land following reinstatement of land required temporarily. The temporary and permanent impacts on soils supporting designated and non-designated notable habitats has magnitudes ranging from moderate to minor, resulting in large adverse to neutral effects, of which the former would be considered to be significant.

- 9.6.4 Whilst, to a degree, there is partial mitigation of these impacts by virtue of the reinstatement of BMV land required temporarily post completion of the works, it is not possible to fully mitigate the residual impact of the large adverse effect in the study area. Given the proportion of BMV land in the east of England, this effect is an inevitable result of implementing the Project in this location. In this regard, the adverse effect has to be weighed in the balance against the multitude of benefits the Project would deliver which are addressed in Chapter 4 (Needs and Benefits) of the Planning Statement [[REP9-215](#)]. Overall, the net benefits delivered by the Project are considered to outweigh any adverse impacts such that the Project can be considered to accord with the NPSNN.

Land contamination

- 9.6.5 The Applicant has followed the methodology set out in Design Manual for Roads and Bridges (DMRB) LA 109 Geology and Soils (Highways England, 2019) and the Environment Agency Land Contamination: Risk Management (LCRM) guidance (Environment Agency, 2021). The Applicant has assessed the effects from land contamination on human health, surface water and groundwater; and that of unidentified unexploded ordnance from the construction and operation of the Project, as set out in ES Chapter 10 [[APP-148](#)]. The LCRM guidance recommends a tiered assessment process in stages, with increased site-specific understanding required at each level.
- 9.6.6 The position analysed within the ES and supporting Appendices provides a robust and appropriate assessment of land contamination risk, assessing potential sources of contamination as low, medium and high risk. No likely significant adverse residual effects have been identified. ES Appendix 2.2: Code of Construction Practice, First Iteration of Environmental Management Plan [[REP9-184](#)] includes the commitments for further assessment, remediation (if necessary) and additional monitoring that would be required during the construction phase, as part of detailed design. In accordance with the principles of LCRM, the potential contamination sources designated as medium and high risk are taken forward to the Remediation Options Appraisal and Outline Remediation Strategy [[REP1-165](#)] and supplementary investigation and assessment leading to site-specific remediation strategies and implementation plans following the principles set in the Remediation Options Appraisal and Outline Remediation Strategy [[REP1-165](#)] will be undertaken by the Contractor.
- 9.6.7 A robust mechanism of control of the management of land contamination risk is provided, and is secured via Requirement 4 and Requirement 6 of the draft DCO [[REP9-107](#)].

- 9.6.8 The Applicant was requested by the ExA to clarify whether the approach to dealing with unexploded ordnance is sufficient. The Applicant therefore confirmed UXO Desk Study and Risk Assessment is presented as ES Appendix 10.10 [APP-433] and that the CoCP [REP9-184] included the requirement to carry out pre-construction risk assessments and for emergency preparedness.
- 9.6.9 This led to an action to provide commentary in respect of the emergency preparedness plan, which resulted in updates to the CoCP.
- 9.6.10 The Applicant was requested by the ExA to set out the extent to which the Southern Valley Golf Course had been investigated and what remediation measures would be secured in view of the proposed use of the site. The Applicant therefore provided a summary of the investigation and assessment of the SVGC, concluding that is being taken forward to the Remediation Options Appraisal and Outline Remediation Strategy [REP1-165] and the securing measures for this is REAC item GS027, which can be found in the CoCP [REP9-184].
- 9.6.11 This led to an action to clarify the position with respect to potential contamination and remediation of the proposed handover land for the purposes of replacement private recreational facilities at the Southern Valley Golf Course, and therefore this has been included in a commitment in the Stakeholder Actions and Commitments Register [REP9A-060].
- 9.6.12 The Applicant was requested by the ExA to clarify the potential for impact from contamination on the proposed wetland mitigation land at Coalhouse Fort. This led to a response which concluded that this was a pre-existing conditions relating to flooding events and was not considered to present any unacceptable risks to the proposed wetland.
- 9.6.13 Thurrock Council requested clarification on the approach to the assessment of land contamination and the securing mechanisms for supplementary assessment and remediation.
- 9.6.14 This led to updates in the REAC item GS001 to clarify requirements for consultation with the Local Authorities on the prior to the commencement of any supplementary site investigation, which can be found in the CoCP [REP9-184].
- 9.6.15 Thurrock Council requested clarification on any potential effects on East Tilbury landfill and Goshems Farm, and the associated frontage. This led to a response which concluded that in the absence of any development within the frontage and East Tilbury and the requirements under permitting for any activities within Goshems farm that no significant impacts were anticipated.
- 9.6.16 Thurrock Council requested clarification on the management of asbestos in soils.
- 9.6.17 This led to updates in the REAC item AQ006 to make the requirement for the consideration of asbestos monitoring explicit, which can be found in the CoCP [REP9-184].

Geology

- 9.6.18 The Applicant has followed the methodology set out in Design Manual for Roads and Bridges (DMRB) LA 109 Geology and Soils (Highways England, 2019). The Applicant has assessed the effects on geology and superficial

deposits, including geological designations and sensitive/valuable non-designated features from the construction and operation of the Project, as set out in ES Chapter 10 [APP-148].

- 9.6.19 Overall the Project would have a neutral effect on geology, which is assessed as not significant. There is partial loss of the geological feature at the Low Street Pit potential Local Geological Site during the construction of the Tilbury Viaduct. Mitigation is therefore proposed to restrict construction activities within the eastern area of Low Street Pit to preserve an area of Mucking Gravel. The impact is assessed as not significant. The Code of Construction Practice [REP9-184] includes commitment GS031 as embedded mitigation.
- 9.6.20 To demonstrate compliance with the clauses of the National Policy Statements and the Scoping Opinion, an assessment on land stability was undertaken and is presented in Appendix 10.2: Stability Report [APP-423]. The Stability Report demonstrated that there are no significant risks related to ground stability and geohazards area and no issues would occur as a result of the Project construction. The Code of Construction Practice [REP9-184] includes commitment GS003. Ground stability and geohazards are addressed within the design through the application of the DMRB Standard, CD 622 Managing Geotechnical Risk (Highways England, 2020a).

Consideration of Geology and Soils matters during Examination

- 9.6.21 During the Examination, questions and clarifications of various topics relating to Geology and Soils were raised and responded to, both as written responses and via the Hearings. For land contamination these were ISH4 (relating to unexploded ordnance) and ISH11 (relating to the investigation and assessment of the Southern Valley Golf Course) plus written representations from Thurrock Council (including via the SOCG and LIR) and Gravesham Borough Council and questions from the Examining Authority. The queries were wide ranging, however broadly these included the approach to the assessment of land contamination and the securing mechanisms for supplementary assessment and remediation; queries on data collation, assessment and presentation, potential effects on East Tilbury landfill and Goshems Farm, emergency preparedness for unexploded ordnance, the assessment of risk at the Southern Valley Golf Course and the potential for impact from contamination on the proposed wetland mitigation land at Coalhouse Fort.
- 9.6.22 In response, the Applicant provided written clarifications by referring to the assessment made in Chapter 10 of the ES [APP-148], the supporting appendices and the CoCP [REP9-184]. Amendments were made to the following in response to queries raised:
- REAC GS001 (in response to ExA and Thurrock Council)
 - REAC GS027 (in response to Thurrock Council)
 - REAC AQ006 (in response to Thurrock Council)
 - CoCP with respect to emergency preparedness for unexploded ordnance

- e. Matters relating to land contamination and remediation of the handover of land for the purposes of replacement private recreational facilities to Gravesham Borough Council at the Southern Valley Golf Course, via a commitment in the Stakeholder Actions and Commitments Register [[REP9A-060](#)].

- 9.6.23 For this topic the only areas that are not agreed by end of Examination are the matters marked as such with Thurrock Council via the SOCG. The Applicant maintains that the position analysed within the ES and supporting Appendices provides a robust and appropriate assessment of land contamination risk. Historical contamination has been identified to date as part of the environmental impact assessment process. The ground investigations carried out are appropriate for this stage of development and there are appropriate measures in place to capture and if necessary to address historical contamination in connection with the Project, as secured via Requirement 4 and Requirement 6 of the draft DCO [[REP9-107](#)] and the commitments of the CoCP and REAC [[REP9-184](#)].
- 9.6.24 In relation to soils, the predominant topics raised during Examination were concerning soil salvage and Ancient Woodland management. The Applicant has provided a response to these in section 4.5, and subsequently updated the outline Landscape and Ecology Management Plan (oLEMP) [[REP9-207](#)] at Deadline 7. A small number of Interested Parties raised the sufficiency of the assessment in relation to the impact on best and most versatile agricultural land and in relation to the provision of compensation for impacts identified on biodiversity. In response to this the Applicant considers that it has fully considered and reported the impact on agricultural soils and believes this impact is outweighed by the overall benefit of the Project.
- Topic conclusion
- 9.6.25 The Geology and Soil assessment has been used to inform compliance with the NPSNN, which can be found in ES Appendix 10.1 of the Geology and Soils Chapter [[APP-422](#)]. This includes the assessment of impacts on internationally, nationally and locally designated sites (paragraphs 5.22 to 5.23), the consideration of land instability (paragraphs 5.117 to 5.119) and agricultural soil quality (paragraphs 5.168 and 5.176).
- 9.6.26 Compliance against the policy requirements of the NPSNN is reported in paragraphs 6.5.141 to 6.5.150 of the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. It is the Applicant's position that nothing has materially changed during the course of the Examination Hearings which fundamentally alters that assessment of policy accordance.
- 9.6.27 ES Appendix 10.1 demonstrates that the Project is compliant with all policy requirements of the NPSNN in relation to geology and soils.

9.7 Material assets and waste

- 9.7.1 The assessment of material assets and waste is reported in ES Chapter 11: Materials and Waste [[REP9-122](#)]. The relevant policy framework is contained in paragraphs 5.42 and 5.43 of the NPSNN, which set out that for a proposed

development, the application should set out the proposed arrangements for managing any waste produced, which should include information on the proposed waste recovery and disposal system for all waste generated by the development. The policy guides the Applicant to minimise the volume of waste produced and the volume of waste sent for disposal unless the alternative can be demonstrated to be the best overall environmental outcome.

- 9.7.2 The methodology for the Material Assets and Waste assessment follows the guidance set out within DMRB LA 110 Material assets and waste (Highways England, 2019). The assessment methodology assesses the likely significant effects on the consumption and use of material assets and production and disposal of waste during the construction and operation of the Project.
- 9.7.3 The Applicant's assessment, as presented in ES Chapter 11 [[REP9-122](#)] provides an assessment of Material Assets and Waste impacts and likely significant effects. The chapter concludes that, for EIA purposes, there are no significant adverse effects at the operation stage; and only one significant adverse effect at construction. The Project would use more than 1% of inert and non-hazardous landfill capacity in the study area. This is above the threshold outlined within DMRB LA 110 Material assets and waste (Highways England, 2019), and as 1-50% project wastes is expected to be disposed of outside the region, the effects on waste receptors are judged to be moderate adverse and therefore significant.
- 9.7.4 It should be noted that the above significance only reports against landfill capacity, not reuse, recycling or recovery within the study area. With regard to paragraph 5.43 of the NPSNN, which refers to the 'adverse effect on the capacity of existing waste management facilities', the assessment demonstrates that an adverse effect on the capacity of existing waste management facilities, as a whole, to deal with other waste arisings in the area would not occur as detailed in Section 11.6.45 of Chapter 11 of the ES [[REP9-122](#)].
- 9.7.5 A number of questions pertaining to materials and waste were asked of the Applicant as part of the first and second written questions, and through its responses [[REP4-191](#) and [REP6-110](#)] the Applicant confirmed that its assessment methodology and proposed mitigation measures are robust and address the policy requirements.
- 9.7.6 Mitigation, including designing-out material use, sustainable material sourcing, the application of the waste hierarchy, contract commitments and targets, has been proposed. The Applicant has committed to mitigation measures for Material Assets and Waste, notably Section 7 Register of Environmental Actions and Commitments, of the Code of Construction Practice [[REP9-184](#)] which includes commitments MW001-MW017. These commitments have been developed to ensure the application of the waste hierarchy and the principles of the circular economy continue to be applied throughout the detailed design and construction phases of the Project.
- 9.7.7 The Code of Construction Practice is supplemented by two outline plans; an outline Site Waste Management Plan [[REP9-186](#)], which provides a consistent framework for the management and recording of material resources used and waste arising (particularly in relation to secured waste targets), and the application of the waste hierarchy; and an outline Materials Handling Plan

[[REP9-188](#)] which sets out the approach and high-level principles for handling construction materials and waste. In line with Requirement 4 of the draft DCO [[REP9-107](#)], the Contractors would be required to develop construction phase iterations of both plans. Both of these plans were discussed in Issue Specific Hearing 12 [[REP8-111](#)].

Earthworks balance

- 9.7.8 Through the iterative process of design development, a significant proportion of excavated materials will be locally placed within the Order Limits. This approach ensures that approximately 95% of excavated material would be retained on-site, contributing substantially to sustainable resource management practices.
- 9.7.9 A benefit of retaining this material within the Order Limits is that it reduces the burden of extra HGVs on the road network and on the River Thames.
- 9.7.10 Excavated material quantities are presented in Table 7.1 of the outline Materials Handling Plan [[REP9-188](#)]. A technical note on Earthworks Quantities [[REP2-076](#)] explains the methodology used to determine the earthworks quantities.

Consideration of Material Assets and Waste matters during Examination

- 9.7.11 During Examination the following issues were raised in relation to this topic:
- Interested Parties were asked to comment on the appropriateness of waste management procedures included within the outline Site Waste Management Plan [[REP9-186](#)]
 - Clarifications on the waste targets secured through the DCO and a request to strengthen the commitment to apply the waste hierarchy during the detailed design and construction phases
 - Whether the Applicant had confidence in the level of certainty that excavated materials generated by the Project would not be exceeded
- 9.7.12 In response:
- At Issue Specific Hearing 12 [[REP8-111](#)], the Applicant confirmed that the framework of waste management procedures set out within the outline Site Waste Management Plan [[REP9-186](#)] were appropriate for this stage of the Project development and the approach is consistent with that taken on Nationally Significant Infrastructure Projects of similar nature and scale. The Applicant reiterated that the assessment of material assets and waste is robust.
 - The outline Site Waste Management Plan and associated commitments in the Code of Construction Practice MW007 and MW013 were updated at Deadline 6 and Deadline 7 in response to stakeholder feedback. This strengthened the Applicant's commitment to apply the waste hierarchy and clarified waste targets which the contractors would be required to achieve.

- c. At Deadline 2, the Applicant submitted a technical note on Earthworks Quantities [REP2-076] which set out the method used to determine the earthworks quantities and how these quantities were used to inform the traffic and environmental assessments supporting the DCO application.

9.7.13 For this topic the only area that will not be agreed by end of Examination is:

- a. Thurrock Council believe the level of detail, for example information on permitted operations and phasing of wastes, included within the outline Site Waste Management Plan (oSWMP) [REP9-186] should be increased. The Applicant strongly considers that the level of detail provided within the oSWMP is sufficient and accordingly a robust assessment has been presented.

9.7.14 All other stakeholders are generally in agreement over the approach to material assets and waste taken by the Applicant.

Topic conclusion

9.7.15 Compliance against the policy requirements of the NPSNN is reported within ES Appendix 11.6: Material Assets and Waste Legislation and Policy [APP-440], in paragraphs 6.5.94 to 6.5.106 of the Planning Statement [REP9-215] and in Planning Statement Appendix A NPSNN Accordance Table [REP9-217]. It is the Applicant's position that nothing has materially changed during the course of the Examination Hearings which fundamentally alters that assessment of policy accordance.

9.7.16 In relation to the key tests in Paragraph 5.42, the Applicant can confirm that arrangements concerning waste arising during construction and operation are set out as well as measures to reduce waste. The Applicant has proposed an effective process for the management of hazardous and non-hazardous waste within the existing waste infrastructure which seeks to minimise waste.

9.7.17 In relation to the key tests in Paragraph 5.43 the assessment presented in Chapter 11 of the ES [REP9-122] demonstrates that an adverse effect on the capacity of existing waste management facilities, as a whole, to deal with other waste arisings in the area would not occur.

9.7.18 In line with Paragraphs 5.169 and 5.182 the Applicant has demonstrated that mineral resources have been safeguarded as far as possible and that where an impact is identified appropriate mitigation has been sought.

9.8 Noise and vibration

9.8.1 All projects which may give rise to potential noise/vibration impacts are assessed with the three aims contained within paragraph 5.195 of the NPSNN. They are:

- a. avoid significant adverse impacts on health and quality of life;
- b. mitigate and minimise adverse impacts on health and quality of life; and
- c. where possible, contribute to the improvement of health and quality of life.

- 9.8.2 The Applicant has explained how these aims have been met in paragraphs 12.6.228 and 12.6.229 of ES Chapter 12 Noise and Vibration [[APP-150](#)]. The three aims have been met by the following measures.
- Design considerations including keeping the Project low in the environment, placing the main alignment (where possible) in a position to optimise separation distances, and through a detailed scheme of mitigation to avoid significant adverse noise effects.
 - Adverse noise impacts from the proposed scheme have been minimised through the inclusion of earth works features including bunding, false cuttings and cuttings within the design, combined with specific acoustic mitigation in the form of low noise surfacing and acoustic fencing provision.
 - The implementation of the Project would result in road traffic noise at receptors near the bypassed existing road network being reduced. This presents both significant beneficial noise effects and beneficial effects on health and quality of life (which is discussed in Section 9.9).
- 9.8.3 The mitigation measures employed to achieve these aims have been considered within the context of Government policy on sustainable development, which includes taking into account factors such as cost, engineering constraints and adverse impact on other environmental topics. When considering mitigation, the principle of first considering noise mitigation at source has been followed (e.g. through surfacing). This is then followed by the consideration of noise mitigation measures between the source and receiver (e.g. noise barriers).
- 9.8.4 In summary, the noise and vibration assessment is predicting some temporary significant adverse effects during the construction phase as a result of increases on some roads as a result of Project related construction traffic and also as a result of the rerouting of general traffic, primarily as a result of temporary traffic management measures. As a result of the robust implementation of Best Practicable Means as mitigation, no significant noise and vibration effects are predicted to occur due to general construction activities. During operation, Chapter 12: Noise and Vibration [[APP-150](#)] has concluded that there would be significant beneficial effects at 1,372 sensitive receptors. Significant adverse effects have been predicted at 1,440 sensitive receptors, of which 873 are at receptors alongside the wider network.

The Whitecroft Care Home

- 9.8.5 The owners of the Whitecroft Care Home have raised an objection to the Project with regard the adverse effects from the construction and operation of the Project and the assessment methodology employed by the Applicant. Their objection on noise grounds was contained within a Deadline 1 submission [[REP1-373](#)]. This was accompanied by a standalone acoustics report [[REP1-367](#)] that presented a review of Chapter 12: Noise and Vibration [[APP-150](#)].
- 9.8.6 The principal area of objection was the lack of detail on how the Applicant would achieve the construction noise mitigation that is proposed and the BS5228-1:2014 night-time thresholds applied in the assessment. The Applicant

responded to their concerns at Deadline 2 [REP2-051] by providing further detail about the construction works planned near the Whitecroft Care Home and the controls that would be put in place. The Applicant considers that the application of BS5228 for night-time is an appropriate measure for healthcare facilities and responded at Deadline 6 [REP6-111]. Further representations were made by the representative for the Whitecroft Care Home within REP5-119 and also at ISH8. The Applicant responded at Deadline 6 [REP6-098] and a meeting was held with the representative for the Whitecroft Care Home on 23 October 2023. At Deadline 7 the Whitecroft Care Home submitted a further representation [REP7-270] that sought clarity on responses previously made by the Applicant. In addition, the effect of the ageing of the low noise surface was raised, and this representation was repeated at CAH5. The Applicant responded at Deadline 8 [REP8-119] with clarification of matters raised by the Whitecroft Care Home. A response was also provided about why the ageing of the low noise surface is not taken into consideration in the assessment of effects and determination of mitigation. This is because the assessment focusses mainly on the short term impacts when changes are greatest, and any influence from the ageing of the surface is very unlikely to change the conclusions of the assessment reported within Chapter 12: Noise and Vibration [APP-150]. A response was provided by the Applicant to a Deadline 9 acoustics report [REP9-316] at D10 [Document Reference 9.216] in which the Applicant clarifies that in relation to the selection of the Future Year for assessment and the consideration of road resurfacing, the appropriate assessment and design standards have been followed and would be applied meaning that the Future Year assessment presented within the noise chapter [APP-150] is based on a reasonable worst case.

- 9.8.7 Heads of Terms for an Acquisition by Agreement of the Care Home site have been submitted to the Care Home's agent for their consideration. This option would allow them to relocate away from any potential impacts of construction. Discussions between the Applicant and the Whitecroft Care Home are ongoing. In relation to further care home provision in the current planning pipeline, this is addressed in Section 9.9: Population and Human Health, paragraph 9.9.24.
- 9.8.8 The Applicant set out how the draft Development Consent Order makes provision that if appropriate the Care Home could be acquired with a view to relocation (see Annex A.8 of the Applicant's post hearing submissions for ISH14 [REP8-114]). In response to this the Care Home owners have stated at Deadline 9A that they agree that this achieves the outcome they seek [REP9A-143].

Franks Farm

- 9.8.9 The owners of Franks Farm raised an objection requesting the provision of a noise barrier alongside the route alignment at their location, despite the results of the assessment. These concerns were raised within the Lawson Planning Partnership Ltd's Written Representation [REP1-389]. The Applicant responded at Deadline 2 [REP2-051] and explained that the noise assessment was predicting a decrease in noise at this location due to the provision of low noise surfacing and the earthworks provided by the new two-lane link road from the M25 northbound carriageway to M25 junction 29 link road. The Applicant explained that it was not practical to undertake baseline noise surveys at every

location and that the noise assessment was undertaken through computer modelling. A further representation was made by the Lawson Planning Partnership Ltd within [\[REP4-389\]](#) which the Applicant responded to in [\[REP5-080\]](#). A representation was made by the Lawson Planning Partnership Ltd at ISH8, and a request was made of the Applicant to supply the calculations for determining that the provision of a noise barrier at this location did not provide value for money. These calculations were supplied by the Applicant within their response [\[REP6-089\]](#), and the calculations demonstrated that the provision of a noise barrier at this location did not provide value for money. The Applicant has made further submissions in response to Lawson Planning Partnership in Applicant's comments on Interested Parties' Submissions at Deadlines 9 and 9A [**Document Reference 9.216**].

Impacts at Travellers' Sites

- 9.8.10 Within their Local Impact Report (LIR) [\[REP1-281\]](#), Thurrock Council raised a concern that the impacts at Gammonfields Way travellers' site had not been assessed within Chapter 12: Noise and Vibration [\[APP-150\]](#). The Applicant responded within [\[REP2-064\]](#) but due to a formatting error a table of results was omitted from this response. The issue was raised again by Thurrock Council at ISH8 and in response, the Applicant produced a technical note explaining the potential impacts from construction and operational noise and all identified traveller sites across the Project. This was included as Annex D within the Applicant's ISH8 summary response [\[REP6-089\]](#), and the technical note showed that there are predicted to be no significant effects from construction noise at any of the traveller sites. For the assessment of operational noise, three of the traveller sites, including the re-located Gammonfields Way site, are predicted to experience a significant beneficial effect. The traveller site at the end of Lower Crescent in Linford is predicted to experience a significant adverse change in road traffic noise level during the daytime and night-time as a result of the Project. Adverse impacts at this location would be mitigated as far as reasonably possible through the Project design via low noise road surfacing and a 4m false cutting adjacent to the Project main alignment.
- 9.8.11 Thurrock Council made a request for the Applicant to investigate additional noise mitigation at the Gammonfields Way travellers' site, this was discussed with the Council on 9 November 2023 and 24 November 2023 under SoCG item no. 2.1.190 [\[REP9A-040\]](#). The Applicant clarified that there are already significant beneficial noise effects for the relocated travellers' site in terms of noise reduction. The relocated travellers' site is predicted to experience road traffic noise levels in the region of 10dB lower than the exiting site as a result of the geographic movement of the receptors and the earth bunding and false cuttings in place within the design. Furthermore, the location for the relocated travellers' site was chosen by both parties as suitable.
- 9.8.12 The Applicant considered the Council's request to investigate if further mitigation measures could be implemented at the new Gammonfields Way travellers' site to further reduce noise to the residents. A 288-metre long acoustic barrier was considered located on top of the earth bund to the east of the relocated Gammonfields Way travellers' site, investigated at heights of 1m, 2m and 3m.

- 9.8.13 The highest of these barriers would not materially change the conclusions relating to residential suitability at the new Gammonfields Way travellers' site. As such it is not recommended that these measures present a viable mitigation option in this location based upon limited acoustic performance.
- 9.8.14 Thurrock Council subsequently responded in their Deadline 9 submission - Thurrock Council Comments on Applicant's Submissions at Deadline 7 (D7) and Deadline 8 (D8) [\[REP9-299\]](#) "6.5.2 The Council welcomes the additional assessments undertaken to mitigate noise levels to the relocated Gammonfields traveller site. The assessment has reviewed noise barriers of 1m, 2m and 3m height on top of the earth bund to the east of the traveller site. It is noted that with this mitigation noise levels are likely to improve by only 1dB. This is not likely to be perceptible and therefore, it is agreed that this is not a viable mitigation option given the limited acoustic benefit". This SoCG matter item no. 2.1.190 is now agreed.
- 9.8.15 A further request was made by Thurrock Council for the Applicant to reconsider acoustic barrier options 4, 6 and 8, which would mitigate road traffic noise levels in Linford and Chadwell St Mary that were initially evaluated and reported within Appendix 12.10: Road Traffic Noise Mitigation and Cost Benefit Analysis [\[APP-450\]](#). The Applicant has reconsidered these barrier and disagrees with Thurrock that the barriers would provide a significant reduction in noise as the significant effects would still remain with the inclusion of these barriers. The Applicant also considers the Landscape and Cultural Heritage impacts as a result of including these barriers would be significant. The Applicant's response on this matter is set out in within the SoCG with Thurrock Council, SoCG item no. 2.1.206 [\[REP9A-040\]](#).

Mitigation measures using Best Practicable Means (BPM)

- 9.8.16 There have been questions from interested parties (Franks Farm [\[REP4-389\]](#), Whitecroft Care Home [\[REP5-119\]](#), Thurrock Council [\[REP6-164\]](#)) as to how the Applicant will achieve their stated reductions in construction noise due to the use of Best Practicable Means. The Applicant has responded to these by providing more detail on how the BPM would be achieved. The Applicant's responses to Franks Farm is set out in paragraph 9.8.9 above, for Whitecroft Care Home was set out in [\[REP6-111\]](#) and within the SoCG with Thurrock Council, SoCG item no. 2.1.190 [\[REP9A-040\]](#).
- 9.8.17 Within the second round of questions from the ExA [\[PD-040\]](#), the Applicant was asked what additional measures could/should be put in place to minimise the impact of construction noise on the residents at The Whitecroft Care Home. Discussions were undertaken with the construction team of all of the main activities in the vicinity of the care home and how noise could be reduced using BPM. The Applicant proposed a suite of measures that could be implemented to reduce the noise impact on the care home, and these were described within Responses to the Examining Authority's ExQ2 Appendix E – 9. Noise & Vibration [\[REP6-111\]](#). These measures were considered by the Applicant to be realistic and reasonable provisions.
- 9.8.18 Thurrock Council have requested [\[REP6-167\]](#) several changes and additions to be made to the REAC. The Applicant has responded to these requests, REAC commitments NV015 and NV017 were updated at Deadline 6 [\[REP6-038\]](#),

followed by NV018 and a further update to NV015 included within the Deadline 7 revised REAC [\[REP7-122\]](#) and for others a response provided describing why the Applicant considers the measure unnecessary. Section 11.4 of Chapter 11 refers to the controls on construction.

Wider Network Impacts

- 9.8.19 In relation to wider network impacts, predominantly minor impacts above a SOAEL are predicted outside the Order Limits along the A228, Rochester Road/Station Road/Hall Road, Warren Road and A229/M2 junction; except for Henhurst Road where there is a moderate change in road traffic noise level above a SOAEL. These impacts and resultant significant effects were reported within Section 12.6 (paragraphs 12.6.181 to 12.6.184 and 12.6.190 to 12.6.194) within Environmental Statement Chapter 12 Noise and Vibration [\[APP-150\]](#). The Applicant has examined measures to mitigate these operational road traffic noise effects at source or by reducing the noise reaching receptors, thereby reducing the number of significant effects. This includes the consideration of measures such as HGV restrictions, noise barriers and low noise road surfacing and was discussed with Kent County Council, Medway Council and Tonbridge and Malling Borough Council.
- 9.8.20 At a meeting with Medway Council and Kent County Council on 6 November 2023, the Applicant discussed the incorporation of HGV restrictions for Henhurst Road in the Section 106 agreement with Kent County Council [\[REP-176\]](#). Noise barriers along the A228 would be effective in removing some of the significant adverse effects but would require land outside of the Project Order Limits and further landscape and cultural heritage considerations. The use of low noise surfacing in the southern section of the A228 would be effective in removing some of the significant adverse effects, but the use of this measure on the A228 has been ruled out by Kent County Council.
- 9.8.21 The Applicant has completed an appropriate Noise Insulation Regulations assessment for the Project and these properties would not be eligible because they are greater than 300m from any new or altered highway associated with the Project, see ES Appendix 12.7: Noise Insulation Regulations Assessment [\[APP-447\]](#) for further details.
- 9.8.22 In responding to the identified impacts on the wider network the Applicant has demonstrated that in the context of the government policy on sustainable development set out in Paragraph 5.195 of the NPSNN.
- 9.8.23 Compliance against the policy requirements are set out in paragraphs 12.6.222 to 12.6.230 Environmental Statement Chapter 12 Noise and Vibration [\[APP-150\]](#), in paragraphs 6.5.290 to 6.5.308 of the Planning Statement [\[REP9-215\]](#) and in Planning Statement Appendix A NPSNN Accordance Table [\[REP9-217\]](#).

Summary of Noise and Vibration matters during Examination

- 9.8.24 During Examination the following issues were raised in relation to this topic:
- The noise and vibration impact of the Project on the Whitecroft Care Home and the mitigation to be provided. There are ongoing discussions between the Applicant and the care home operators. Heads of Terms for an

Acquisition by Agreement of the care home site have been submitted to the Whitecroft Care Home's agent for their consideration.

- b. Noise mitigation to be provided at Franks Farm.
- c. The impact of the Project on Travellers' sites across the area.
- d. Request from Thurrock Council for the Applicant to reconsider noise barrier options 4, 6 and 8.
- e. How Best Practicable Means would be achieved.
- f. Wider network impacts.

9.8.25 In response:

- a. The potential impacts at the Whitecroft Care Home have been explained to the owners and further mitigation during construction has been proposed. Heads of Terms for an Acquisition by Agreement of the Care Home site have been submitted by the Applicant to the Care Home's agent for their consideration. This option would allow them to relocate away from any potential impacts of construction. Discussions between the Applicant and the Whitecroft Care Home are ongoing.
- b. It has been explained to the owners of Franks Farm that there is predicted to be a reduction in noise at Franks Farm and that no further mitigation will be provided at this location.
- c. A separate exercise has been undertaken to determine the impact at the Travellers sites across the area as set out in within Annex D of 9.131 Post-event submissions, including written submission of oral comments, for ISH8 [[REP6-089](#)].
- d. An assessment of noise barrier options 4, 6 and 8 has been undertaken with the barriers at different heights to those initially examined. The Applicant has not found the barriers to be value for money or for them to provide any significant reductions in noise at the closest sensitive receptors.
- e. The Applicant has responded to requests for more information on how BPM would be achieved by providing more detail and making changes to the commitments made within the REAC.
- f. The Applicant has examined measures to mitigate the significant adverse effects identified on the wider network. These measures have been through the use of low noise surfacing and noise barriers. It was concluded that the provision of noise barriers along the A228 would be effective in removing some of the significant adverse effects but would require land outside of the Project Order Limits and further landscape and cultural heritage considerations. The use of low noise surfacing in the southern section of

the A228 would be effective in removing some of the significant adverse effects but this has been rejected by Kent County Council.

- 9.8.26 For this topic the only areas that are not agreed by end of Examination are as follows:
- a. The assessment methodology and mitigation applied by the Project at the Whitecroft Care Home. There are ongoing discussions between the Applicant and the Whitecroft Care Home, but the issues are unlikely to be resolved by the end of the Examination. Heads of Terms for an Acquisition by Agreement of the Care Home site have been submitted by the Applicant to the Care Home's agent for their consideration. This option would allow them to relocate away from any potential impacts of construction.
 - b. The position of the Applicant and that of the owners of Franks Farm are different on the matter of whether additional mitigation should be provided.
 - c. The position of the Applicant and Thurrock Council on acoustic barrier options 4, 6 and 8 remain not agreed, due to both parties' positions remaining unchanged. This is set out in Deadline 9 submission -Thurrock Council Comments on Applicant's Submissions at Deadline 7 (D7) and Deadline 8 (D8) [[REP9-299](#)] and SoCG item no. 2.1.206 [[REP9A-040](#)]. The Applicant has reconsidered these barrier options and disagrees with the Council's conclusion. The Applicant stands by its professional assessment of the impacts and has further support on the matter in relation to the impact on proposed utility works, with the barriers providing only a limited change to the overall outcomes of the impacts. Paragraph 6.6.15 of Section 6.6: Consideration of Good Design during Examination also explains the design considerations for the proposed Tilbury Viaduct to help reduce the verticality and scale of the structure within the landscape and preserve views beneath the viaduct structure, which is relevant to noise barrier options 4 and 6.
 - d. Requests for the Project to undertake operational noise monitoring will remain not agreed as set out in within the Applicant's response in Thurrock Council's SoCG item no. 2.1.198 [[REP9A-040](#)] and Gravesham Borough Council's SoCG item 2.1.191 [[REP9A-050](#)].

Topic conclusion

- 9.8.27 The output of the noise assessment has been used to determine compliance with the NPSNN. Compliance against the policy requirements of the NPSNN is reported in paragraphs 6.5.290 to 6.5.308 of the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. While there have been a number of changes made to the Project during the course of the examination hearings, not least those in respect of the Whitecroft Care Home, Franks Farm and the traveller sites discussed above, it

is the Applicant's position that these beneficial changes do not affect that assessment of policy accordance.

- 9.8.28 Compliance against the NPSNN is reported in paragraphs 6.5.290 to 6.5.308 of the Planning Statement [[REP9-215](#)].
- 9.8.29 In relation to the key tests in paragraph 5.195, it can be concluded that, through implementing the identified mitigation, the Project would meet the aims of the NPSNN, defined within the context of Government policy on sustainable development in relation to noise. These are defined around the principles of avoiding significant impacts on health and quality of life, and mitigating adverse impacts to a minimum in the context of sustainable development.

9.9 Population and human health

- 9.9.1 The Population and Human Health assessment is reported in Chapter 13 [[APP-151](#)] of the ES. The relevant policy framework is contained in Section 13.2 and the NPSNN. Appendix 13.1: Population and Human Health Legislation and Policy [[APP-451](#)] lists the planning policies at a national level and the Project response.
- 9.9.2 The methodology for the population and human health assessment follows the guidance set out within DMRB LA 112 as well as that provided by Health in Environmental Impact Assessment – A Primer for a Proportionate Approach (Institute of Environmental Management and Assessment, 2017) and Human Health: Ensuring a High Level of Protection (International Association of Impact Assessment and European Public Health Association, 2020).
- 9.9.3 The Applicant's assessment, as presented in Chapter 13 of the ES, provides a detailed, thorough and robust assessment of population and human health impacts and likely significant effects.
- 9.9.4 A range of mitigation measures to manage potential effects have been proposed, including good practice mitigation and essential mitigation. The most significantly affected receptors would be properties subject to demolition or acquisition as a result of the Project. Mitigation measures in those cases would be in the form of appropriate compensation mechanisms. Community land would also be affected by virtue of temporary possession and permanent acquisition of land. However, replacement land would be provided in appropriate cases.
- 9.9.5 A number of population and human health questions were asked of the Applicant at the first and second written questions stages, and through its responses [[REP2-037](#)] and [[REP6-116](#)] respectively, the Applicant was able to demonstrate that its assessment methodology and proposed mitigation measures are robust.
- 9.9.6 During the Examination, several issues relating to population and human health matters were raised by Interested Parties and the Examining Authority. The Applicant has addressed those issues, as summarised below.

Effects relating to walkers, cyclists and horse riders (WCH)

- 9.9.7 ES Chapter 13: Population and Human Health [[APP-151](#)] concludes that there are likely adverse effects on walkers, cyclists and horse riders (WCH) during

the construction phase due to temporary closures of a number of routes and, in a number of cases, the creation of permanent diversions. During the operational phase, a range of enhancement opportunities have been identified to improve the existing Public Rights of Way (PRoW) network through enhanced facilities and creation of missing links, as identified in Section 13.6 of ES Chapter 13. These are secured as commitments within the Design Principles [REP9-227] and Section 5 of ES Chapter 13.

Wider recreational impacts

- 9.9.8 Temporary disruption to the Shorne Woods Country Park (SWCP) would result from work associated with proposed utilities diversions along the north side of the A2. The main access to the Country Park would not be impacted, and direct access to the site from the central carpark within the Country Park would be retained. However, there would be disruption to routes leading to the Country Park from the south when Brewers Road is to be closed for up to 18 months. The Applicant would provide and maintain suitable alternative routes for NS167, NS169 and NS174 (which provide connections to SWCP) during construction in accordance with the measures in Table B.1 of the oTMPfC [REP9-235]. This is secured under Schedule 2 Requirement 10 (Traffic management) of the draft DCO [REP9-107].
- 9.9.9 Replacement land is located to the east of Brewers Wood, which forms part of Shorne Woods Country Park. The design rationale for the SWCP replacement land is, among other things, to provide a functional connection between Brewers Wood and Great Crabbles Wood, improving access between open spaces in the region. Kent County Council, as the owner and operator of SWCP, agrees that the replacement land as included in the DCO application is no less advantageous and no less in area, in accordance with s.131 & s.132 of the Planning Act 2008 (Item 2.1.54 of the Statement of Common Ground between the Applicant and Kent County Council [REP9A-052]). The approach to replacement land at this location is also agreed with Natural England (Item 2.1.19 of Statement of Common Ground between the Applicant and Natural England [REP5-038]).
- 9.9.10 The DCO application as submitted included a proposal for the construction of a new car park facility to the west of Thong Lane as part of measures to relieve congestion and capacity issues at the main Shorne Woods Country Park car park. The application also included new WCH links in and around the area to the west of Shorne Woods Country Park. The Examining Authority's Second Questions queried the impact that new recreational facilities may have on Shorne and Ashenbank Woods SSSI in terms of increased visitor numbers. Paragraphs A.4.6 to A.4.10 of Appendix A of the Environmental Statement Addendum [REP9-245] describes how users are likely to be dispersed across a wide area, including the new recreational routes to the west of Thong Lane, areas to the south of the car park (for example providing a route to Jeskyns Community Woodland) as well as to the western extent of Shorne Woods Country Park.
- 9.9.11 Thong Lane car park was removed from the Project design as described in the Notification of proposed amendments – November 2023 [REP6A-023]. The Applicant was content that no significant effects on the Shorne and Ashenbank

Woods SSSI were likely to arise as a result of the proposed new WCH routes to the south of the A2.

Effects on open space provision

- 9.9.12 The Stakeholder Actions and Commitments Register (SAC-R) [\[REP9A-060\]](#) was updated at Deadline 7 to incorporate three new commitments specific to areas of green and open space, namely the Ron Evans Memorial Field, Thames Chase and Folkes Lane Woodland (SAC-R commitments SACR-014, SACR-015 and SACR-016 respectively). In the case of the Ron Evans Memorial Field and Folkes Lane Woodland, the commitment relates to ensuring that a proportion of replacement open space is landscaped and made available for public access prior to public access to existing open space within the Order Limits being restricted; in the case of Thames Chase, the commitment ensures that a proportion of replacement open space is landscaped and made available for public access by the end of the third year of the construction period.
- 9.9.13 Further SAC-R commitments (SACR-020 and SACR-023) were added at Deadline 8 committing to engagement activities targeted at specific wards and communities during the construction period in Thurrock (SACR-020) and Kent (SACR-023) specifically in relation to use of areas of open space, WCH routes and the promotion of physical activity.
- 9.9.14 The Applicant has also included a commitment to ensure that the parts of the existing Orsett Fen which are not required for the A122 main line are subject to public access rights under article 54 of the draft DCO [\[REP9-107\]](#). There is an additional commitment in the SAC-R (SAC-R001) which secures public access rights during construction. Together these commitments provide an enhanced level of public access rights over the historic area of the Mardyke and Orsett Fen.
- 9.9.15 The Project seeks to generate a positive legacy of green infrastructure, and the design proposal includes provision of a recreational landscape for north-eastern Gravesend and Chalk, currently an area of limited public open space provision. Design Principle S3.04 secures the provision of a new recreational landscape (named as Chalk Park), which would both provide open space of over 35ha and create a desirable separation between the South Portal and the edge of Gravesend.
- 9.9.16 Design Principle S9.02 describes the creation of a new public park, known as Tilbury Fields, at Goshems Farm. In response to comments received from the Thurrock's Local Impact Report at Deadline 1 and the Examining Authority at Deadline 3, the Applicant has developed a design principle outlining that all walking, cycling and equestrian routes will be designed in accordance with the latest standards and guidance with a surface appropriate for its intended use. Design Principle (Clause PEO.03) requires that surfacing needs to balance design quality and practicality, within the context of the local environment. Further details of surfacing materials will be developed at detailed design.

Provision of healthcare services during construction

- 9.9.17 Following stakeholder discussions as part of the Community Impacts and Public Health Advisory Group (CIPHAG) meetings, the DCO application contained a

commitment in the REAC (PH002) relating to the provision of healthcare services for the construction workforce.

- 9.9.18 Since the submission of the DCO, further discussions have taken place with the Integrated Care Boards (ICBs) and Thurrock Council in relation to the wording of commitment PH002. The Applicant has made subsequent modifications to the wording of the commitment at Deadline 6 and Deadline 7 in response to comments made by the ICBs and Thurrock Council. The revised final wording included a commitment to engage with and have regard for the views of the ICBs in relation to the medical and occupational healthcare services to meet the needs of the construction workforce, and to share information relating to uptake of services by the construction workforce and relevant incident data with ICBs on a six-monthly basis. This amended wording has resolved concerns raised by the NHS Kent and Medway ICB and the NHS North East London ICB in relation to effects of the construction workforce on local healthcare services. However, the NHS Mid and South Essex ICB and Thurrock Council remain unsatisfied with the changes and this matter remains not agreed in the Statements of Common Ground with both these organisations.
- 9.9.19 Engagement has commenced with Contractors in relation to the provision of healthcare services for their workforce, building on their understanding and experiences of the types of services likely to be most appropriate for their workers and how these should be designed and managed to ensure maximum take-up by construction workers.

Effects relating to the Whitecroft Care Home

- 9.9.20 Whitecroft Care Home lies partly within the Order Limits; the care home building itself is within 300m of the Stanford Road compound. The care home building would not be affected by the permanent or temporary use of land for construction of the Project, although a small area of land owned by the care home would be required permanently for the works to connect the existing driveway to the realigned Stanford Road. Most of the compound would be used for storage, equipment and stockpiling, in addition to providing space for car parking, offices, welfare facilities and workshops. Access to the care home would be maintained at all times during the construction phase.
- 9.9.21 Mitigation measures identified in relation to construction traffic management and community engagement are set out in the CoCP [[REP9-184](#)]. Impacts on the care home from an operational perspective were originally assessed in ES Chapter 13 as being minor adverse.
- 9.9.22 ES Chapter 13 also noted that there may be adverse effects experienced by sensitive populations including older people and people with pre-existing health conditions/disabilities as a result of exposure to construction noise; the chapter notes that people may experience noise effects differentially within a population and that even relatively small changes in noise levels can have a disproportionate effect on people's wellbeing / quality of life. This was also reported in the Health and Equalities Impact Assessment [[REP3-118](#)].
- 9.9.23 Several representations have been made by Whitecroft Care Home during Examination, notably at Deadlines 1,5 and 7, and at CAH2, CAH5 and ISH8. The Applicant provided responses to representations received, notably [[REP2-051](#)], [[REP6-098](#)] and [[REP8-119](#)] respectively in relation to written

representations. Discussions between the Applicant and the Whitecroft Care Home are ongoing.

- 9.9.24 Heads of Terms for an Acquisition by Agreement of the care home site have been submitted to the Whitecroft Care Home's agent for their consideration. This option would allow them to relocate away from and therefore avoid any potential impacts of construction. The ES Addendum for Deadline 8 [[REP8-092](#)] provided an update to the findings of ES Chapter 13: Population and Human Health in the event that the purchase of the care home by the Applicant was agreed. An amended assessment was provided in relation to the construction impacts on care home capacity and bedspace provision should the purchase be agreed; the assessment identified that although there is a shortfall in care home spaces identified within the Thurrock Council area, this is likely to be met by provision currently in the planning pipeline, together with the provision of a replacement care home facility by the current operator of the Whitecroft Care Home. This would result in a minor adverse level of effect which is not significant. There was no new information available on the status of the proposed purchase for inclusion at Deadline 9.
- 9.9.25 As a result of the Applicant making provision to purchase the care home, existing residents would be relocated to a replacement facility. Whilst residents of the care home may experience temporary disruption associated with relocation to a new home, the acquisition of the care home ensures that residents (who exhibit protected characteristics by virtue of age and/or disability under the Equality Act 2010) would not be exposed to potential differential effects associated with construction noise activities during the construction phase of the Project. The Applicant set out how the draft Development Consent Order makes provision that if appropriate the Care Home could be acquired with a view to relocation (see Annex A.8 of the Applicant's post hearing submissions for ISH14 [[REP8-114](#)]). In response to this the Care Home owners have stated at Deadline 9A that they agree that this achieves the outcome they seek [[REP9A-143](#)].

Travellers' sites

- 9.9.26 There are a number of travellers' sites located in close proximity to the Order Limits for the Project with the potential to be affected by environmental change during construction and operation. Privately owned travellers' sites within Gravesham Borough Council, Thurrock Council and the London Borough of Havering comprise sites located off Rochester Road (Gravesham); a site located at the end of Lower Crescent, Linford (Thurrock); and the Fair oak Showman's Quarters, Railway Sidings and Tyas Stud Farm sites (Havering). The Gammonfields Way travellers' site in Thurrock is managed by Thurrock Council.
- 9.9.27 The Gammonfields Way travellers' site would be affected as a result of land being permanently acquired for the Project. Travellers would therefore be directly impacted, with the loss of their existing site and relocation to an adjoining area. A further traveller site at Linford would be temporarily impacted during construction due to works associated with utilities diversions, however this is not considered to be significant in terms of duration or type of activity. Potential impacts affecting the remaining sites relate primarily relating to amenity impacts during the construction phase.

- 9.9.28 During Examination, the potential for impacts on traveller sites during construction was raised at ISH8, notably whether suitable regard had been given to the impact of the construction process and duration on sites, given the propensity for greater noise exposure. The traveller sites located on Rochester Road (Ashlea View and View Point Place) were highlighted as particular locations of concern by Gravesham Borough Council. A separate assessment of potential noise impacts was undertaken for all travellers sites, as set out in Section 7.9 of the Health and Equalities Impact Assessment [[REP7-144](#)] (paragraphs 7.9.41 and 7.9.42). In order to mitigate the potential for significant effects, best practice measures (BPM) and other construction phase mitigation would be implemented through the controls set out within the REAC. Additionally, when further details of the construction method and design are known, the Contractors would develop a Noise and Vibration Management Plan (REAC NV002) to control noise as far as reasonably possible under BPM. As such it has been concluded that construction noise would be suitably controlled to a level where it would not constitute a significant effect at any of the traveller's sites identified.
- 9.9.29 In relation to the Gammonfields Way traveller site, a replacement site has been identified directly to the west of the existing site in consultation with stakeholders; the replacement site would be equivalent to the existing in terms of size, quality and access arrangements from Long Lane. This has been secured by Requirement 13 of the draft DCO [[REP9-107](#)] and by Design Principle S11.12 as described in Section 13.5 of this chapter and set out in Design Principles [[REP9-227](#)].
- 9.9.30 Construction impacts on the travellers' site relate to changes in quality / amenity as a result of the proximity of construction activities. Two construction compounds (Long Lane Compounds A and B) would be created in the vicinity of the travellers' site to support construction activities associated with the proposed A122/A13 junction. The magnitude of impact associated with these changes has been assessed as minor, resulting in effects that would be slight adverse and therefore not significant. Access to the site and land to the west of the Railway Sidings travellers' site, Havering would be required for water diversion works with access to the site maintained at all times. Any impacts are therefore likely to be negligible in magnitude and not significant.
- 9.9.31 Throughout the Examination, engagement has been extensive between the Applicant, the Traveller community at the Gammon Field site and Thurrock Council. The details of engagement activities are clearly summarised in Appendix B of the HEqIA [[REP3-118](#)]. The Applicant, Thurrock Council and the Travellers Community have agreed the pitch layout leading to the indicative layout being appended to Design Principle S11.12. In a meeting held on 5 October 2023, the Applicant confirmed that it is in a position and has funding available to acquire any Thurrock Council owned land, rights or temporary land by agreement at such point the Council may wish to dispose of the land or alternatively enter into an Option Agreement to secure the drawing down of the land in the future. Thurrock Council confirmed in an email on 20 October 2023 that they would like to enter into an Option Agreement for land within its ownership. Both parties are working towards an agreement [[REP6-030](#)].
- 9.9.32 A representation by Thurrock Council was made at OFH5 in relation to SACR-008 [[REP9A-060](#)]. The Applicant submitted a post hearing response at

Deadline 8 [[REP8-112](#)] outlining its stance stating the commitment is robust, enforceable and binding.

Wider network impacts

- 9.9.33 The Applicant is aware that impacts on Population and Human Health are not limited to the Order Limits and areas of operational severance were identified within Strood and Tilbury. Agreements have been reached with Medway Council and Thurrock Council for the provision of crossing points to mitigate severance effects. Additionally, in acknowledgement of the impact of additional HGV traffic on the A228 in Snodland (Tonbridge and Malling) provision has been made for active travel improvements in the vicinity of the A228 to assist vulnerable road users. The Applicant has actively sought solutions to impacts on Population and Human Health receptors outside of the Order Limits and has worked with local authorities to develop and implement mitigation (as detailed above).

Summary of Population and Human Health matters during Examination

- 9.9.34 During Examination the following issues were raised in relation to this topic:
- a. Wider recreational impacts associated with the Project, including in relation to Shorne Woods Country Park and Shorne and Ashenbank Woods SSSI
 - b. The impact of the Project on open space provision, including commitments specific to areas of green and open space and in relation to the Project's positive legacy of green infrastructure
 - c. The potential impacts of the construction workforce on the provision of healthcare services and the associated wording of commitment PH002 in the REAC
 - d. Health and equalities impacts as they relate to residents of the Whitecroft Care Home, associated mitigation and discharging the Applicant's Public Sector Equality Duty.
 - e. The impact of the Project on Travellers' sites along the route of the Project, primarily during construction, and including the relocation of the Gammonfields Way Travellers' site.
- 9.9.35 The Applicant has provided responses to the issues raised by referring to the assessment made in ES Chapter 13: Population and Human Health [[APP-151](#)], supporting ES appendices and REAC.
- 9.9.36 For this topic, the areas that are not agreed by the end of Examination are as follows:
- a. The mitigation provided by the Project at the Whitecroft Care Home. There are ongoing discussions between the Applicant and the care home operators. Heads of Terms for an Acquisition by Agreement of the care home site have been submitted to the Whitecroft Care Home's agent for

their consideration. However, the issues are not resolved at the end of Examination.

- b. For Thurrock Council and the NHS Mid and South Essex ICB, the issue relating to effects of the construction workforce on local healthcare services remains not agreed.
- c. A number of other matters relating to population and human health remain not agreed with Thurrock Council in their SoCG [[REP9A-040](#)].

Topic conclusion

- 9.9.37 The output of the population and human health assessment has been used to determine compliance with the NPSNN. Compliance against the policy requirements of the NPSNN is reported in various places in the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. Matters related to health are addressed in paragraphs 6.4.77 to 6.4.83 of the Planning Statement [[REP9-215](#)]; matters related to public open space are addressed at paragraphs 6.5.266 to 6.5.273; matters related to walkers, cyclists and horse riders are addressed at paragraphs 6.3.12 to 6.3.14 and 6.5.326.
- 9.9.38 It is the Applicant's position that, while there have been changes made to the Project during the course of the Examination Hearings as described above in order to respond to important matters raised by IPs, these changes have sought to improve the Project overall and do not materially alter that assessment of policy accordancy.
- 9.9.39 The assessment is compliant with principles contained in paragraphs 4.81 and 4.82 of the NPSNN (relating to the need to identify and set out the assessment of significant adverse health impacts and to identify measures to avoid, reduce or compensate for adverse health impacts as appropriate, respectively).

9.10 Road drainage and the water environment

Flood risk management

- 9.10.1 Whilst the Applicant has sought to avoid development within the floodplain, given the linear nature of the Project, and its setting, this has not been possible in all locations. The Project has been subject to a detailed Flood Risk Assessment [[APP-460 to APP-464](#), [REP1-171](#), [APP-466 to APP-468](#) and [REP7-130](#)], that has been informed by thorough engagement with the Environment Agency and Lead Local Flood Authorities, desk study and flood modelling. The FRA has assessed both flood risk to the Project from a range of sources, accounting for the predicted effects of climate change, and flood risk arising from the Project.
- 9.10.2 A suite of flood protection and mitigation measures have been embedded in the design and are secured through Project commitments detailed in the Register of Environmental Actions and Commitments within the Code of Construction Practice [[REP9-184](#)]. Key commitments are described in RDWE029, RDWE037, RDWE039, RDWE040 and RDWE046.

- 9.10.3 One of the mitigation measures is the provision of floodplain compensation within the catchments of the West Tilbury Main, the Mardyke and the West Mardyke tributary. The compensation areas are illustrated in Drawing Nos. 00180, 00181 and 00182 in Part 9 Annex C of ES Appendix 14.6 [APP-477] and these will function to compensate for volumes of floodplain storage that would be lost due to the construction of Project earthworks.
- 9.10.4 The mitigation has been tested in the hydraulic flood models of the Mardyke and West Tilbury Main and the principle and their outline designs have been proven to mitigate for any increases in flood risk caused by the Project.
- 9.10.5 The floodplain compensation area in the Mardyke catchment is proposed to serve a number of other functions, having been integrated into a new area of wetland planting, where new ditches and waterbodies would be created to provide habitat for water voles and aquatic invertebrates.
- 9.10.6 In the Statement of Common Ground between the Applicant and the Environment Agency [REP9A-006], it is noted, under item 2.1.65, as a matter agreed that the FRA demonstrates compliance with the requirements that there should be no net loss in floodplain storage resulting from the Project and that the Project must not impede flood flow and/or reduce storage capacity thereby increasing the risk of flooding elsewhere.
- 9.10.7 Through Examination new information relevant to flood risk has become available. The Environment Agency has published updated Thames Estuary extreme water level data and a revised Thames Estuary 2100 Plan. In addition, the government's Ministerial Statement (UK Parliament, 2023) has proposed a two year rephasing of construction. The Project programmed completion date and Project lifetime will therefore shift by two years from 2030 and 2130 respectively to 2032 and 2132.
- 9.10.8 A technical note has been produced and submitted to the Examining Authority, as Annex C.1 to the Statement of Common Ground between the Applicant and the Environment Agency [REP9A-006], that considers the implications of the new information, and the two-year delay, on the conclusions of the Flood Risk Assessment (FRA). The assessments conclude that the new information and the planned two-year delay in completion of the Project, do not have a significant impact on the conclusions of the FRA submitted with the DCO application. The Applicant has engaged with the Environment Agency on this matter, who are also in agreement with this conclusion, as documented under item 2.1.80 in the Statement of Common Ground between the Applicant and the Environment Agency.

Coalhouse Point Habitat Creation

- 9.10.9 Wetland habitat creation on agricultural land at Coalhouse Point is included in the Project design, comprising a number of scrapes and connecting ditches. The site is located on the landward side of a relatively low-level tidal River Thames flood defence embankment (providing an approximate two-year standard of protection).
- 9.10.10 Water levels in the scrapes and channels would be controlled by a number of hydraulic structures. These structures would be inspected and maintained during the Project lifetime as secured by commitment RDWE014 within the

Register of Environmental Actions and Commitments within the Code of Construction Practice [REP9-184]. RDWE014 was strengthened during the course of Examination to address stakeholder representations.

- 9.10.11 A new self-regulating water inlet structure through the low-level tidal River Thames flood defence embankment would enable supply of water to the wetland area when required.
- 9.10.12 Through Examination hydraulic modelling has been undertaken to assess the impacts of the proposed Coalhouse Point wetland area on flood risk to third party infrastructure [REP6-102]. The modelling results have informed technical engagement with the Environment Agency as described in item 2.1.35 RRE within the Statement of Common Ground between (1) the Applicant and (2) the Environment Agency [REP9A-006] which has reached a status of a matter agreed.
- 9.10.13 The modelling has assessed impacts following breach and/or overtopping of the low-level River Thames flood embankment adjacent to the wetland area, and failure of the proposed water inlet structure, for a range of events. The results demonstrate that the proposed wetland area will not have an adverse impact on flood risk elsewhere.

Manor Farm

- 9.10.14 The proposed Project cutting at the M25 junction would sever a series of field ditches running east–west which feed the farm irrigation reservoir situated to the north of Dennises Lane at North Ockendon. The reservoir is also fished as a well-known carp lake by a private syndicate. The Project would also sever the irrigation system distributing water from the reservoir to the fields east of the M25.
- 9.10.15 The Applicant, the landowner and their agent have had extensive discussions for more than three years to agree a solution for the impacts on the above assets. The Applicant is compensating the landowner (the Mee family) for the professional fees of a specialist water consultant to advise him. In agreement with the landowner’s consultant, the Applicant installed a flow meter device and rain gauge in December 2022. In July 2023 the landowner’s consultant shared with the Applicant the Manor Farm Options Report (updated in November 2023).
- 9.10.16 In August 2023 (Deadline 2) the Applicant responded with [REP2-051] to WR [REP1-437] submitted by Gateley Legal on behalf of Stuart Mee, Richard James Mee and AP Mee. In this response the Applicant acknowledged the impacts on Manor Farm irrigation assets and reiterated that the options report submitted by the landowner’s consultant was under active consideration. The Applicant also expressed hope that a detailed solution would be agreed by the end of Examination but if not, the landowner’s position was protected by commitments in the Register of Environmental Actions and Commitments (REAC) [REP9-184] where RDWE016 provides for the Protection of Irrigation Supply and Infrastructure at North Ockendon and RDWE038 provides a commitment to avoid adverse impacts on groundwater at Hall Farm and other locations. SACR-030 [REP9A-060] was submitted at D9 and includes an additional commitment to safeguard the water supply and irrigation supply at Manor Farm.

- 9.10.17 On 3 October 2023 a Joint Statement between the Applicant and Mr Mee [\[REP5-125\]](#) was submitted to the Examining Authority. The statement reiterated that both parties were working together towards a legal side agreement to protect the Mees' operations. The Joint Statement includes an extract of the unsigned version of the Statement of Common Ground [\[REP7-191\]](#) which shows that this matter is "agreed" subject to detailed design and legal agreement. In the October statement both parties acknowledged the importance to maintain the dialogue, despite the SoCG not being concluded at that time. An updated SoCG was subsequently submitted by the Applicant at Deadline 9A [\[REP9A-074\]](#) again on an unendorsed and unsigned basis.
- 9.10.18 An updated Joint Statement, including the updated 'Manor Farm Options Report' V2 (Nov 2023), was submitted at Deadline 8 [\[REP8-188\]](#) highlighting progress. Regular meetings continue to be held to develop the options and strategy within the report with the latest meeting being held on the 18/12/23 and the next scheduled for the 25/01/24. It is proposed that the report's conclusions will ultimately be agreed and secured within a legal side agreement which is also being drafted at present. The two parties continue to have regular engagements including at the meeting on the 18th December 2023. The Applicant is committed to continue negotiations with the landowner and to complete the legal side agreement as soon as possible. In the absence of an agreement being reached the REAC item (RDWE038) provides appropriate mitigation.

Water Framework Directive

- 9.10.19 The Water Framework Directive (WFD) Assessment prepared for the Project [\[APP-478\]](#) has assessed the potential for Project activities to cause deterioration of or prevent implementation of planned measures for surface, groundwater and transitional waterbodies within the Project's Zone of Influence.
- 9.10.20 The assessment was progressed in close collaboration with the Environment Agency. As detailed in the Statement of Common Ground between (1) the Applicant and (2) the Environment Agency [\[REP9A-006\]](#) Annex C.12, the Environment Agency have confirmed that the content of the Water Framework Directive Assessment is supported and that objections are unlikely based on the submitted information and discussions.
- 9.10.21 During Examination, in response to written questions from the Examining Authority and at Issue Specific Hearing 9, further information has been provided by the Applicant with regard to the Project's approach to the culverting of watercourses in the context of the WFD [\[REP6-090\]](#).
- 9.10.22 Culverting of one main river is proposed, the West Tilbury Main, in addition to culverts of several ordinary watercourses. The effects of culverting on biological quality, which includes fish, macrophytes and macroinvertebrates; hydromorphology, which includes aspects such as flow and sediment transport; and physio-chemical quality have been assessed in Tables 4.1, 4.2 and 4.3 within the WFD Assessment [\[APP-478\]](#). The assessment concludes that there is a negligible risk of deterioration in status at the waterbody scale. The conclusions drawn are in consideration of the culvert design proposals secured within the Register of Environmental Actions and Commitments (RDWE013, RDWE014, RDWE030, RDWE031) [\[REP9-184\]](#).

- 9.10.23 The Applicant's position is that no further amendments to the culvert designs currently proposed are practicable and notes that the Environment Agency agreed following a Choosing by Advantage workshop in December 2019, that the current design represents the most appropriate option and that there are no alternative more favourable options to crossing the West Tilbury Main watercourse [[REP6-124](#)].
- 9.10.24 Several compensatory improvements on the West Tilbury Main watercourse and in the Mardyke catchment are also included in the Project Design.
- 9.10.25 ES Chapter 14: Road Drainage and the Water Environment [[APP-152](#)] concludes no significant adverse effects on water environment receptors, land drainage and flood risk. As demonstrated by Appendix 14.8 of the ES [[APP-479](#)], the Project accords with the requirements of all relevant water environment planning policy and legislation and can therefore be consented on road drainage and the water environment grounds.

Summary of Road Drainage and Water Environment matters during Examination

- 9.10.26 During Examination the following issues were raised in relation to this topic:
- a. Interested parties requested further information about the water supply to the proposed Coalhouse Point wetland habitat creation area. Queries included future maintenance responsibilities and the potential for the proposals to impact on flood risk to third party assets.
 - b. Questions were raised with regard to watercourse crossing designs, in particular seeking clarification on the approach to avoiding or reducing the amount of watercourse culverting.
 - c. The provision of continued irrigation water supplies to Manor Farm during construction and operation of the Project
 - d. New data was published by the Environment Agency which required analysis against the conclusions of the Project's Flood Risk Assessment.
- 9.10.27 In response the Applicant has:
- e. undertaken an assessment of flood risk specific to the Coalhouse Point wetland creation area [[REP6-102](#)] that confirms no impacts on flood risk to third party assets, and strengthened commitment RDWE014 within the Register of Environmental Actions and Commitments [[REP8-044](#)]) to secure maintenance of the hydraulic structures that will manage and maintain water supplies and water levels within the wetland.
 - f. provided clarity in response to the Examining Authorities written questions and through representations at Issue Specific Hearings 4 and 11 on the Project approach to watercourse crossings and culverting.
 - g. continued discussions with the landowner of Manor Farm regarding the form that the solution to provision of an alternative water supply will take (as

secured by REAC commitment RDWE016 within the Register of Environmental Actions and Commitments [[REP9-184](#)]).

- h. Assessed the new flood risk data sets published by the Environment Agency and secured Environment Agency agreement that the new data has no significant impact on the conclusions of the Flood Risk Assessment (see item 2.1.80 within the Statement of Common Ground between the Applicant and the Environment Agency [[REP9A-006](#)]).

9.10.28 For this topic the only area that is not agreed by end of Examination is the following:

- a. The Environment Agency’s position regarding culverting. As described in item 2.1.29 of the Statement of Common Ground between the Applicant and the Environment Agency [[REP9A-006](#)]), the Environment Agency has a formal policy against culverting. Whilst the Project design seeks to reduce culverting, given the linear nature of the Project and constraints linked, for example, to topography, culverting cannot be entirely avoided.

Topic conclusion

- 9.10.29 The Applicant has carried out an assessment on road drainage and the water environment to determine compliance with the requirements of the NSPNN. The Applicant’s response to each of the paragraphs of the NPSNN relevant to the water environment is set out in Appendix 14.8 and confirms that the Project has demonstrated the appropriate management of surface and groundwater flows and quality. Compliance has been supported through a comprehensive flood risk (Appendix 14.6 [[APP-460](#), [APP-461](#), [APP-462](#), [APP-463](#), [APP-464](#), [REP1-170](#), [APP-466](#), [APP-467](#), [APP-468](#), [REP7-130](#)]) and groundwater (Appendix 14.5 [[APP-458](#) and [APP-459](#)]) assessments. Compliance with the Water Framework Directive has also been demonstrated through Appendix 14.7 [[APP-478](#)].
- 9.10.30 These matters are also considered, specifically in terms of policy accordance with the NPSNN in the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. Matters related to flood risk are addressed in paragraphs 6.5.124 to 6.5.140 of the Planning Statement [[REP9-215](#)] and those related to the Water Framework Directive at paragraphs 6.5.342 to 6.5.354. While a number of changes have been made to the Project as described above in order to reflect important matters raised by IPs, these changes have resulted in an improved Project and do not materially alter that assessment of policy accordance.
- 9.10.31 The Environment Agency as regulators of these aspects of the water environment have agreed to the conclusions of these assessments, as documented in the Statement of Common Ground between the Applicant and the Environment Agency [[REP9A-006](#)].

9.11 Carbon and Climate

9.11.1 Consideration of the impacts of the Project on Carbon and Climate are presented in Chapter 15 of the ES [APP-153]. Through the Examination there have been a number of questions and representations from Interested Parties which the Applicant has responded to in full. The following section summarises those points which were the focus of Written Questions and IP representations.

Consideration of Carbon and Climate matters during Examination

Cumulative effects of Greenhouse Gas emissions

- 9.11.2 Cumulative impacts can occur due to the Project in combination with other existing and/or approved developments.
- 9.11.3 The Applicant has carried out a cumulative assessment of the effects of the Project's GHG emissions as described in Section 15.7 of ES Chapter 15: Climate [APP-153]. The Project's transport model as detailed within the ComMA [APP-518] is inherently cumulative with regard to operational carbon emissions. This is because it takes into account the assessment of the Project and other planned developments that are likely to have an influence on the proposed road scheme.
- 9.11.4 However, unlike other EIA topics like air quality and noise, the effect of carbon emissions on climate change is not limited to a specific geographical boundary but has a cumulative global impact, causing global warming. The cumulative effect of the Project's GHG emissions has therefore been assessed at a national level, against the UK carbon budgets. The net GHG emissions (Do Something (DS) – Do Minimum (DM) scenario) were used in the cumulative assessment.
- 9.11.5 The approach was challenged by Dr Boswell / Climate Emergency Policy and Planning (CEPP), in subsequent submissions. CEPP's argument is that the calculated 'scheme only' net GHG emissions (DS-DM) do not include any other developments and therefore a cumulative assessment is missing, incurring a breach of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations).
- 9.11.6 Further to ES Chapter 15: Climate [APP-153], the Applicant has provided an additional clarification in its Deadline 6 submission [REP6-094] (paragraphs 2.1.59–2.1.66) and its Deadline 8 submission [REP8-119] (Section 2, paragraphs 23-26) to explain why the assessment should be considered cumulative, providing further clarification on:
- Why the assessment has a cumulative component.
 - Why the net GHG emissions (DS-DM) were used in the assessment and not the emissions related to the DS scenario.
- 9.11.7 The considered view of the Applicant is that the adopted methodology, although different from other EIA topics due to the specific character of the impact of GHG emissions, contains a cumulative component. Hence the adopted methodology is compliant with the EIA Regulations, as these do not prescribe

any methodology nor exclude the adopted methodology for the cumulative assessment.

- 9.11.8 The matter was also considered in the case of *R (Boswell) v Secretary of State for Transport [2023] EWHC 1710*, where the High Court held that the approach to assessment of the cumulative impacts of carbon emissions for three road schemes along the A47 in Broadland, Norfolk was consistent with the EIA Regulations and therefore lawful. The approach to the cumulative assessment in the A47 schemes is substantively the same as that presented by the Applicant in ES Chapter 15: Climate [APP-153].
- 9.11.9 Dr Boswell was given permission to appeal the Boswell judgment on 18 October 2023 and at Deadline 6 [REP6-171] states that the judgment ‘... cannot be relied upon to support any assertion by the applicant or any parties whilst the matter is still being resolved by the Court of Appeal’.
- 9.11.10 The Applicant has also provided its position on the status of the judgment in its Deadline 6 submission [REP6-094] ‘It is important to emphasise, and the Examining Authority should be in no doubt, that the granting of this permission to appeal does not quash the Boswell decision. As far as the Applicant is aware, no date has been listed for the hearing of the substantive appeal and the High Court judgment remains extant unless and until it is overturned by the Court of Appeal’. The Applicant is now aware that a date for the substantive hearing has been set for January 2024.

Carbon budgets - delivery risk

- 9.11.11 In ES Chapter 15 [APP-153], the assessment of the significance of the effects of the Project’s GHG emissions is based on the policy test in paragraph 5.18 of the NPSNN (Department for Transport, 2014): ‘Therefore, any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets’.
- 9.11.12 In paragraph 11 of its Deadline 7 submission [REP7-231], CEPP raised ‘...the need identified in my RR, to assist the ExA and the SoS, for ‘a robust risk assessment of the related policy delivery, and a robust assessment methodology of the significance of the greenhouse gas emissions (“GHGs”)’.
- 9.11.13 The Applicant addressed this matter in its Deadline 8 submission [REP8-119] and considers that there is no legal or policy basis to require a policy delivery risk assessment in the ES. A wider risk assessment is a matter for government as it develops, monitors and enforces its policies towards carbon reduction, employing a range of initiatives and mechanisms, not just land use planning decisions.
- 9.11.14 In its Deadline 9 submission [REP9-301] CEPP states in paragraph 69 ‘The point is that a properly risk assessed appraisal of the government policy in the CBDP for the delivery of the UK climate budgets and targets is essential context of the decision on the DCO application’.
- 9.11.15 The Applicant considers however that the Secretary of State (SoS) can reach a reasoned conclusion on the NPSNN policy test on the basis of the approach followed in Section 15.6 of ES Chapter 15 [APP-153] and be satisfied that the

effects of the Project's GHG emissions would be 'not significant' for the following reasons:

- a. The Project's GHG emissions make up a small proportion of the national carbon budgets.
- b. The Project complies with up-to-date policy and incorporates 'good practice' reduction measures (as confirmed by independent review), rendering its effects of GHG emissions as 'minor adverse' and 'not significant' in line with the IEMA approach ('Assessing Greenhouse Gas Emissions and Evaluating their Significance', 2nd edition (IEMA, 2022)).

Application of the IEMA document 'Assessing Greenhouse Gas Emissions and Evaluating their Significance'

- 9.11.16 The Applicant has provided, in addition to the assessment against the national budgets, an assessment using the IEMA guidance.
- 9.11.17 The Applicant sets out its position on the use of the IEMA 2022 guidance in ES Chapter 15 [APP-153], quoting the IEMA guidance (page 24) '*The crux of significance therefore is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050*'. This is the overarching principle against which, under the IEMA approach, the significance of effects of a project's GHG emissions can be determined.
- 9.11.18 As stated in ES Chapter 15, the Project is assessed to comply with the following criterion (on page 25 of the IEMA guidance) 'A project that is compatible with the budgeted, science based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect that is not significant. It may have residual emissions but is doing enough to align with and contribute to the relevant transition scenario, keeping the UK on track towards net zero by 2050 with at least a 78% reduction by 2035 and thereby potentially avoiding significant adverse effects'.
- 9.11.19 The Applicant has elaborated on its position in its Deadline 6 [REP6-094] and Deadline 8 [REP8-119] submissions, in response to CEPP's comments in its Deadline 4 and Deadline 7 submissions. Some key arguments are summarised below.
- 9.11.20 The Applicant considers that the approach in the IEMA guidance is, besides the contextualisation against the national budgets, in the first instance about assessing the rate of emissions reductions or carbon intensity reduction being consistent with applicable existing and emerging policy requirements and good practice design standards.
- 9.11.21 The innovative Carbon and Energy Management Plan [REP9-239] was designed for the Project to align with and contribute to securing the Net Zero Strategy (NZS) targets (in terms of carbon intensity reduction that aligns with the net zero trajectory) and thus complies with the IEMA principle and criterion. Through 22 secured carbon commitments, the Carbon and Energy

Management Plan aims to drive down the carbon intensity of construction of the Project as much as possible and to set new industry best practice. The carbon limit to which the Applicant secured in version 1 of the Carbon and Energy Management Plan (1.763 tCO_{2e}) was reflective of industry best practice. This was confirmed by independent review and market tested through procurement.

- 9.11.22 Driving down the carbon intensity has not ended at the DCO application submission as the Carbon and Energy Management Plan [REP9-239] includes actions for the procurement, detailed design and construction phases as well. The carbon commitments related to the procurement phase have already resulted in a substantial further reduction of the maximum level of construction phase emissions to 1.44 million tCO_{2e}.
- 9.11.23 This reduction provides demonstrable evidence of the successful implementation of steps three and four of the Carbon and Energy Management Plan (to select the right partners and set minimum standards) and carbon commitment CBN01 (*'The Applicant will include carbon as a key criterion in the evaluation of tenders for the three design and build contracts'*).
- 9.11.24 Moreover, the reduction provides confidence that the mechanisms committed to in the Carbon and Energy Management Plan [REP9-239] would be effective in further reducing the Project's GHG emissions during the detailed design and construction phase, to align with emerging policies and near future best practice. Further details of the Contractors' further emissions reduction plans would be reported and committed to in the second iteration of the Carbon and Energy Management Plan.
- 9.11.25 As outlined in the ES Chapter 15, implementation of the policies of the Department for Transport's 2021 plan *'Decarbonising transport: a better, greener Britain'* would reduce road-user emissions in line with the budgeted science-based 1.5°C trajectory set out through the UK carbon budgets.
- 9.11.26 The Applicant furthermore considers that this approach is more meaningful than comparison against sub-national carbon budgets, as such contextualisation does not demonstrate alignment with 'best practice' and the net zero trajectory (in terms of carbon intensity). Moreover, there is no agreed methodology to assess the significance based on such contextualisation. The Applicant refers to page 27 of the IEMA guidance that states: *'It is down to the practitioner's professional judgement on how best to contextualise a project's GHG impact.'*
- 9.11.27 The Applicant disagrees with CEPP that the Project GHG emissions would have a 'major adverse' effect based on the IEMA guidance. It is clear that the Project would not be assessed as 'major adverse' according to the criterion provided in box 3 of the IEMA guidance *'Major adverse: the project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero.'*

Thurrock Council's request for a localised assessment

- 9.11.28 The Examination Authority posed the following ExQ1 2.2.1 Question to Thurrock Council: 'In its Deadline 1 submission at Appendix K [REP1-292],

Thurrock Council appears to be calling for a localised assessment of climate and carbon. 1. Can the Council explain the national policy and scientific basis for such an assessment? 2. Please refer to any other made DCO's where such an approach has been taken'.

- 9.11.29 Thurrock Council responded at Deadline 4 [REP4-353], the Applicant responded to Thurrock's response at Deadline 6 [REP6-096] to which Thurrock Council subsequently responded at Deadline 7 [REP7-228]. Based on and further to these submissions, the Applicant summarises its closing position on the matter below.
- 9.11.30 In its Deadline 4 submission, Thurrock Council defines 'localised assessment' in terms of '*assessed the significance of GHG emissions in the context of...local emission budgets*' (top of page 10 and top of page 15) or '*show approaches to setting local...budgets and targets to determine significance*' (page 10).
- 9.11.31 In the Bristol Airport extension case (Bristol Airport Action Network Co-ordinating Committee v Secretary of State for Levelling Up, Housing and Communities [2023] EWHC 171 (Admin)), the judge confirmed that "... I am in no doubt that the Panel did not act irrationally in giving the issue of local carbon budgets no weight, on the ground that such budgets have no basis in law or in policy". Whilst that case related to a local planning application where the legal and policy framework is different, it nevertheless clarifies the status of local carbon budgets in the planning system. For the Project, as a Nationally Significant Infrastructure Project (NSIP), the relevant policy is the NPSNN. The NPSNN is silent on local carbon budgets and refers only to the national budgets made under the Climate Change Act (CCA) 2008.
- 9.11.32 This gives significant support to the approach the Applicant has taken in the ES, which is (in the same way as other road schemes) to undertake a comparison of the Project's impacts on the fourth, fifth and sixth national carbon budgets, but not any local budgets.
- 9.11.33 In its deadline 6 submission, the Applicant has substantiated that there is also no basis in the Net Zero Strategy (NZS) (HM Government, 2021), revised National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing & Communities, 2023) and the Carbon Budget Delivery Plan (CBDP) (HM Government, 2023) for a localised assessment in Environmental Statements of NSIPs.
- 9.11.34 In its Deadline 6 submission the Applicant has furthermore substantiated that the scientific basis put forward by Thurrock Council in its Deadline 4 submission is not valid.
- 9.11.35 As substantiated in detail in its Deadline 6 submission, the Applicant considers that none of the example projects provided by Thurrock Council in their deadline 4 submission in response to the second part of ExQ1 2.2.1 has undertaken a localised assessment in terms of (in the words of Thurrock Council in their response) '*assessed the significance of GHG emissions in the context of ...local emission budgets*' (top of page 10 and top of page 15) or '*show approaches to setting local ... budgets and targets to determine significance*' (page 10).
- 9.11.36 In conclusion, the Applicant considers there are no legal, policy and scientific reasons, nor precedents in recent DCOs, that call for a localised assessment in

terms of assessing the significance of effects of the Project's carbon emissions in the context of local carbon budgets and therefore the approach presented by the Applicant is entirely appropriate.

Summary of Carbon and Climate matters during Examination

9.11.37 During Examination the following issues were raised in relation to this topic:

- a. Climate Emergency Policy and Planning (CEPP) challenged that no cumulative assessment of the significance of the effects of the Project's GHG emissions has been carried out, incurring a breach of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations).
- b. CEPP challenged that a robust risk assessment of the government's net zero policy delivery should be carried out in the ES to assess the impact of the Project's GHG emissions on the ability of the Government to meet its carbon reduction targets, in support of the policy test in paragraph 5.18 of the NPSNN.
- c. CEPP considers that the Applicant has not complied with the IEMA guidance in assessing the significance of the effects of the Project's GHG emissions and states that, applying the principles of the IEMA guidance, would render the Project's impact 'Major Adverse'.
- d. Thurrock Council challenged that a 'localised assessment' in terms of assessing the significance of GHG emissions in the context of local emission budgets should have been carried out and not doing so is in breach of the EIA Regulations.

9.11.38 In response, the Applicant:

- a. provided additional clarifications that demonstrated that the adopted methodology in the ES for the cumulative assessment, although different from other EIA topics due to the specific character of the impact of GHG emissions, contains a cumulative component and complies with the EIA Regulations.
- b. put forward that there is no legal or policy basis to require a net zero policy delivery risk assessment in the ES and demonstrated that the Secretary of State (SoS) can reach a reasoned conclusion on the NPSNN policy test with the approach followed in the ES and be satisfied that the effects of the Project's GHG emissions would be 'not significant'.
- c. demonstrated that the approach followed in the ES aligns with the NPSNN policy requirements and IEMA guidance and leads to the conclusion that the significance of the effects of the Project's GHG emissions would be 'not significant'.

- d. demonstrated that there is no legal, policy or scientific basis, nor previous DCO examples, that would necessitate carrying out an assessment against local carbon budgets.

9.11.39 For this topic, all four areas described above are unlikely to be agreed by end of Examination.

Topic conclusion

9.11.40 The Applicant has produced a Carbon and Energy Management Plan [[REP9-239](#)] which sets out the Applicant's carbon ambitions for the Project. Planning Statement Appendix I Carbon Strategy and Policy Alignment [[REP7-138](#)] explains how the Applicant has been able to further drive down the Project's maximum level of emissions over those contained in the first version of the Plan [[APP-504](#)].

9.11.41 Matters related to carbon are also considered, specifically in terms of policy accordance with the NPSNN in paragraphs 6.3.8 and 6.5.33 to 6.5.44 of the Planning Statement [[REP9-215](#)] and in Planning Statement Appendix A NPSNN Accordance Table [[REP9-217](#)]. While a number of IPs have sought to challenge the Applicant's approach to carbon during the Examination Hearings as summarised above, the Applicant's position in response is they do not materially alter that assessment of policy accordance.

9.12 Cumulative effects assessment

9.12.1 The Applicant has, in line with NPSNN Para 4.15-4.17, undertaken a cumulative effects assessment (CEA). The CEA has been completed in line with Planning Inspectorate Advice Note 17 (Planning Inspectorate, 2019) and presents an assessment of both intra and inter project effects. The inter-project effects assessment was brought up to date from the cut-off date used in the original application documents with additional developments being reported at Deadline 1. The intra-project effects assessment was updated at Deadline 8 to reflect updates made to the landscape and visual assessments. The detail of these updates is presented in the Environmental Statement Addendum, submitted at Deadline 9 [[REP9-245](#)]. No outstanding matters have been identified during Examination in relation to the cumulative assessment topic.

9.13 Habitats Regulations Assessment

9.13.1 The Applicant's HRA assessment can be found in the Habitats Regulations Assessment Screening Report and Statement to Inform an Appropriate Assessment [[APP-487](#)], as supplemented at Deadline 8 by [[REP8-122](#)], the Applicant's Assessment of the air quality effects on European sites following Natural England advice. These documents provide the Secretary of State with the information necessary to undertake an appropriate assessment (as per Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 (as amended)) as part of the determination process for the DCO.

9.13.2 The HRA assessment report the results of the Stage 1 Screening, determining the likely significant effects (LSEs) on European sites; the Stage 2 Appropriate Assessment, assessment of adverse effects on the integrity of a European site(s) as a result of the Project alone and in-combination with other plans and

projects; and whether there is a requirement for consideration of derogation at Stage 3 HRA.

- 9.13.3 Section 3.3 of the HRA assessment [[APP-487](#)] highlights the relevant design, avoidance and mitigation measures that are proposed during construction and operation to reduce the impact of the Project on the environment and local communities. Section 6.4 of the HRA assessment [[APP-487](#)] and Section 5.2 of the Assessment of air quality effects [[REP8-122](#)] set out the likely significant effects of the Project on European designated sites have been identified for Thames Estuary and Marshes Special Protection Area (SPA), Thames Estuary and Marshes Ramsar site, Epping Forest Special Area of Conservation (SAC), and the North Downs Woodlands SAC.
- 9.13.4 Section 7.1 of the HRA assessment (as supplemented by section 6.1-6.2 of [[REP8-122](#)] in relation to the updated assessment of air quality effects) sets out the proposed mitigation that the Applicant has designed, after consultation with the appropriate environment bodies and other key stakeholders, to avoid or reduce the effects on European designated sites identified in the Stage 1 screening, with these measures secured via the Design Principles [[REP9-227](#)] and the REAC [[REP9-184](#)].
- 9.13.5 The Applicant's HRA assessment ([[APP-487](#)] and [[REP8-122](#)]) concludes that, with the appropriate measures in place during construction and operation, there would be no adverse effects on the integrity of any European designated site as a result of the construction and operation Project alone and in-combination with any other plan or project.

Consideration of HRA Matters during Examination

Assessment of air quality effects

- 9.13.6 The assessment of air quality effects on European sites has been under discussion with Natural England throughout the application and Examination period and is documented within the Statement of Common Ground [[REP9A-014](#)] items 2.1.90, 2.1.1122, 1.91, 2.1.94 and 2.1.95.
- 9.13.7 In response to advice from Natural England commenting on the Applicant's assessment of air quality effects on European designated sites (in their Relevant Representation [[RR-0784](#)] and subsequent technical note [[REP5-109](#)]), the Applicant carried out further assessment, submitted at Deadline 8 in document 9.199 'Assessment of the air quality effects on European sites following Natural England advice' [[REP8-122](#)].
- 9.13.8 The Applicant's updated assessment [[REP8-122](#)] replaces all sections in the Habitats Regulations Assessment – Screening Report and Statement to Inform an Appropriate Assessment [[APP-487](#)] relating to the methodology and assessment of effects of changes in air quality as a result of vehicle emissions.
- 9.13.9 This assessment considers the results of the air quality modelling of the concentrations of nitrogen oxides (NO_x) and ammonia (NH₃), as individual pollutants against the relevant critical levels for each European site. The assessment also considered the results of the predicted nitrogen deposition, regardless of the changes in NO_x, against the relevant lower critical loads for each European site.

- 9.13.10 This assessment concludes that there is sufficient evidence to demonstrate beyond reasonable scientific doubt that the Project, alone or in combination with any other plans and projects, would have no adverse effect on the integrity of any of the following European sites as a result of changes in vehicle emissions during construction and operation:
- Thames Estuary and Marshes Ramsar site
 - Epping Forest Special Area of Conservation (SAC)
 - North Downs Woodlands SAC
- 9.13.11 In light of this assessment, the Applicant's concludes that there would be no adverse effects on the integrity of any European site and there is no requirement for consideration of derogation at Stage 3. Natural England does not agree with the conclusion of the Stage 2 appropriate assessment in respect of Epping Forest SAC only. In the event that the competent authority does not agree with the conclusions of this assessment, there would in any event be no need to employ Stage 3 derogation of the HRA process as a mitigation measure has been assessed on a 'without prejudice' basis, shown to be feasible and would reduce the impact to below screening thresholds (see Annex C.7 of the Natural England SoCG [REP9A-014]). Further, Natural England has agreed that the mitigation measure would be appropriate and, if required to be implemented by the competent authority, would avoid any adverse effects on the integrity of Epping Forest SAC, thereby enabling the competent authority to complete the HRA process at Stage 2.

Coalhouse Point habitat creation

- 9.13.12 Section 7.1 of the Applicant's HRA [APP-487] included mitigation, in the form of habitat creation at Coalhouse Point, as shown in Figure 2.4: Environmental Masterplan Section 9 [REP7-120], that will maintain the baseline functionality of the functionally linked land associated with the Thames Estuary and Marshes SPA/Ramsar site. It would be fed by a tidal water supply from an inlet constructed within the sea wall in the south-west part of the new area.
- 9.13.13 The Applicant's HRA [APP-487] had the following commitments that related specifically to the creation of habitat at Coalhouse Point, HR010 and HR011 in the REAC within the Code of Construction Practice [REP9-184]. HR010 relates to the phasing of the creation in relation to the construction programme as well as the habitat required. HR011 relates specifically to measures required when constructing the water inlet.
- 9.13.14 During Examination, issues were raised concerning the HRA with regards to the implementation of the mitigation measures at Coalhouse Point – in particular regarding the use of a water inlet from the River Thames to supply the new habitat.
- 9.13.15 The Applicant is of the view that the proposed design for the water supply at Coalhouse Point, via a water inlet valve in the sea wall secured via the Code of Construction Practice [REP9-184], REAC commitment HR010, is the most appropriate option. It has been assessed and found to be appropriate for supplying the necessary quantity of water required for the wetland habitat creation at Coalhouse Point and provides the same quality of water (direct from

the River Thames) as would be supplied from the existing drainage arrangements from the Coalhouse Fort Moat (which is also fed via a water supply directly from the River Thames), thereby maintaining the same water chemistry as currently exists within the ditch network.

- 9.13.16 Paragraphs 9.10.9 to 9.10.13 above provide a summary of the discussions and agreements reached with regard to the hydrological design and flood risk associated with the Coalhouse Point habitat creation.
- 9.13.17 Natural England’s concern [[REP6-152](#)], discussed within Examination (ISH9 and ISH11), with regard to Coalhouse Point was regarding the risk of disturbance of the SPA/Ramsar bird features during construction of the water inlet and requested that the Applicant include a timing commitment to avoid the overwintering period.
- 9.13.18 During Examination, the Applicant made an update to commitment HR011. At submission, this stated that works will be carried out around low tides to minimise noise and vibration impacts on marine life.
- 9.13.19 The revised version of HR011 (Code of Construction Practice [[REP9-184](#)]) commits to: “*Construction of the water inlet and associated works to excavate scrapes and ditches will be undertaken between 1st April and 30th August where reasonably practicable. Where these works are taken outside of these months they shall be undertaken within a localised area over the shortest reasonably practicable time period.*” The date when these works are expected to be carried is prior to when the construction of the North Portal is expected to start, in line with REAC commitment HR010.
- 9.13.20 Natural England raised concerns with regard to the detailed design and long-term management in their Written Representation [[REP1-262](#)]. The Applicant discussed these concerns with Natural England during the Examination period and through the provision of a technical note on the matter (Annex C.17 of the SoCG [[REP9A-014](#)]) the Applicant updated the outline Landscape and Ecology Management Plan [[REP9-207](#)] to include more detailed design and management measures in relation to the habitat at Coalhouse Point which resolved Natural England’s concerns (see item 2.1.93 [[REP9A-014](#)]).
- 9.13.21 The Applicant is committed to an oLEMP Advisory Group (oLEMP Annex 1 terms of reference [[REP9-209](#)]) for the development of ecological mitigation to ensure that the measures proposed and secured in the DCO will deliver the required objectives. The Applicant has engaged with, and will continue to engage with, relevant stakeholders (including Natural England) in developing that process.
- 9.13.22 The Applicant has demonstrated through the Examination that sufficient certainty of delivery is possible and that this is secured through a number of control measures.

Summary of HRA matters during Examination

- 9.13.23 During the application period and examination, the following issues were raised in relation to the HRA:

- a. Natural England has raised a variety of points and provided advice on the methodology used to assess the effects of changes in air quality (as a result of vehicle emissions) on European sites.
- b. Natural England and other interested parties have raised points on various aspects of the implementation of Coalhouse Point habitat creation.

9.13.24 In response the Applicant has:

- a. submitted an update to the HRA in relation to the assessment of the effects of vehicle emissions on European sites [REP8-122] which has resulted in Natural England agreeing (Item 2.1.91 & 2.1.92 of the SoCG [REP9A-014]) the conclusions of the assessment for Thames Estuary and Marshes Ramsar site and North Downs Woodland SAC.
- b. Updated REAC HR011 [REP9-184] and the outline LEMP [REP9-207] resulting in Natural England agreeing the proposed mitigation at Coalhouse Point (Item 2.1.93 of the SoCG [REP9A-014]).

9.13.25 The only areas that are not agreed with Natural England are as follows:

- a. The conclusion of the assessment of the effects of vehicle emissions on Epping Forest SAC. However, Natural England indicated that this would be agreed if the “without prejudice” mitigation measure proposed by the Applicant was implemented and monitored (Item 2.1.94 of the SoCG [REP9A-014]).
- b. The detail of the methods used to assess the effects of vehicle emissions in-combination with other plans and projects (Item 2.1.90 of the SoCG [REP9A-014]). However Natural England do agree that the conclusions of the HRA in-combination assessment are appropriate.
- c. The HRA stage that assessment of underwater noise should be presented (Item 2.1.89 of the SoCG [REP9A-014]). However, both parties agree that adverse effect on site integrity can be discounted.

Topic conclusion

- 9.13.26 The Applicant’s HRA assessment [APP-487] and [REP8-122] provide the Secretary of State with the information necessary to undertake an appropriate assessment (as per Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 (as amended)) as part of the determination process for the DCO.
- 9.13.27 The Applicant’s HRA assessment [APP-487] and [REP8-122] provide the information required to comply with NPSNN paragraphs 4.22 and 4.23.
- 9.13.28 The Applicant, having due regard to Natural England’s advice, updated the construction commitments at Coalhouse Point and revised the assessment of air quality effects on European designated sites. The Applicant’s HRA assessment [APP-487] and revised assessment of air quality effects [REP8-

[122](#) conclude beyond reasonable scientific doubt that the Project alone or in combination with other plans or projects would have no adverse effect on the integrity of any European sites.

- 9.13.29 The Applicant considers, therefore, that there is no need for a derogation as required by Regulation 64 and 66 of the Conservation of Habitats and Species Regulations 2017 (as amended)). Noting Natural England’s position on at Epping Forest SAC, the Applicant has provided a without prejudice mitigation measure should the competent authority not agree with the Applicant that there is an absence of adverse effects at Epping Forest SAC. Further, Natural England has agreed that the mitigation measure would be appropriate and, if required to be implemented by the competent authority, would avoid any adverse effects on the integrity of Epping Forest SAC. Therefore, the Applicant is confident that there are no reasons why any aspect of the HRA should form an impediment to the Project gaining consent.

9.14 Effects on the Green Belt

- 9.14.1 The vast majority of the Project lies within the designated Metropolitan Green Belt within which there is a general presumption against inappropriate development. In acknowledgement of paragraphs 5.170 and 5.178 of the NPSNN it has always been the Applicant’s position that the Project represents inappropriate development in the Green Belt but that very special circumstances exist to justify the approval of the DCO application for the Project.
- 9.14.2 Planning Statement Appendix E Green Belt [[REP9-223](#)], supplemented by 9.172 Applicant’s response to ExQ2 Q13.1.3 - Green Belt Harm Assessment [[REP7-181](#)] and 9.152 Responses to the Examining Authority’s ExQ2 Appendix I – 13 Social, Economic & Land-Use Considerations [[REP6-116](#)] questions Q13.1.2 Green Belt: applicability of ‘inappropriate development’, presents the Applicant’s assessment of the Project against relevant Green Belt policy both in terms of accordance with relevant NPS policy, the NPPF to which the NPSNN refers, and also an appraisal against relevant local plan policy. The assessment follows a staged approach considering the following:
- Is the development within the Green Belt?
 - Is the development considered ‘inappropriate’ and what, if any, exemption applies?
 - Does the development have an impact on the openness / purposes of the Green Belt?
 - Are there very special circumstances that exist which should allow the development notwithstanding the inappropriateness of the development?
- 9.14.3 The Appendix confirms that the Project is in the Green Belt, is considered ‘inappropriate’ and does impact on the openness / purposes of the Green Belt. It then sets out the very special circumstances that exist.
- 9.14.4 In terms of the very special circumstances, the Appendix concludes at paragraph E.8.7 that:

“There is a clear and overriding need for the Project and there are substantial benefits as a result of the Project which are in the public interest. The need and benefits of the Project and lack of alternatives are considerable and outweigh any potential harm to the Green Belt or other any other harm that may be caused by the Project.”

Consideration of Green Belt matters during the Examination

- 9.14.5 This position has been challenged by objectors and was subject to a number of questions from the ExA.
- 9.14.6 In the second round of ExA questions ExQ2_Q13.1.2 asked the Applicant to provide further clarification on the point of ‘inappropriate development’ and to consider whether any elements of the Project could fall within the definition of ‘local transport infrastructure’ (and if so which elements) which might be considered appropriate in the Green Belt.
- 9.14.7 The Applicant undertook this exercise of ‘disaggregating’ individual component parts of the Project and presenting a view on whether or not those individual components could be considered local transport infrastructure and so not be considered inappropriate development in the Green Belt. That assessment is contained in the Applicant’s Deadline 6 submission 9.152 Responses to the Examining Authority’s ExQ2 Appendix I – 13. Social, Economic & Land-Use Considerations [[REP6-116](#)]. That assessment identified that some components (for example including balancing ponds, landscape mitigation works, local roads, earthworks, green infrastructure and WCH routes) might be considered appropriate in the Green Belt. However, despite undertaking the exercise as requested by the ExA, the Applicant reiterated its view that, overall, the whole Project should on a precautionary basis be considered inappropriate development in the Green Belt which required the demonstration of ‘very special circumstances’ in order to accord with policy. Nonetheless, the disaggregation shows that a number of elements of the Project do not cause harm to the Green Belt.
- 9.14.8 In the second round of questions the ExA also requested in ExQ2_Q13.1.3 that the Applicant provide “a more detailed assessment of the Project against the purposes for including land in the Green Belt and the impact on openness of the Green Belt” in order for the ExA to be able to establish the extent of harm caused.
- 9.14.9 The Applicant submitted its response to this question in its Deadline 7 submission 9.172 Applicant’s response to ExQ2_Q13.1.3 – Green Belt Harm Assessment [[REP7-181](#)]. That assessment addresses the Project’s accordance with policy on the purposes of Green Belt and also in terms of impacts on spatial and visual openness. It concludes in terms of the Green Belt purposes at paragraph 4.1.2 that:

“The assessment concludes that the Project would result in no harm to four of the five Green Belt purposes but recognises that it would not (in promoting development in the Green Belt) contribute to the purpose of “safeguarding the countryside from encroachment”. This is, however, recognised in policy which identifies that linear infrastructure linking areas near a Green Belt will often have to pass through Green Belt land. The Project would also deliver measures

that would support this purpose by providing new public open spaces and woodland planting and committing to maintaining their openness.”

9.14.10 It concludes in terms of openness at paragraph 4.1.4 that:

“The assessment concludes that the Project would bring harm to the spatial and visual openness of the Green Belt, and the extent of that harm would vary depending upon the specific location in the Green Belt. This varies from no change in some areas to major harm in others and in most cases the effects of construction would be absorbed into the landscape in time - as the impacts from construction are ameliorated with the inclusion and establishment of mitigation planting helping to soften the appearance of road infrastructure. However overall, there will be significant harm to the openness of the Green Belt as a result of the Project.”

Topic conclusion

9.14.11 These conclusions are consistent with those expressed in Planning Statement Appendix E [\[REP9-223\]](#). As is the overall conclusion of the paper that, as a ‘worst case’ assessment, the whole Project should be considered as inappropriate development in the Green Belt but that the Project accords with relevant NPS policy in that very special circumstances are demonstrated as summarised above and in Planning Statement Appendix E [\[REP9-223\]](#).

10 The draft Development Consent Order

10.1 The Applicant's approach

- 10.1.1 The Applicant has provided in the Explanatory Memorandum [\[REP9-109\]](#) an enhanced level of Project-specific rationale for the inclusion of the provisions below without prejudice to the requirement to do the same on any of its other projects. The issues addressed below therefore seek to provide signposting and closing submissions on matters which are “live” during the examination, and which were the subject of consideration and challenge.
- 10.1.2 The Applicant notes that it has been responsive throughout the pre-application and examination phases in proactively proposing changes in response to concerns. The Schedule of Changes to the dDCO during Examination [\[REP9-251\]](#) is evidence of that approach, and the Applicant would highlight the following changes made in response to stakeholder concerns:
- a. A reduction of the compulsory acquisition period from 10 years to 8 years. In addition, there has been an amendment to the definition of the “start date” in respect of the compulsory acquisition period in Article 27, so that the period starts to run 1 year after a legal challenge, even if that legal challenge is not yet determined.
 - b. Introduction of an appeals process where local authority approval is required.
 - c. Further consultation requirements in connection with the discharge of requirements in Schedule 2, as well as consultation requirements in connection with the procedure for the correction of plans in Article 62.
 - d. Introduction of an extension to the consultation period under Schedule 2, enabling the consultation to be extended to 42 days where a request is made to the Applicant.
 - e. Agreement with the Environment Agency on their Protective Provisions, as well as Article 68 (which has also been agreed with landfill environmental permit holders such as Tarmac Cement and Limit, and Veolia).
 - f. Agreement with the PLA on the terms of Article 18 (which relates to powers in the river Thames), Article 48 (which relates to safeguarding the tunnel in the river Thames) and Article 53 (which relates to the disapplication of the river works licensing regime).
 - g. Amendments to Requirement 13 (relating to a replacement travellers' site) in relation to conditions and enforcement provisions (these have now been agreed with Thurrock Council).
 - h. Introduction of Protective Provisions for Local Highway Authorities – contrary to all but two SRN DCO precedents – with most matters agreed.

- i. Extension of time periods in various traffic regulation provisions.
- j. Introduction of a Requirement which secures passive provision for the Tilbury Link Road.
- k. Introduction of a Requirement which seeks to address potential traffic impacts at the Orsett Cock junction.
- l. Introduction of provisions which seek to ensure that rights acquired in relation to “ABC” diversions are surrendered (under article 37).
- m. Full agreement with UKPN, Cadent, National Grid Gas, National Grid Electricity, various Internal Drainage Boards, and statutory undertakers on their Protective Provisions.
- n. Agreement with the PLA on its Protective Provisions (with the exception of two matters).
- o. Agreement with the Port of Tilbury London Limited on its Protective Provisions (with the exception of a limited number of matters).

10.1.3 These changes meaningfully respond to concerns raised by stakeholders, as well as the ExA. Generalised and unsubstantiated suggestions from Thurrock Council that the Applicant has only made limited changes therefore deserve short shrift, should be seen as entirely meritless, and must be seen in the context of both the council’s in principle objection to the Project, as well as damaging and highly novel suggestions which would conflict with Government policy (see below), increase costs (at taxpayers’ expense) and introduce needless administrative burdens. The Applicant is seriously concerned about the implications of a number of the amendments proposed by Thurrock Council on the delivery of the Project in a manner consistent with the proper use of taxpayer funds, but also for its wider NSIP portfolio, if these requests are acceded to.

10.1.4 In addition to three Issue Specific Hearings on the dDCO, the Applicant has actively engaged throughout the examination with comments on the dDCO. The Applicant has at every Deadline between Deadline 1 and Deadline 9 provided a response, or made amendments to address, comments raised on the dDCO. This can readily be seen in its post-hearing submissions in respect of ISH2 [\[REP1-184\]](#) and [\[AS-089\]](#), ISH7 [\[REP4-183\]](#), and ISH14 [\[REP8-114\]](#), as well as its responses to comments on the dDCO at Deadline 1 [\[REP2-077\]](#), Deadline 2 [\[REP3-144\]](#), Deadline 3 [\[REP4-212\]](#), Deadline 4 [\[REP5-089\]](#), Deadline 5 [\[REP6-085\]](#), Deadline 6 [\[REP7-190\]](#), Deadline 7 [\[REP8-116\]](#), Deadline 8 [\[REP9-275\]](#) and Deadline 9 [\[Document Reference 9.216\]](#). The Applicant would also highlight its initial submissions on the ExA’s commentary are contained in [\[REP8-116\]](#), and its responses to IP comments on the ExA’s commentary are in Section 14 of [\[REP9-275\]](#).

Use of precedent

- 10.1.5 The Applicant’s position on the use of precedent is set out in Section 8.2 of [REP4-212]. The Applicant considers the provisions are necessary, and effective, for the reasons set out in the Explanatory Memorandum [REP9-109]. The Applicant is mindful that across a number of recent highways DCOs, the Secretary of State has made clear that there should be a degree of consistency across made highways DCOs (see, for example, the reference to “*maintain[ing] consistency with highways DCOs*” in the M25 Junction 28 decision letter, the rationale for refusing a correction in relation to the A303 Stonehenge scheme was “*the Secretary of State’s preferred drafting and ensures a consistency of approach across transport development consent orders*”). Due regard has therefore been given to precedents.

Relevant Government policy

- 10.1.6 The Applicant would request that regard is had to Government policy in the context of the dDCO. In particular, the Applicant notes the concern expressed by the Government in Getting Great Britain building again: Speeding up infrastructure delivery (DLUHC, 2023) that “*the delivery of big infrastructure projects in our country could be much better. It is too slow. Too bureaucratic. Too uncertain.*” It goes on to state “*the system responds with more process, but longer processes are not leading to better outcomes. All these factors detract from the focus we need on delivery. We need to speed up every part of the process, ... and hardwire a focus on delivery into every part of the system.*” That is precisely the approach adopted by the Applicant, and it is requested that measures which disproportionately add time, cost or needless process are not inserted into the dDCO. The Applicant has included a robust set of controls based on its unparalleled experience in delivering NSIPs in England and, indeed, has gone beyond those precedented approaches in many cases. In light of those specific features of the Project, it is therefore respectfully requested that moving any further is rejected.

10.2 Matters for the “adjudication box” & way-finding for the ExA

- 10.2.1 The Applicant has set out the following tables which represent the up-to-date position on the areas of disagreement between the Applicant and stakeholders.
- 10.2.2 The Applicant is grateful to Gravesham Borough Council, London Borough of Havering, Transport for London, Mike Holland (on behalf of several Affected Persons), the Environment Agency, the Marine Management Organisation, the Port of London Authority and the Port of Tilbury London Limited for their productive suggestions throughout the examination. The Applicant has accommodated as many of these as it considers appropriate, and sincerely thanks them for these suggestions.
- 10.2.3 The Applicant has also accommodated a number of amendments requested by Thurrock Council, but as set out above, its outstanding suggestions seek to protract the delivery of the Project, delay the construction programme to the detriment of the local community, and increase costs (at taxpayers’ expense). The Applicant strongly believes that Thurrock Council’s suggestions are in many cases contrary to Government policy.

- 10.2.4 The Applicant considers its dDCO is based on the considerable and unparalleled experience it possesses in delivering NSIPs, and is confident the controls are not just necessary, proportionate and tied to the specified features of the Project, but go above and beyond precedents in providing further assurance and controls. It is appreciated that Thurrock Council maintains an in-principle objection to the Project, but the Applicant is seriously concerned about the implications on UK infrastructure as a result of Thurrock Council’s highly novel, inappropriate and unnecessary suggestions. At Deadline 9A, Thurrock Council states that this concern is “is plainly false”. No evidence, substantiation nor argument is provided. By contrast, the Applicant has highlighted numerous instances of why its serious concerns about Thurrock Council’s suggestions are substantiated (and does so again in the Table provided below).
- 10.2.5 For completeness, Thurrock Council’s repeated tactic of copying and pasting the same meritless submissions (unrelated to any DCO precedent or justified basis for inclusion) and claiming that the Applicant has not engaged simply because it does not agree with a response are specifically addressed in Section 12.2 of the Applicant’s responses to the Interested Parties’ comments on the dDCO [REP9-275]. The Applicant reiterates that a lack of consensus should not be conflated with a lack of engagement. Such a proposition would run the risk of placing public sector developers, like the Applicant, at the mercy of unreasonable and inappropriate requests. At Deadline 9A, Thurrock Council, again, claims that “the applicant has not engaged in many of the points raised”. This is mere assertion which can easily be dismissed by looking at the detailed responses, and signposting provided by the Applicant. The Applicant has highlighted further instances of this pattern of claiming disregard, and which are shown to be false, below.
- 10.2.6 Table 10.1 below is provided as a signposting/wayfinding tool for the Examining Authority on outstanding matters at the end of the examination. For completeness, the Applicant reviewed Deadline 9A responses made available to it to ensure they are reflected in the table below. Annex B of Thurrock Council’s Deadline 9A submission (which runs from page 72 to page 158) contains comments on the dDCO (in addition to section 3 of that document). The Applicant has reviewed Annex B and can confirm no new matters are raised, and the council has repeated its previous submissions.

Table 10.1 Matters for the “adjudication box”

Provision	Interested Party(ies)	Matter raised and Applicant’s response
Discharging authority – TC and GBC consider the appropriate discharging authority should be the local planning authority	GBC, TC	The Applicant considers that the Secretary of State is the appropriate discharging authority for the matters identified in Schedule 2 of the dDCO. The Applicant’s approach on this is set out in Section 6.3 of the Explanatory Memorandum [REP9-109] which sets out 10 strong and robust reasons for maintaining the Secretary of State as the discharging authority. In short, the approach is necessary given the number of inter-connected works which cross local authority boundaries and the need for related and consistent decision making. The Secretary of State has been the discharging authority for National Highways DCOs in all but one case (which is not relevant as it was made during the transition

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>period between the Highways Agency and Highways England).</p> <p>This reflects arrangements in place between the Applicant and the DfT, but also avoids inconsistent decision-making, delays, and additional applications being required in respect of the same works to different discharging authorities. The Applicant notes it has, where a matter is discrete and unlikely to involve works or matters which cross local authority boundaries, specified appropriate discharging authorities (e.g. Requirement 13 in relation to the travellers' sites).</p> <p>Whilst an extremely limited number of local authorities have objected to the proposed discharging authority, most parties have either supported that approach or not objected to the Secretary of State being the discharging authority under Schedule 2 (e.g., Kent County Council, Essex County Council, Natural England, the Environment Agency, TfL, the Port of Tilbury London Limited, and the Port of London Authority). In addition, a number of parties have put forward suggested Requirements where the Secretary of State is the proposed discharging authority (e.g., the joint submission [REP6-163] from the Port of Tilbury London Limited, DP World, Thames Enterprise Park proposes the Secretary of State as the discharging authority). The Applicant further notes that even parties who object to the position of the Project in principle have suggested Requirements in which the Secretary of State is the discharging authority (see, for example, Annex B.2 and B.3 of Thurrock Council's submission in [REP7-228], and Gravesham Borough Council's submission in [REP8-131]).</p>
Article 2 (Interpretation) - Definition of "authorised development"	PLA	<p>The PLA objects to the definition of 'authorised development' (and in particular, the reference to any other development authorised outside of Schedule 1 under the Order should be removed). The Applicant has comprehensively explained why the PLA's position is not only unusual and is not supported by the terms of the Order (which in fact does authorise development outside of Schedule 1), but that it will have unintended consequences and is not supported by the precedents (including those with significant harbour and port works). This is explained in Section 6.1 of the Applicant's response to IP's comments made on the dDCO at Deadline 3 [REP4-212] and the Applicant restates its case in full.</p> <p>In short, the Applicant's view remains that the heavily precedented definition of 'authorised development' is appropriately used in connection with the Project. As set out in [REP2-077], the Applicant has used this definition of 'authorised development' because the development authorised by the Order entails development outside the scope of Schedule 1 (e.g., the power to carry out protective works under article 20). The Applicant's view is therefore that the starting position is that precedents are not the definitive starting point (even though they support the Applicant's</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>approach) because it is simply reflective of the fact that the development authorised entails development outside the ambit of Schedule 1. The position does not turn on the presence of a harbour authority or otherwise.</p> <p>Nonetheless, the Applicant highlighted that such provisions are included in DCOs which entail significant harbour works, and gave the example of the Great Yarmouth Third River Crossing Development Consent Order 2020. The PLA in its Deadline 3 submission states that <i>“Interference with the River Yare is not comparable in terms of the impacts”</i> of the Project. The Applicant wishes to highlight that on that scheme, full powers were taken to extinguish public rights of navigation over the River Yare (see article 44 of that Order). There are many other precedents which involve significant harbour works where the same definition of authorised development is used (see, for example, the Able Marine Energy Park Order 2014 and Hinkley Point C Connection Order 2016), and indeed, harbour DCOs themselves include the identical definition (see the Port of Tilbury (Expansion) Order 2019).</p>
Article 2(10) (Interpretation)	GBC	<p>GBC consider that article 2(10) should be removed from the dDCO, citing the potential for unintended consequences, on the basis that a reduction in an adverse effect may have other adverse effects. This is addressed above, and the Applicant has set out its position in relation to this matter in [AS-089] (see Table A.1), [REP2-077] (see within Table 4.1), [REP4-212] (see with Table 2.1), [REP5-089] (at Section 5.1, in response to similar comments raised by the London Borough of Havering), [REP6-085] (see paragraph 3.4.6) and [REP8-116] (see Table 3.1 in response to similar comments raised by the London Borough of Havering). The Applicant would also refer to the detailed explanation for this provision set out in the Explanatory Memorandum at paragraphs 5.16 to 5.21 [REP9-109].</p> <p>The Applicant has explained in the Explanatory Memorandum why the interpretive provision is necessary, proportionate and justified (see paragraphs 5.16 to 5.21). In short, the Applicant believes the drafting responds positively to a specific issue which developers, including the Applicant, have faced in the implementation of NSIPs where works within the scope of the reasonable worst case scenario assessed in the Environmental Statement are not progressed when they are environmentally better. The Applicant notes in particular that the drafting directly responds to “Getting Great Britain building again: Speeding up infrastructure delivery” (DLUHC, 2023) which sets out that <i>“Under the status quo, developers are required to apply for additional planning permission if they propose project amendments that have ‘materially new or materially different environmental effects’”</i>. It further notes that Government wants to <i>“make sure that project changes that will deliver positive impacts for projects,</i></p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p><i>communities, and the environment can be approved more quickly</i>".</p> <p>The Applicant would emphasise the point made throughout its submissions, that it does not consider the concern raised by GBC could arise, since a reduction in an adverse effect (effect A) which itself gives rise to other adverse effects (effect B) would not be permissible given the condition that the exercise of a relevant Order power must not give rise to materially new or materially different environmental effects. This is because effect B would not benefit from the carve-out in article 2(10) irrespective of whether effect A does.</p> <p>The Applicant does not therefore agree with GBC's suggestion to remove article 2(10) from the dDCO. Indeed, in the Explanatory Memorandum [REP9-109], the Applicant cites specific evidence, and specific Government policy which supports its approach.</p>
	LBH	<p>LBH has proposed that "<i>provided that there is no new or materially different adverse environmental effect in comparison with those identified in the environmental statement caused by the avoidance, removal or reduction of such adverse environmental effect</i>" be added to the end of the interpretive provision on "<i>materially new and materially different environmental effects</i>" in article 2(10). The Applicant has explained why the suggested amendment was not appropriate in Section 5.1 of Applicant's responses to IPs comments made on the dDCO at Deadline 4 [REP5-089]. LBH have not responded to the Applicant's point in relation to the Explanatory Memorandum [REP9-109], but the Applicant nonetheless updated the Explanatory Memorandum to make clear that the drafting does not have the effect of enabling a variation which gives rise to an additional materially worse environmental effect. LBH's Deadline 7 submission does not appear to reference or extract the Applicant's response on this point.</p> <p>To summarise, though, the Applicant would emphasise the point made throughout its submissions, and above, that it does not consider the concern raised by LBH would arise in practice, since a reduction in an adverse effect (effect A) which itself gives rise to other adverse effects (effect B) would not be permissible having regard to the condition that the exercise of a relevant Order power must not give rise to materially new or materially different environmental effects. This is because effect B would not benefit from the carve-out in article 2(10) irrespective of whether effect A does.</p>
Article 3 (Development consent, etc. granted by Order)	GBC	<p>GBC submits that article 3(3) should be modified so as to replace the words "<i>within, adjoining or sharing a common boundary with the Order limits</i>" with the words "<i>within the Order limits or land adjacent to</i>". The Applicant has set out its response to this matter in [AS-089] (within Table A.1 under item 3) [REP2-077] (within Table 4.2) and [REP4-212] (within Table 2.1). In summary, the Applicant disagrees with GBC's</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		interpretation of the drafting proposed in article 3(3) of the dDCO and considers that, substantively, the drafting has the same legal effect as GBC's proposal. The drafting included in the dDCO was inserted at the request of the PLA and follows the Silvertown Tunnel Order 2018. The Applicant does not therefore consider the change sought by GBC is necessary.
Article 6 (Limits of deviation)	GBC	GBC proposes amendments to article 6 relating to the limits of deviation for the Chalk Park landforms (Works Nos. OSC4(a) and OSC4(b)). The Applicant does not consider this amendment is necessary as it is plain and obvious what the references to the relevant mounds are. These should also be seen in the context of the Design Principles [REP9-227], also secured under Requirement 3 and 5, which add further controls and details about the laying out of Chalk Park.
Signposting responses – Article 6(3) (Limits of deviation) – TC considers the well used and understood phrase “materially new or materially different environmental effects” needs further explanation and that article 6(3) should be limited to the Order limits	Thurrock Council	<p>Thurrock Council has repeatedly, with no elaboration, raised its opposition to the drafting of article 6(3) which allows for variations, following consultation and with the Secretary of State's approval, where those do not give rise to materially new or materially different environmental effects. The Applicant refers to pages 134 to 135 of the Applicant's responses to IP's comments on the dDCO at Deadline 3 [REP4-212] and Section 9.2 of the Applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089].</p> <p>In short, the Applicant considers the proviso that there be no new materially new or materially different environmental effects, as well as the position that compulsory acquisition and temporary possession is limited to land inside the Order limits, justifies the use of the widely precedented provision (and the omission of the reference to “order limits” in an article which relates to <i>works</i> not land use). This is explained in detail in paragraphs 5.3 to 5.36 of the Explanatory Memorandum [REP9-109]. Removal of this provision would place the Applicant in a worse position as compared with virtually every SRN DCOs. The request to insert a reference to the Order limits is specifically addressed in Section 9.2 of the applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089] and the Applicant objects in the strongest possible terms to its inclusion.</p> <p>The Applicant also specifically responded to the request for defining the well-understood, widely used and precedented phrase “environmental effects” on page 25 of the Applicant's responses to Interested Parties' comments on the draft DCO at Deadline 6 [REP7-190]. At Deadline 9A, Thurrock Council claims that the signposting does not provide a response and selectively quotes part of the signposting. In particular they state that the Applicant has been dismissive in relation to the questions raised. Unlike other projects, the Applicant has explicitly set out a process to be followed, as well as further definition of “materially new or materially different environmental effects” in section 2.8 of the Code of Construction Practice including the REAC. The Applicant</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>notes that the term is defined, and Thurrock's questions addressed, as that section includes the following definition:</p> <p><i>"a. an effect that is 'materially new'– this is an effect that is significant in EIA terms and does not fall within the envelope of the scope of the environmental assessment contained in the ES certified by the SoS</i></p> <p><i>b. an effect that is 'materially different'– this is an effect that was reported in the ES but in respect of which there is a material change in the significance attributed to the effect from that reported in the ES".</i></p> <p>The Council has reviewed the CoCP in detail, and indeed raised questions on section 2.</p> <p>The Applicant has highlighted various precedents which support its approach, but wishes to highlight that the two DCOs granted in Thurrock itself also contain the phrase (see Port of Tilbury (Expansion) Order 2019 and Thurrock Flexible Generation Plant Order 2022). The Applicant can find no evidence that the council objected to those provisions (and the scale of the Project is not relevant in this context because the council is raising an in-principle objection and questioning to the certainty of the phrase). Indeed, the Applicant has discovered instances of Thurrock Council itself imposing conditions which utilise the same terminology (see, for example, Planning Application with the reference 19/01101/ELEC where Thurrock Council propose condition 60 which allows for variations where agreement for variations is given where <i>"the agreement or approval is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the Environmental Statement"</i>). The suggestion that the council does not have sufficient certainty about what this phrase means therefore deserves short shrift, and reinforces the Applicant's view about the approach Thurrock Council has taken in commenting on the dDCO.</p> <p>In these circumstances, the Applicant is dismayed that the council has copied and pasted on almost two dozen occasions queries which were not just responded to in the pre-application period, but throughout the examination in respect of a phrase which is itself used by Thurrock Council itself. As shown above, the information provided in relation to this well-understood and well-trodden phrase – used in the vast majority of DCOs, not just SRN DCOs – is in the Applicant's view not a reflection of the Applicant's approach, but the Council's in principle objection to both the Project and how infrastructure in this country is delivered expeditiously. For the avoidance of doubt, the Applicant objects on the strongest possible terms to the removal of the phrase "materially new or materially different effects" which would place in the Applicant in a materially worse position compared to every single SRN DCO granted in the last 8 years.</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>The Applicant would highlight that it is not merely relying on precedent as is frequently alleged, and it has provided a detailed justification – which goes beyond precedents – in pages 134 to 135 of the Applicant's responses to IP's comments on the dDCO at Deadline 3 [REP4-212] and Section 9.2 of the Applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089], as well as the Explanatory Memorandum.</p> <p>At Deadline 9A, Thurrock Council also repeats its position that <i>"it is the Council's position that the fact that this is approved by the Secretary of State does not address the Council's concerns."</i> Article 6(3) requires consultation, and Part 2 of Schedule 2 (which requires due consideration, as well as a report on consideration of representations) is applied via article 6(4).</p>
Article 8 (Consent to transfer benefit of Order)	LBH	<p>LBH refers to Sizewell C Nuclear Power Station as a precedent for its suggestion that a section 106 agreement should be secured under the terms of the DCO. The distinction is that on that scheme the land was not owned by the promoter. In this case, there is clearly land which the section 106 Agreement can bind to. The section 106 will be secured, either by agreement or unilateral undertaking, and there is no suggestion the Applicant would not fulfil its legal obligations under either of those mechanisms. Article 8 makes clear that any transfer would be subject to the same liabilities.</p>
	PLA	<p>The PLA raised a concern that the transfer of powers to the defined list of undertakers is too broad. The Applicant's position is set out in the Statement of Common Ground [APP-100] (which the Applicant restates), but in short, the Applicant stresses that any powers transferred under article 8(4) are only those relating to the 'undertaking' of the relevant body. The approach of allowing such transfers to licensed operators (even unnamed) is precedented (e.g. Thurrock Flexible Generation Plant DCO), and the Applicant has taken the approach of excluding liability for compulsory acquisition compensation from the scope of the powers over and above those precedents.</p> <p>The Applicant considers that this provision, insofar as it relates to the PLA, cannot be seen in isolation from the robust Protective Provisions included for the benefit of the PLA. In particular, the Applicant notes that so far as a work is a 'specified work', or a 'specified function' (which are defined broadly) under the terms of the PLA's Protective Provisions, the PLA would benefit from appropriate safeguards. This article also provides that any transfer is subject to the same liabilities and conditions as the Applicant would have imposed on it. This protection therefore means that if a power was transferred, it would still be subject to the PLA's Protective Provisions.</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
Article 8 / Schedule 15	MMO	The MMO have raised concerns about the variations, and the related transfer provisions. This is addressed in Section 5 of the Applicant's responses to Interested Parties' comments on the draft DCO at Deadline 6 [REP7-190].
Article 9 (Application of the 1991 Act) / Traffic Management Forum	Thurrock Council	<p>Thurrock Council repeats their position – contrary to every single transport DCO – that the provisions of the NRSWA should apply in full. In relation to Article 9, please see pages 141 to 144 of the Applicant's response to IP comments made on the draft DCO at Deadline 1 [REP2-077]. In short, the disapplication of these provisions (which are designed primarily to regulate the carrying out of street works by utility companies in respect of their apparatus) is appropriate given the scale of works proposed under the Order, the specific authorisation given for those works by the Order (particularly article 3 and Schedule 1), and the provisions in the Order (including the requirements) which would regulate the carrying out of the Order works. For the avoidance of doubt, the disapplication of the provisions of NRSWA is heavily precedented. The detailed justification for each provision of NRSWA which the council has suggested it is concerned about is provided in the previous signposting.</p> <p>Since these submissions, the Applicant has inserted Protective Provisions for Local Highway Authorities which go ever further in ensuring relevant input into traffic management matters.</p> <p>In relation to Thurrock Council's generalised and unparticularised claims about the Traffic Management Forum, please see the Applicant's position on this in Section 1.2 of the Post-event submissions, including written submission of oral comments, for ISH2 [REP1-184]. The Applicant's approach in respect of the Traffic Management Forum generally is also set out in its post-hearing submissions for ISH12 [REP8-111]. The Applicant's approach is underpinned by its unparalleled experience in delivering NSIPs and the detail provided goes above and beyond precedents.</p> <p>At Deadline 9A, Thurrock Council claims to particularise its position by arguing that the Applicant has not addressed its concern about "what happens when proposed works by the applicant conflict with pre-authorise [sic] permits". The Applicant has repeatedly responded to the council's position on this matter in the pre-application period, but has only ever received materially same text from Thurrock Council back. For the benefit of the Examining Authority, the Applicant is proposing to utilise the road booking system for works (see paragraph 3.1.6 of the CoCP which confirms the use of "the existing road booking system operated by the respective local highway authority, to aid management and integration of other schemes."). This avoids conflicts, together with the protective provisions, which ensure local authority input.</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>The Applicant would highlight that the use of the permit schemes – subject to the same modifications in NWRSA – was a position adopted by the Applicant in response to Thurrock Council's concerns. Other schemes simply disapply the requirement to comply with a permit scheme (see, for example, the A38 Derby Junctions Development Consent Order 2023). This is in fact an example where the Applicant has secured controls and consultation over and above precedents.</p>
<p>Article 23 (Felling or lopping of trees and removal of hedgerows)</p>	<p>GBC</p>	<p>GBC proposes that article 23 should be modified to include an additional requirement, as article 23(2)I, that the undertaker must, in carrying out activity permitted by this article, take steps to avoid a breach of the Wildlife and Countryside Act 1981.</p> <p>The Applicant has previously responded to this suggestion in [REP4-212] (within Table 2.1). The Applicant does not consider the drafting necessary, given the wide ranging controls already secured via the REAC under Requirements 4 and 5 of the dDCO, as well as the provision made for pre-construction survey work to establish the presence of European or nationally protected species under Requirement 7 of the dDCO. The Applicant has also proposed a robust outline Landscape and Ecology Management Plan which will be subject to further consultation and approval under Requirement 5. The amendment is therefore superfluous and the Applicant notes it is not widely precedented, thereby supporting the Applicant's submissions.</p>
<p>Article 25 – Compulsory acquisition of land</p>	<p>PLA</p>	<p>At Deadline 9, the PLA stated that they considered there was a lack of enthusiasm to reaching a voluntary agreement on the acquisition of the subsoil. The Applicant has set out the engagement carried out in Section 3.2 of its Post-hearing submissions in respect of CAH3 [REP6-087]. The Applicant would note that it provided the PLA with an offer in March 2022, and only heard back in July 2023. Since then, the parties have exchanged correspondence on Heads of Terms. The Applicant has received a response to the Heads of Terms provided to PLA. It is unlikely that agreement will be reached because of the significant gap between the parties on quantum, as well as provisions of the Heads of Terms which conflict with the terms of the dDCO (e.g. the suggestion that works be covered by the river works licensing regime, rather than the Protective Provisions, which is a matter which has long been agreed between the parties). The Applicant will continue to engage with the PLA on a voluntary agreement, but fundamentally the Applicant maintains its position that compulsory acquisition – in connection with the tunnels required for this nationally significant infrastructure – is required, and a compelling case in the public interest has been provided for that acquisition in the Statement of Reasons [REP7-096].</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
Article 27 (Time limit for exercise of authority to acquire land compulsorily)	GBC	<p>GBC contends that the period for exercise of compulsory powers should be reduced from eight years to five years (and that this period should start from the day on which the Order is made).</p> <p>The Applicant's position was set out in full in response to QD29 and QD47 of the Applicant's response to the ExA's commentary on the dDCO [REP8-117] and Section 14 of the Applicant's responses to the Interested Parties' comments on the dDCO [REP9-275]. Those responses also signposted to further submissions made by the Applicant during the course of the examination in relation to this matter. In short, a reduction in eight years would cause a significant issue in allowing the Applicant to minimise land interference at the detailed design stage, noting that the Applicant's approach is to take temporary possession and then acquire the "as built" configurations. Most of the Applicant's portfolio of DCOs has a construction programme of two to four years but it is accompanied by a five-year compulsory acquisition period to allow it to fulfil that approach. In the case of the Project, the eight-year period is based on a six-year construction programme, and in light of the Written Ministerial Statement on the two-year construction rephase, is considered necessary and proportionate.</p> <p>The Applicant would highlight that it has made amendments to the definition of 'start date' in article 27 of the dDCO at Deadline 8 [REP8-006]. The Applicant is grateful for GBC's confirmation that these amendments represent "<i>an improvement of the position</i>". However, GBC reiterates its view that the drafting could still result overall in a period of nine years from the date of the making of the Order. The Applicant would reassert its justification for the extended period in this case. The Applicant considers it has taken important steps to seek to resolve comments raised by third parties. However, to impose a five-year time limit as GBC suggests would be inappropriate in a case such as this, where the construction period is itself six years. Furthermore, to do so could lead to worse outcomes overall; for example, it may have the effect of preventing the Applicant from minimising the amount of land subject to compulsory acquisition, if it needs to be making those decisions as construction works are progressing. This would be contrary to the public interest in minimising the interference with landowners' rights and expense to the public purse.</p>
	Thurrock Council	<p>Thurrock Council suggests that there should be different time limits for compulsory acquisition and temporary possession on a plot-by-plot basis. The Applicant's position on this is set out in its response to the ExA's commentary on the dDCO (see response to QD30 in [REP8-117] and its further commentary on QD30 in [REP9-275] contained in Section 14 of that document).</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>The highly novel suggestion that time limits be provided on a plot-by-plot basis is addressed specifically on page 155 of Applicant's response to IP comments made on the draft DCO at Deadline 1 [REP2-077]. The Applicant strongly objects to this – it would be exceptionally onerous, and would set a very unwelcome precedent that would be contrary to the public interest in the efficient and cost effective delivery of nationally significant infrastructure.</p>
<p>Article 35 (Temporary use of land for carrying out the authorised development)</p>	<p>GBC</p>	<p>GBC has suggested that article 35(5) of the dDCO should be modified to include a requirement for the relevant local planning authority to be consulted in relation to the restoration of land of which temporary possession has been taken under article 35, where that land is green belt land or is in an area of outstanding natural beauty. The Applicant notes that article 35(5) requires reinstatement of land subject to temporary possession. The Applicant considers that provision is sufficient to assure GBC that temporary works will be removed. These clear obligations are further supplemented in the REAC by reinstatement requirements in commitments GS012, GS014, CH006, LV002, RDWE009, RDWE021, TB020, TB021. Further measures requiring reinstatement, including in relation to sensitive sites, are in the Design Principles [REP9-227] (see clauses S1.01, S1.12, S3.05, S3.16 and LSP.05). As noted, the Applicant appreciates that there is an exemption to removing temporary works under article 35(5), but the amendment made at Deadline 8 to ensure this only applies where planning permission is in place, provides comfort that no temporary works will remain in place.</p> <p>Introducing a separate requirement for consultation is therefore unnecessary, disproportionate and may in fact delay the reinstatement of the relevant land. The Applicant notes that no precedent is offered to support this novel suggestion, and it should therefore be rejected.</p>
	<p>Thurrock Council</p>	<p>TC suggests that a landowner scheme be submitted and approved by that landowner six months in advance and at Deadline 9A, the council asks why a provision requiring the production of a scheme with 6 months notice is "is not consistent with the expeditious delivery of LTC." Please see Section 8.2 of Applicant's responses to Interested Parties' comments on the draft DCO at Deadline 6 [REP7-190]. In short, this perverse and unprecedented suggestion would likely delay land being returned and is unduly onerous (and would put the Applicant in a worse position than any precedent) in light of the controls already inserted (which includes a positive requirement to reinstate the land to the landowners' reasonable satisfaction).</p> <p>For completeness, the Applicant has inserted a requirement for planning permission to be in place in connection with article 35(5)(g). The council's suggested drafting is not considered appropriate as it does not account for the full</p>

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	Thurrock Council	<p>circumstances in which planning permission could be in place. At Deadline 9A, the council confirmed it agrees with the Applicant's drafting.</p> <p>TC suggests that the notice period for taking temporary possession should be three months instead of 28 days. Please see page 57 of [AS-089] as well as paragraph 5.167 of the Explanatory Memorandum [REP9-109].</p> <p>A three-month notice period is not appropriate or proportionate for the Project. The Applicant notes that complex projects such as the A14 Cambridge to Huntingdon project have provided 14 days (which the dDCO is doubling). The 28 days period must be seen in the context that landowners and occupiers have been consulted on land use over numerous consultations; have had an opportunity to take part in the examination process; and National Highways will be required to publish a notice under section 134 of the Planning Act 2008 if the Order is made. The Applicant does not think a three-month period is consistent with the government's desire to ensure NSIPs are expeditiously delivered. In addition, the Applicant would highlight the presence of requirements relating to community engagement in the Code of Construction Practice [REP9-184], as well as the existence of various forums which will ensure the local community – and Thurrock Council – are proportionately sighted on the proposals.</p>
Article 39(2) (Recovery of costs of new connections)	Thurrock Council	TC maintain their highly novel suggestion of extending the article to cover compensation for losses, as well as expenditure. Please see page 166 of Applicant's response to IP comments made on the draft DCO at Deadline 1 [REP2-077] . In short, the provision already covers compensation for losses.
Article 40 (Special category land)	Thurrock Council	TC maintain that replacement land should be delivered before the Special Category Land is vested in the Applicant. They claim that there is a least a temporary loss of open space and a potential long term risk of loss/non-delivery. Please see pages 35 to 39 of [AS-089] . The Applicant refers to the Planning Statement Appendix D: Open Space Addendum [REP6-097] which specifically responds to the suggestion that any delay to the delivery of replacement land is somehow unacceptable in principle. As explained in section 7 above, Ron Evans Memorial Field has specifically been considered, and commitment to secure early release of land has been included in the SAC-R.
Articles 45, 46 and 47 – (Road user charging, Suspension of road user charging)	GBC	GBC restates its view that residents of Gravesham should be entitled to a discount in respect of both LTC and the Dartford Crossing. To this end, GBC sets out suggested drafting for a new article 47 of the dDCO, which would modify the charging regime in respect of the Dartford Crossing under the A282 Trunk Road (Dartford-Thurrock Crossing Charging Scheme) Order 2013. The Applicant has set out in full its position

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		regarding the operation of payments for local residents during the course of the examination in [REP1-184] (including Annex B of that submission), [REP2-077] and [REP4-212] . The Applicant does not agree with the drafting proposals put forward by GBC, for the reasons set out in those submissions.
Article 53 (Disapplication of legislative provisions, etc.)	LBH	<p>LBH makes an unprecedented suggestion to include local authorities in the scope of article 53(7). Article 53(7) (now Article 53(8)) is only intended for the benefit of those bodies who have or may have specific powers under the proposed Order to ensure that the exercise of such powers would not prejudice the relevant body's related statutory duties and powers. This will include the Secretary of State and, for the purposes of Article 8 dDCO (Transfer of benefit), the statutory undertakers. As previously stated, this is not intended for local highway authorities and, therefore, no amendment is considered necessary or appropriate.</p> <p>The Applicant further notes that the powers of local authorities under the New Roads and Street Works Act 1991 are in fact modified (under article 9 and so it would introduce new confusion to include local highway authorities in the scope of article 53(7)).</p>
Article 53	Natural England	Natural England object to the disapplication of section 28E and 28H of the Countryside and Wildlife Act 1981. The Applicant's position on this provision is contained in Section 6 of the Applicant's response to IP's comments on the dDCO at Deadline 5 [REP6-085] .
Article 58 (Defence to proceedings in respect of statutory nuisance)	GBC	<p>GBC expresses the view that this article should be narrowed in scope so as: (a) to reduce the number of statutory nuisances within the scope of section 79 of the Environmental Protection Act 1990 in relation to which a defence might be available under the Order (if made); and (b) to remove article 58(2) of the dDCO, which confirms that compliance with the controls set out in the Code of Construction Practice or management plans approved under Requirement 4 would be sufficient to show that an alleged nuisance could not reasonably be avoided for the purposes of article 58(1).</p> <p>The Applicant does not regard the drafting amendments proposed by GBC to be appropriate and has set out in detail the justification for the drafting proposed in article 58. In particular, the rationale for and response to GBC's comments on articles 58(2) and 58(3) can be found on pages 60 to 61 of the Applicant's Response to Issue Specific Hearing (ISH) 2 draft DCO [AS-089], pages 171 to 172 of the Applicant's response to IP comments made on the draft DCO at Deadline 1 [REP2-077] and pages 32 to 34 of the Applicant's responses to IP's comments on the dDCO at Deadline 3 [REP4-212]. The Applicant would emphasise that GBC has failed to grapple with the point that the Planning Act 2008 already provides a broad exemption, and the purpose of the</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		article is to narrow down the relevant defences applicable under section 82.
Article 61 (Stakeholder actions and commitments register)	GBC	<p>GBC propose amendments to article 61, the effect of which would be to require the Applicant, before entering a measure on the stakeholder actions and commitments register, to notify the person(s) with the benefit of the measure of the effect of article 61(1)(b) (this provision provides for the revocation, suspension or variation of a measure entered on the register with the Secretary of State's approval).</p> <p>The Applicant has provided a response to GBC's drafting suggestion in [REP2-077] and [REP4-212]. The Applicant regards GBC's proposal as unnecessary, given that the wording of article 61(1)(b) is a matter before the examination and IPs, including those with the benefit of a measure entered on the register, have had an opportunity to comment on the effect of the provision. In addition, article 61(1)(b) specifically requires consultation by the undertaker with the person(s) with the benefit of the measure and other persons considered appropriate before an application for revocation, suspension or variation is submitted to the Secretary of State. The process is, therefore, open and transparent.</p>
	LBH	LBH object to the use of the phrase " <i>take all reasonable steps</i> " in article 61(1). The Applicant amended this provision at Deadline 7 so that it requires the Applicant to "implement" the measures, thereby strengthening the requirement.
Article 62 (Certification of documents, etc)	GBC	<p>GBC suggests that a new paragraph (9) should be added to article 62, which would require the Applicant to make copies of the certified plans and documents publicly available in an electronic form to the public.</p> <p>The Applicant updated the dDCO [REP8-006] to include a requirement in substantially the same terms sought by GBC at article 62(9). The Applicant therefore considers this matter resolved.</p>
	LBH	<p>LBH objects to the process which enables the correction of plans. The Applicant's position is set out in page 87 of [REP4-212].</p> <p>The Applicant has sought to replicate provisions included in section 52 of the Crossrail Act 2008, section 54 of the High Speed Rail Act 2021, and section 43 of the Dartford-Thurrock Crossing Act 1988 to allow for a bespoke process for the correction of inadvertent mistakes in plans. This is necessary because these provisions minimise a potential delay to the delivery of the Project in the unanticipated event that there is an error.</p> <p>Only one interested party (LBH) has objected to its inclusion in the dDCO. The Applicant believes the basis for the objection is misconceived. For the reasons explained in the Explanatory Memorandum (paragraphs 5.268 and 5.269) [REP9-109], these provisions do not circumvent the processes for the amendment of <i>Orders</i> (which do not apply</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		to plans). The Applicant considers that the fact that the precedents it cites are Acts of Parliament does not undermine the necessity for the provisions, nor indeed the fact that an Order under section 120 of the Planning Act 2008 can authorise the inclusion of such provisions.
Article 65 (Appeals to the Secretary of State)	GBC	<p>GBC suggest minor amendments to article 65 which it considers would represent “<i>drafting improvements</i>”. In addition, GBC argues for the deletion of article 65(1)(e), which provides an appeal mechanism to the Secretary of State in the event a local authority were to issue a notice further to sections 60 or 61 of the Control of Pollution Act 1974.</p> <p>The Applicant has set out in detail the justification for the appeal process under article 65(1)(e) in the Explanatory Memorandum [REP9-109], as well as in [AS-089], [REP2-077] and [REP4-212], and does not consider the deletion sought by GBC to be appropriate in that context. As regards GBC’s minor drafting suggestions, the Applicant has considered them but does not regard them to be necessary, nor does it consider they would materially enhance the meaning or legal effect of the dDCO. The Applicant does not therefore propose to make the amendments suggested by GBC.</p>
	LBH	LBH objects to the 10-day period to provide a response to an appeal and maintains this should be extended. No new matters have been raised by LBH and the Applicant’s position is set out on page 90 of [REP4-212].
	Thurrock Council	TC maintain that a minimum 20-day period to provide a response to an appeal should be introduced. Please see page 173 of the Applicant’s response to IP comments made on the draft DCO at Deadline 1 [REP2-077].
Schedule 1 (Authorised Development)	GBC	<p>GBC suggests that the ability to carry out ancillary works or related development should be restricted geographically to land which is within the Order limits.</p> <p>The Applicant has set out its position in full within [AS-089] (see responses to issues or questions raised against items 2 and 12 of Annex A to the ExA’s agenda for ISH2), [REP1-184] (see paras 1.3.15 to 1.3.17), [REP2-077] (within Tables 4.1 and 4.2) [REP4-212] (within Tables 2.1 and 2.2) and [REP6-085] (see Section 3.4). Indeed, the drafting already makes reference to the Order limits, is precedent and, for the reasons explained in the aforementioned submissions, comprises necessary flexibility and entails no detriment or prejudice to landowners (because the compulsory acquisition and temporary possession powers are limited to the Order limits). These submissions reflect the Applicant’s full and settled position in respect of this matter. The Applicant emphasises that no land outside of the Order limits is authorised to be used or compulsorily acquired. The Applicant therefore objects in the strongest possible terms to</p>

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		<p>GBC's drafting suggestion, and considers that an attempt to curtail the ability to carry out ancillary works – which have been assessed – would unnecessarily circumscribe flexibility. GBC has also suggested that, in relation to the ancillary works referenced in lettered work (m) of Schedule 1, the word "temporary" should be used before the references to "construction related facilities and welfare facilities" and "buildings". The Applicant does not agree. It is apparent from the references to "construction" in lettered work (m) that the buildings and facilities referred to will perform a temporary function during the construction period. The drafting of lettered work (m) is widely precedented and the Applicant is not aware of any prior challenge as to its interpretation, which suggests it is well understood by parties.</p>
Schedule 2 (Requirements), Requirement 2 (Time limits)	GBC	<p>GBC submits that the reference to "begin" in Requirement 2 of the dDCO should be amended to "commence".</p> <p>The Applicant – in line with clear precedents – has used the term "begin" in Requirement 2 so that any material operation (whether it is a preliminary work or not) is sufficient to discharge the requirement to start the development. The Applicant would refer to its responses to QD13 to QD16 of its response to the ExA's commentary on the dDCO [REP8-117], which set out in detail the Applicant's rationale for using the terms "begin" or "commence" to address specific scenarios within Schedule 2 and Section 14 of the Applicant's responses to the Interested Parties' comments on the dDCO [REP9-275]. The Applicant's position is merely replicating the effect of section 154 and 155 of the Planning Act 2008. The Applicant notes that some IPs have selectively quoted from the Swansea Tidal Lagoon judgment, and the Applicant's position on that case is set out in response to Action Point 1 of ISH7 contained in [REP5-089].</p>
	LBH	<p>LBH objects to the use of the term "begin" in Requirement 2. No new matters have been raised by LBH. Further to the above, the Applicant's position is also set out in [AS-089], [REP1-184] and [REP2-077]. The Applicant further refers to its response to Action Point 1 of ISH7 in the Applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089].</p>
	PLA	<p>The PLA restates its concern about the use of 'begin' in Requirement 2 of Schedule 2 to the dDCO. The PLA states the matter "<i>has not been addressed by the Applicant in successive iterations of the dDCO</i>". The Applicant wishes to clarify for the ExA that there is a distinction between (1) the PLA's concerns relating to the use of 'commence'/'begin' in the context of the PLA's Protective Provisions; and (2) the PLA's concern about the use of 'begin' in Requirement 2. The former has been addressed, and the PLA has confirmed this matter has now been addressed. In relation to the latter, strictly speaking, the PLA is correct to say that this has not been addressed "<i>in successive iterations of the dDCO</i>" but</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>the substantive matter has been addressed in a number of submissions. The Applicant's position is that the use of 'begin' in Schedule 2 is appropriate and justified for the reasons which have been the subject of significant examination, as explained above and in [REP1-184] and [AS-089], and its response to Action Point 1 of ISH7 in the Applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089].</p> <p>At Deadline 9A, the PLA claim that "The additional explanation offered by the Applicant at paragraph 6.10.2 of the EM does not provide this clarification because it contradicts itself." The Applicant does not agree. The Explanatory Memorandum is clear that: "this provision does not mean that preliminary works [i.e., all preliminary works] are sufficient to discharge the requirement, but it instead requires that any material operations – including those which may be preliminary works – is sufficient to discharge the requirement." As the Applicant explained, in response to the PLA and others in [REP9-275], "The definition merely acknowledges the fact that a material operation could be a preliminary work, not that all preliminary works are sufficient to discharge the requirement." The totality of preliminary works are therefore not sufficient to discharge the requirement, it must be a preliminary work which is a material operation.</p>
	<p>Thurrock Council</p>	<p>TC restates its concern about the use of 'begin' in Requirement 2 of Schedule 2 to the dDCO. The Applicant refers to Section 2.2 of the Applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089]. It is in the public interest for a material operation – whether a preliminary work or not – to discharge the Time Limits requirement. As the Applicant has explained at great length in response to Action Point 1 of ISH7, the position is no different from the general operation of section 154/155. The suggestion that the "default" position, endorsed by Parliament, is somehow not in the public interest is wholly without merit, and it would be inappropriate to conclude that such a position could not be applied.</p> <p>The Applicant notes that Thurrock Council appear to have fundamentally misunderstood the use of the word begin. They state "<i>the applicant could preserve the DCO with very minor preliminary works being undertaken, which is contrary to the purpose and intention being the primary legislation</i>". This is not correct. The definition of "begin" is:</p> <p><i>"to carry out any material operation (as defined in section 56(4) (time when development begun) of the 1990 Act) forming part of the authorised development including preliminary works"</i></p> <p>There must be a "material operation". This is why the use of "begin" leads to an outcome which is no different from the standard operation of section 154/155. The definition merely</p>

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		<p>acknowledges the fact that a material operation could be a preliminary work, not that all preliminary works are sufficient to discharge the requirement. At Deadline 9A, Thurrock Council repeats its comments with no elaboration or new argument, though appears to acknowledge a material operation (not any minor preliminary work) is required. Thurrock Council merely highlights a paragraph of the Swansea Tidal Lagoon case which has specifically been addressed in in response to Action Point 1 of ISH7. The suggestion that the Swansea Tidal Lagoon is implying that the position under section 154/155 is somehow unacceptable should be rejected.</p>
Schedule 2 (Requirements), Requirement 3 (Detailed Design)	Thurrock Council	<p>TC maintain that this requirement is effectively a modified non-material amendment procedure, which results in less consultation and less publication of the potential amendments. Despite the claim that a “<i>non-material amendment procedure</i>” is somehow being proposed, this well-precedented drafting is justified and the specific claim is responded to in Section 9.2 of the Applicant's responses to IP's comments on the dDCO at Deadline 4 [REP5-089]. The Applicant specifically refers to paragraph 9.2.3 which explains why the reliance on a case provides no support whatsoever to the council's position.</p>
Requirement 3	GBC	<p>GBC seeks a number of amendments to Requirement 3 of the dDCO. Under GBC's proposed paragraph (3), GBC requests that the detailed design of green bridges comprising Works Nos. 1D and 1H should be the subject of design review to minimise their impact on the Kent Downs AONB and to maximise their ability to conserve and enhance the Kent Downs AONB. The amendment is unnecessary. Design Principle PRO.01 already secures the requirement for a design review. Design Principle PRO.07 also requires structured stakeholder engagement on the spatial arrangement, user experience, appearance and integration of key Project elements, including Works Nos. 1D and 1H. Design Principle STR.08 sets out further relevant commitments in relation to the design of the green bridges. Design Principle S1.04 also sets out five specific criteria which Works Nos. 1D and 1H must be designed to meet. These include ensuring that shrub and tree species are reflective of the surrounding character and species makeup of the Kent Downs AONB.</p> <p>Paragraphs (4) to (6) of GBC's proposal seek to require the Applicant to submit options for the detailed design of the Project to the Design Council's Design Review Panel and further requirements for engagement with stakeholders in relation to detailed design. The Applicant does not consider these proposals are justified or necessary, since the Applicant has defined an appropriate approach to detailed design through the Design Principles [REP9-227]. Design Principle PRO.01 requires the Applicant to engage with the</p>

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		National Highways Design Review Panel on the development of the detailed design and to develop design proposals having regard to the comments raised by that Panel. This ensures there is appropriate SRN-specific oversight as the Project proceeds through the design stage. Design Principle PRO.01 secures a structured approach to stakeholder engagement in relation to a number of key elements of the detailed design, in accordance with the detailed design multi-disciplinary workshop terms of reference found in Appendix D of the Design Principles. The modifications sought by GBC would create a duplication of process, thus acting as a constraint to the timely delivery of the Project. The Applicant considers they should be rejected accordingly.
Schedule 2 (Requirements), Requirement 4 (Construction and handover environmental management plans)	LBH	LBH desires the EMP (Third Iteration) to be subject to approval. It is not appropriate for the EMP3 to be subject to approval. The Applicant is a strategic highways authority appointed by the Secretary of State, and operational matters fall within its day-to-day operational responsibilities. Insofar as the road is a local highway, this will be handed back to the relevant highway authority. The position adopted is consistent with a long line of precedents (see Requirement 4(6) of the M42 Junction 6 Development Consent Order 2020, Requirement 4(4) of the A63 (Castle Street Improvement, Hull) Development Consent Order 2020, Requirement 4(5) of the A585 Windy Harbour to Skippool Highway Development Consent Order 2020, Requirement 4(16) of the A303 (Amesbury to Berwick Down) Development Consent Order 2023). The Project does not give rise to any materially distinguishing features which justify departing from that precedented approach.
	Thurrock Council	TC maintain that the EMP3 should be consulted upon with the Council and approved by the SoS. Please see pages 83 to 84 of 9.63 Applicant's response to IP comments made on the draft DCO at Deadline 1 [REP2-077] as well as the Applicant's commentary on this matter in its post-hearing submissions for ISH12 [REP8-111] which sets out why it is not appropriate for the EMP3 to be subject to consultation.
Schedule 2 (Requirements), Requirement 6(2) (Contaminated land and groundwater)	LBH	LBH objects to the precedented position that under the provision, the undertaker determines whether or not remediation of contaminated land not previously identified is required. No new matters are raised by LBH, and the Applicant's position is set out in Section 4.2 of Applicant's Responses to IP's comments on the draft DCO at Deadline 5 [REP6-085] .
Schedule 2 (Requirements), Requirement 8 (Surface and foul water drainage)	GBC	GBC considers that the requirement for written details of the surface and foul water drainage system proposals referred to in Requirement 8 should be extended to include details relating to the management of flood risk. The Applicant provided a response to this matter in [REP7-190] , which set out the reasons why it was not necessary for

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		Requirement 8 to make provision for matters pertaining to flood risk, given the range of controls already contained in the Code of Construction Practice [REP8-044] and the REAC which forms part of it (as well as the fact that Requirement 4(2) covers flood risk management). GBC has not provided a response to the Applicant's submissions in this regard.
Schedule 2 (Requirements), Requirement 9 (Historic Environment)	LBH	LBH maintains its objection to the 14-day period in this provision. As explained on page 107 of [REP4-212], the 14-day period is considered appropriate given the discrete nature of the considerations involved and the need for the Project to be delivered expeditiously. It is highly precedented (see The A19/A184 Testo's Junction Alteration Development Consent Order 2018, The A19 Downhill Lane Junction Development Consent Order 2020, The A63 (Castle Street Improvement, Hull) Development Consent Order 2020, The A1 Birtley to Coal House Development Consent Order 2021, The A57 Link Roads Development Consent Order 2022, The M54 to M6 Link Road Development Consent Order 2022, The A47 Wansford to Sutton Development Consent Order 2023).
Schedule 2 (Requirements), Requirement 17 (Passive provision for the Tilbury link Road)	Thurrock Council	<p>Thurrock Council requests an amendment to paragraph 3(d) so that the Secretary of State's approval is required.</p> <p>The Applicant has explained – including at ISH14 – that the addition of an administrative step is unnecessary and disproportionate. The fundamental question is whether the Applicant – as the strategic highways authority in England – is in a position to reasonably consider and determine whether any proposal constitutes the proposed Tilbury Link Road. It is the Applicant's submission that it clearly is in a position to do so. No evidence has been produced to the contrary. The Applicant notes its statutory functions under its licence which require cooperation and ensuring the efficient and safe operation of the road network in this context.</p> <p>Adding an administrative step also leads to potentially perverse results. As noted, passive provision has been limited to consideration prior to the Design Review Panel (see Requirement 17(1)). By introducing a requirement that a formal step must be undertaken, it potentially means that, in its absence, nothing other than a formal determination by the Secretary of State could be considered. This runs contrary to the intention of the Applicant to – as a result of stakeholder feedback – provide passive provision for the Tilbury Link Road.</p> <p>The Applicant notes that in other instances where passive provision is provided – e.g. the Thurrock Flexible Generation Plant Development Consent Order 2020, the Galloper Wind Farm Order 2013 – there is no such administrative step.</p> <p>At Deadline 9A, Thurrock Council repeats its suggested provision. The only new matter raised is <i>“the Secretary of State is much better placed due to the conflicted position that the applicant would be in, due to the need to balance</i></p>

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		<p><i>potentially conflicting positions.</i>” The Applicant would merely highlight that the Tilbury Link Road is a Road Investment Strategy pipeline scheme, and the Applicant would be responsible for the delivery of the Tilbury Link Road if progressed. The suggestion that the Applicant – who has statutory licence obligations to cooperate across the road network, and deliver the Road Investment Strategy – would be conflicted on a matter as innocuous as reasonably determining which proposal would constitute the Tilbury Link Road should be dismissed.</p>
Requirement 18	PoTLL, TC, DP World, Thames Enterprise Park	<p>The Applicant has explained in detail why its proposed provision is adequate and carried out a line-by-line comparison of PoTLL’s suggested requirement and how the aspects already secured in Section 7.2 of [REP7-190]. Following ISH13, the Applicant met with the port authorities and local authorities, and put forward further amendments. The Applicant has also addressed the Deadline 9/9A submissions relating to this requirement in Applicant’s comments on Interested Parties’ submissions at Deadlines 9 and 9A [Document Reference 9.216] submitted at Deadline 10.</p>
Schedule 2 (Requirements), Paragraph 20 (Application made to the Secretary of State under Part 1)	LBH	<p>LBH “<i>prefers its drafting</i>” in relation to notification of a deemed consent where consultation is carried out under Schedule 2 and the drafting in relation to the period provided for consultation. The Applicant notes LBH does not identify that the Applicant’s drafting achieves the effect which LBH seeks to achieve. No amendment is therefore considered necessary, and the Applicant considers its drafting is clear that the deemed consent provision will be notified to consultees and that 28 days at minimum will be provided.</p>
	Thurrock Council	<p>TC disagree with the use of deemed consent provisions and states that in principle these do “<i>not work in the public interest, as a failure of a public body to grant consent can lead to consent being granted without scrutiny.</i>” TC maintain that these provisions should be replaced with “<i>deemed refusal</i>” provisions. Please see Section 6.3 of the Applicant’s response to IP comments made on the draft DCO at Deadline 1 [REP2-077]. No new comments on deemed consent have been raised.</p> <p>Thurrock Council also repeats its objection to the Secretary of State as the discharging authority. The Applicant’s position on this matter is set out in paragraph 6.3 of the Explanatory Memorandum [REP9-109]. No new matters have been raised by TC during the course of the examination, except citing a consultation by the Secretary of State on the A66 project. The Applicant does not consider a consultation letter on a different project affects the Project-specific reasons put forward in the Explanatory Memorandum. The Applicant would emphasise that no weight should be placed on a consultation letter, which is necessarily subject to reviewing responses and a final decision by the Secretary of State. The</p>

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		<p>Applicant has confirmed its position regarding the discharging authority in response to the Secretary of State, and would note that, without prejudice to that position, this particular Project is in any event distinct (e.g. because it affects a greater number of local authorities where works traverse multiple local authority boundaries). The request on the A66 was made in relation to specific viaducts. It does not extend more generally. In the case of the Project dDCO, the design of significant assets (including Project Enhanced Structures) is subject to an enhanced level of design input and approval (via Article 10 and the Protective Provisions for Local Highway Authorities, as well as the ground-breaking design principle PRO.07). In addition, unlike the A66, the Project has committed to using the local authority permit schemes – including those in Thurrock – which secures further approval (subject to the standard and precedented modifications in Article 9).</p> <p>The Applicant notes Thurrock Council's comments that it maintains its position notwithstanding that the joint response from DP World, Port of Tilbury London Limited, and Thames Enterprise Park put forward the Secretary of State as the discharging authority. The Applicant considers this underscores the fact that Thurrock Council is part of a small minority of IPs who have suggested a contrary discharging authority.</p>
Schedule 2 (Requirements), Paragraph 22 (Details of consultation)	GBC	<p>GBC submits that the period for comments to be provided by bodies in response to consultation on documents to be submitted for approval under the Requirements should be increased from 28 days to 42 days.</p> <p>The Applicant would refer to its comments at Section 14 of its comments on responses to the ExA's commentary on the draft DCO at Deadline 9 [REP9-275], specifically those relating to GBC's and Kent County Council's response to QD12 of the ExA's commentary on the dDCO. For the reasons stated therein, the Applicant does not consider that an increase in the consultation period under Requirement 22 is justified.</p>
Various	LBH, Thurrock Council	<p>LBH and Thurrock Council maintain an objection in relation to the use of "substantially in accordance with" drafting. '<u>"Substantially in accordance with"</u></p> <p>The Applicant has explained why the phrase "substantially in accordance with" is used in Schedule 2 in Section 4.3 of Applicant's Responses to IP's comments on the draft DCO at Deadline 5 [REP6-085]. In short, the use of the phrase is necessary and appropriate because the relevant management plans for the Project will be in outline form only and will require further development following the DCO (if granted) as part of the discharge of Requirements process. The Applicant wishes to draw the ExA's specific attention to the A47 Wansford to Sutton decision letter. That project was promoted by the Applicant. The Secretary of State reinstated</p>

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		<p>the phrase as ‘<i>the Secretary of State considers its omission is an inappropriate fettering of his discretion</i>’.</p> <p>The Applicant further notes that all transport DCOs granted since the M25 Junction 28 DCO affirm the use of the phrase ‘substantially in accordance with...’ (see, in particular, A47/A11 Thickthorn Junction Development Consent Order 2022, A417 Missing Link Development Consent Order 2022, A428 Black Cat to Caxton gibbet Development Consent Order 2022, A47 Blofield to North Burlingham development Consent Order 2022, A57 Link Roads Development Consent Order 2022, Manston Airport Development Consent Order 2022, A303 (Amesbury to Berwick Down) Development Consent Order 2023 and A38 Derby Junctions Development Consent Order 2023). In light of the robust Project controls offered and the vast body of precedent cited, the Applicant does not consider there is good reason to move away from the Secretary of State’s adopted practice.</p> <p>At Deadline 9A, Thurrock Council claim that “<i>The applicant is focused on whether use of this phrase is lawful.</i>” This is incorrect, the Applicant has explained in detail what the practical implications of the phrase are (see above). The Applicant also wishes to emphasise that flexibility in implementing a scheme is necessary and will assist with the safe and expeditious delivery of the Project in an environmentally sensitive manner (e.g. references to guidance documents in the REAC [REP9-184] could be updated in the final plan to be approved by the Secretary of State).</p> <p><u>“Reflect”</u></p> <p>The Applicant does not consider the use of the phrase “<i>reflecting the mitigation measures in the REAC</i>” in Schedule 2 connotes any lesser security for the relevant mitigation measures in the REAC. The Applicant considers the term is appropriate, noting that not all measures will be relevant to each plan or scheme approved. The Applicant further notes the substantial precedent on this issue, and does not consider that any weight should be given to the inappropriate suggestion that the Secretary of State was not adequately securing the relevant mitigation measures on those precedents.</p> <p>Thurrock Council argue that the phrase “in accordance” should be seen in light of the Hillside judgment which confirms some flexibility is permitted under that formulation. The Applicant does not consider the <i>Hillside</i> judgment, that Thurrock Council has referred to, affects its position in relation to the use of “substantially in accordance”. The Applicant would note that a number of SRN DCOs – made after the <i>Hillside</i> judgment – continue to utilise “<i>substantially in accordance</i>”. Indeed, the Applicant’s reliance on the Secretary of State’s decision letter for the A47 Wansford – in which the Secretary of State confirmed that changing</p>

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		<p><i>“substantially in accordance with”</i> to <i>“in accordance with”</i> would inappropriately fetter their discretion – came <i>after</i> the <i>Hillside</i> judgment.</p> <p>The Applicant also highlights the case of <i>Swire v Canterbury City Council</i> [2022] EWHC 390 (Admin) – a case more concerned with the use of the words <i>“in accordance”</i> vs. <i>“substantially in accordance”</i> in planning conditions. In that case, the judge held that <i>“the degree of conformity required by condition 6 depends upon a combination of inter-related factors: the meaning and effect of the words “in accordance with”, the nature of the parameter plans to which condition 6 relates, and how condition 6 sits with other conditions”</i>. The judge accepted that using the phrase <i>“strictly”</i> would connote a stronger requirement for conformity thereby accepting that the particular drafting has a bearing on interpreting the degree of conformity required. In the Applicant's submission, the specific features of the relevant plans – i.e., that they are outline management plans or documents – justifies the use of the phrase <i>“substantially in accordance”</i>. Where the Applicant is certain about conformity, it has necessarily used different drafting (e.g., Article 61 requires the undertaker to <i>“implement”</i> the measures in the SAC-R, the preliminary works must be carried out <i>“in accordance”</i> with the final iterations of the preliminary works EMP / TMP under Requirement 4(1) and 10(1)). The Applicant therefore considers it has appropriately considered each document, and each obligation, in order to reach a balance without fettering the Secretary of State's discretion or acting in a way which would clearly be contrary to the Secretary of State's explicit confirmation in the A47 Wansford to Sutton decision letter.</p>
New Requirement: “Implementation Group” / Wider Network Impacts	LBH, TfL	LBH and TfL propose a Silvertown Tunnel-type implementation group. The Applicant's position on this matter is set out in its Wider Network Impacts Position Paper [REP6-092] . The Applicant's without prejudice provision would secure a Network Management Group. The Applicant further refers to its comments in its post-hearing submissions at ISH7 [REP4-183] which shows the significant and serious risk of duplicating the functioning of various working groups the Applicant is already proposing.
New Requirement: Orsett Cock & Wider Network Impacts	Thurrock Council, Port of Tilbury London Limited	Thurrock Council and the Port of Tilbury London Limited have jointly put forward a revised requirement. The Applicant refers to its response to the Port of Tilbury London Limited at Section 11.1 of the Applicant's Response to Interested Parties' comments on the draft DCO at D8 [REP9-275] .
New Requirement: “Silvertown” requirement	GBC, PoTLL, TfL, TC, LBH	GBC states its preference for the draft requirement in relation to the implementation of a network management group proposed by the Port of Tilbury London Limited in PoTLL's Post-event submissions, including written submission of oral comments made at the hearings held 16 to 24 Oct 2023 [REP6-163] , over the provision proposed by the Applicant on

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		<p>a without prejudice basis in the Wider Network Impacts Position Paper [REP6-092]. GBC also seeks assurances that it would be one of the parties included in any such Network Management Group (LTNMG, or LTCIG in the Port of Tilbury London Limited's draft requirement).</p> <p>As set out in [REP7-190], the Applicant considers the without prejudice proposal submitted at Deadline 6 to be appropriate and does not regard the Port of Tilbury London Limited's proposal to be proportionate or necessary. The Applicant can confirm that GBC would be one of the parties to any LTNMG. However, the Applicant would stress, for the reasons set out in paragraph 4.2.3 of the Wider Network Impacts Position Paper [REP6-092], that it does not consider the inclusion of any network management group requirement to be necessary or appropriate.</p> <p>For the same reasons, the Applicant does not consider the new requirement proposed by GBC at Deadline 8 entitled 'construction phase local traffic monitoring', which it puts forward as an alternative to the Silvertown requirement if that is not accepted, to be necessary or appropriate.</p>
New Requirement: Blue Bell Hill requirement	GBC, KCC	<p>GBC and KCC seeks a requirement to ensure that local traffic impacts at Blue Bell Hill are addressed before the Project opens.</p> <p>The Applicant does not regard the inclusion of such a requirement to be appropriate, as set out in the Joint Position statement: Blue Bell Hill submitted at Deadline 5 [REP5-083]. With specific regard to the proposed Requirement, the Applicant notes that as the decision on delivery or otherwise of the A229 improvement works would remain the decision of the Secretary of State, this proposed Requirement would seem to add no additional security to the delivery of that project and simply duplicates the existing process put in place by Government. The Applicant further notes that the proposed requirement from KCC also inappropriately seeks to link the Project to the decision making for a distinct scheme. This is explained in further detail in section 8 above.</p>
New Requirement: new monitoring and mitigation requirement	GBC	<p>GBC seeks a requirement for a post-construction planting monitoring and mitigation plan.</p> <p>The Applicant does not consider such a requirement is necessary. Requirement 5 of the draft DCO already requires landscape and ecology management plans to be approved by the Secretary of State for each stage of the authorised development. GBC has not said how its own proposal would achieve anything which Requirement 5 does not already.</p>
New Requirement: new Gravesham / Thurrock accommodation	GBC / TC	<p>GBC submits that a new requirement for a Gravesham accommodation resilience scheme to be prepared and submitted to the Secretary of State for approval should be included in the dDCO. Having seen GBC's request, TC made the same request. The Applicant provided a response to this in [REP8-116], and would highlight its submissions on this</p>

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resilience scheme		matter given in its post-hearing submissions in ISH14 [REP8-114] which explains how the specific impacts forecast do not justify going beyond the robust and precautionary measures proposed in the Framework Construction Travel Plan [REP9-233] . At Deadline 9A, Thurrock Council repeats its comments but adds the claim that their requirement “ <i>provides a clear structure for remedying issues with the work accommodation</i> ”. This is unsubstantiated. Requirement 11 secures the Framework Construction Travel Plan, securing the commitments made which proactively respond to the concerns of GBC and TC.
New Requirement: Air Quality	Thurrock Council	<p>Thurrock Council continues to propose a new Requirement relating to air quality [REP6-085]. It provides no justification for why this is necessary. Please see Section 8.5 of [REP7-190]. In short, the air quality assessment has concluded there are no significant air quality effects during the operational stage, and consequently there is no requirement for mitigation monitoring</p> <p>At Deadline 9A, Thurrock Council assert that “<i>the Council has not had a response to its comments that the importance of air quality mean that it is still appropriate for air quality to be monitored</i>”. The Applicant has addressed this matter. The absence of a significant effect is why the Applicant does not consider it necessary or proportionate to do so. Requirements must meet the test of necessity and proportionality. Though absent from the D9A submissions, the Applicant has secured proportionate air quality monitoring (see REAC Items AQ006, AQ007)</p>
New Requirement: Asda Roundabout	PoTLL, TC	<p>PoTLL have put forward an onerous requirement that seeks to control the impacts at the Asda Roundabout.</p> <p>The Applicant has set out its position on how the construction traffic impacts at Asda Roundabout could be reduced in [REP6-123]. In particular, that document sets out how operational controls developed during the detailed design stage would be sufficient to appropriately mitigate any adverse impacts. In addition, Table 4.2 of that document sets out how the requests from the Port of Tilbury London Limited are already accounted for, and safeguarded, in the outline Traffic Management Plan for Construction [REP9-235]. The document sets out how the processes in producing a Traffic Management Plan will ensure adverse impacts are minimised.</p>
Schedule 8	Glenroy Estates	Glenroy Estates set out its position that their land be subject to permanent rights (rather than outright acquisition) and therefore suggest amendments to insert plot references to Schedule 8. The Applicant set out its justification for the acquisition of the land owned by Glenroy Estates in Post-event submissions, including written submission of oral comments, for CAH3 [REP6-087] and this matter is also addressed in Section 3.1 of the [REP7-190] .

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Schedule 12 (Road user charging provisions for use of the Lower Thames Crossing)	LBH	LBH wants the local residents discount extended to LBH residents. No new matters have been raised by LBH, and the Applicant would reiterate that the discounts offered in relation to the Project reflect Government policy, and the Government has confirmed this (see Annex B of [REP1-184] in which the Department for Transport endorses, in its capacity as the charging authority, that “ <i>this would offer the same type of discount arrangements as are offered on the Dartford Crossing LRDS scheme. It would be aligned with the Dartford LRDS by being offered to residents of the boroughs in which the tunnel portals would be situated (Gravesham and Thurrock for LTC, Dartford and Thurrock for the Dartford Crossing)</i> ”. The Applicant notes the unsubstantiated position that charging discounts were not provided at Dartford because this is not where construction occurred for the Dartford Crossing.
Schedule 14, Part 8 - Protective Provisions for PLA – paragraph 97	PLA	At Deadline 9A, the PLA notes it would like the definition of specified work amended. The Applicant informed the PLA that this amendment would be made prior to Deadline 9A, and this is reflected in the dDCO submitted at Deadline 10.
Schedule 14, Part 8 - Protective Provisions for PLA – paragraph 99(6)	PLA, PoTLL	<p>The Applicant updated paragraphs 99 and 100 of Schedule 14 following comments from the PLA on revised wording provided to them prior to Deadline 6. The Applicant is happy to confirm that, with the exception of one matter, the provisions are now agreed. The sole matter relates to paragraph 99(6) (and related wording in paragraph 99(5) of Schedule 14. The PLA has requested the removal of the paragraph 99(6) of Schedule 14.</p> <p>In relation to paragraph 99(6), the Applicant's position is set out in Section 10.1 of [REP9-275] In short, the Applicant would note that, it is necessary to ensure that the Project can be commenced in circumstances where the arbitration becomes protracted or is delayed. Arbitration may impose a delay involving significant time and cost at public expense. In the Applicant's view, the Secretary of State for Transport, as the Government department responsible for regulating both ports and highways, is competent to discharge this function. Indeed, UK-wide maritime transport policy is managed by the Department for Transport. The Applicant would note that under section 60 of the Port of London Authority Act 1968, which relates to dredging, the Secretary of State for Transport is given an approval function in connection with “<i>material ...deposited below the level of mean high water springs</i>”. Under section 69, it is the Secretary of State who determines any appeal in relation to a refusal, variation or revocation of a river works licence. Various other provisions engage the Secretary of State for Transport in connection</p>

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		<p>with works in the river Thames (e.g. sections 76, 78, 79, and 88).</p> <p>At Deadline 8, the PLA suggested an arbitration rules schedule, and the Applicant responded to why this was inappropriate in Section 6 of Applicant's response to Interested Parties' comments on the dDCO at D7 [REP8-116] and paragraph 10.1.5 of [REP9-275].</p> <p>At Deadline 9A, the PLA supplements its arguments against paragraph 99(6) (and the related elements in paragraph 99(5)) and these are all addressed below:</p> <ul style="list-style-type: none"> – The PLA acknowledges the project should be not be unduly delayed as a whole, but states “<i>the possibility of protracted or delayed arbitration is one of the Applicant's own creation</i>”. This pre-judges who would be responsible for any delay, and should be given no weight. – The PLA state that “<i>The solution of using the Arbitration Rules would resolve the risk of a delay causing significant time and cost by having the standard fixed periods for determination of a dispute, and avoiding the need for optional involvement from the Secretary of State</i>”. This matter was addressed in [REP9-275], and the PLA have raised no further evidence for its submissions. – The PLA state that “<i>The Applicant's solution would also give the Applicant the ability to place the time and cost burden of resolving the dispute on to the Secretary of State and their officials</i>”. The Secretary of State already has functions relating to this matter, and as explained, there are existing process in place between the Applicant and the DfT which would allow for this to be determined. – The PLA state that they agree that the timescales in their proposed arbitration rules would not be appropriate for all disputes but state that “<i>the Arbitration Rules allow for exemptions and shorter periods to be agreed between the parties or determined by an Arbitrator.</i>” Introducing a separate process comprised of applications and counter-submissions for merely agreeing what the appropriate timescale – as the default – increases costs at public expense and protracts proceedings, and indeed detracts from using time to address a dispute. – The PLA states “<i>The Arbitration Rules are therefore better suited to meeting the Applicant's stated concern</i>”. This is incorrect, and would protract the dispute resolution process, and prescribe a fixed period (unless an arduous process is progressed to agree an alternative) for all matters, no matter how complex or simple. – The Applicant previously noted that private arbitration is more suitable for private sector energy DCOs. The PLA

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		<p>state that “<i>private arbitration is the process envisaged in article 64 and used as a method to resolve disputes with other parties both throughout the dDCO and throughout other DCOs promoted by the Applicant.</i>” The specific matters, however, that are capable of arbitration under the Project dDCO are not unfettered: they relate to private organisations (like statutory undertakers, or private port operators). Appeals relating to local authorities are dealt with under article 65 and similarly, decisions of the Secretary of State are excluded from arbitration. In this particular case, the underlying concern is a matter of public policy in ensuring the delivery of the Project.</p> <ul style="list-style-type: none"> – The Applicant has noted that the primary driver for its suggested paragraph 99(6) was the fact that it had offered additional protections over and above precedents. The PLA’s Deadline 9A merely asserts that the Project is different, but that is precisely why the additional protections (and the consequent SoS derogation process) are proposed. – The PLA claims that “<i>The Applicant is confusing two entirely separate functions. One is discharging the Requirements; the other is resolving a dispute in relation to protective provisions which would usually be subject to arbitration.</i>” This comment is misconceived. The process for the discharge of requirements fundamentally deals with design, construction, and mitigation measures for the Project. That is fundamentally what the SoS process in paragraph 99(6) is securing. – The Applicant noted under the Port of London Authority Act 1968, there are various matters – including in relation to river works in the river Thames and dredging – where the SoS is the authority which determines appeals. The PLA state “<i>the provisions within the 1968 Act are not concerned with disputes of a nature which would arise under the dDCO.</i>” This is mere assertion and palpably incorrect. The ExA is asked to note the specific provisions highlighted in [REP9-275] which are materially similar to this issue. Indeed, in the absence of the dDCO, if the PLA refused a river works licence for the very same works, the Secretary of State would be the appeal authority. <p>At Deadline 9A, PoTLL reiterates its concerns and argues that “<i>the [Applicant’s] provision results in less clarity over who the final decision-maker will be in the case of a dispute, provides uncertainty as to the robustness and effectiveness of the protective provisions for the PLA, and undermines any comfort that PoTLL would otherwise be able to take from the protective provisions for the PLA.</i>” The Applicant does not agree: there is no uncertainty as to the decision-maker: it is the Secretary of State, and the related amendments to</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>paragraph 99(5) ensure consistency with the Secretary of State's decision. The Applicant does not agree that allowing the Secretary of State to confirm that an integral part of the Project can proceed – taking into account the PLA's representations – should be seen as a weakening of the protection for the PLA, which the Applicant has noted goes above and beyond precedents and secures the agreed depth to secure the future aspirations for the river Thames.</p> <p>Without prejudice to the Applicant's position that paragraph 99(6) is justified, noting the lack of substantiation and in the Applicant's view the weak points from the PLA in favour of its proposed Arbitration Rules, the Applicant considers of the two options, paragraph 99(6) should be removed, rather than imposing the Arbitration Rules which would be damaging to the delivery of the Project and the expeditious resolution of disputes. This is the solution proposed by PoTLL and is to be preferred.</p>
Schedule 14, Part 8 - Protective Provisions for PLA – paragraph 104	PLA	<p>Paragraph 104 of the PLA's Protective Provisions deals with remedial works where there is a material change to the riverbed. The PLA does not indicate which subparagraph of paragraph 104 is being referenced but the Applicant understands the PLA is referring to subparagraph (1). In particular, that provision sets out: <i>"104.(1) If any specified work or the exercise of any specified function ... during construction or carrying out gives rise to sedimentation, scouring, currents or wave action, or other material change to the riverbed, which would be materially detrimental to traffic in, or the flow or regime of, the river Thames, then the PLA may by notice in writing require the undertaker at the undertaker's own expense to comply with the remedial requirements specified in the notice."</i> The PLA objects to the use of the word 'material' and argues that <i>"what is material in the context of the river, may be different from what is material in the context of the project as a whole and that, from the PLA's point of view, paragraph 104 should deal with materiality so far as the river is concerned"</i>. The Applicant has addressed this matter in the Statement of Common Ground with the PLA [APP-100] (see Item 2.1.58). In short, the 'material' change is explicitly a change which is a "material change to the riverbed", and which is "materially detrimental to traffic in, or the flow or regime of, the river". There is no reference to materiality being related to the Project. No amendment is therefore considered necessary.</p> <p>At Deadline 9A, the PLA repeat its position that <i>"what is material in the context of the river may be different from what is material in the context of the project as a whole"</i>. With respect, for the reasons above, there is no reference to materiality in the context of the Project, but in the context of the river. The Applicant considers the terms are clear, certain and no amendment is required.</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
Schedule 14	PoTLL and HS1	Both PoTLL and HS1 have requested 'consent' provisions over the exercise of land powers. HS1 have also requested expanded terms of the indemnity. The Applicant's position on this is set out in Section 3 of Deadline 9 Hearing Actions [REP9-279] . In respect of PoTLL, please see Section 7.5 of [REP7-190] . The Applicant can also confirm that the form of indemnity is now agreed with PoTLL, which was an important outstanding issue between the Applicant and PoTLL.
Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 148 - Definition of "as built" drawings	Local highway authorities	The local highway authorities propose, as set out in their submission at Deadline 8 [REP8-150] , specifying the format of "as built" drawings within Schedule 14 by including within the definition that drawings should be provided in " <i>both PDF and Autocad DWG formats</i> " or as otherwise agreed. The Applicant's position is unchanged. Going beyond all the SRN precedents, the Applicant has inserted a definition which includes " <i>drawings showing the as constructed local highways in an appropriate format</i> ". This allows an appropriate degree of flexibility for the Applicant to choose an appropriate form of drawing at the appropriate time, and avoids being tied to particular proprietary software which may have been superseded by the time of completion. If the local highway authority does not consider the drawings provided by the Applicant meet its needs then it may request further information as reasonably required under paragraph 153(1)(e) of the Protective Provisions. The Second Joint Response seeks to rely on the Applicant's submissions on the Hinckley Rail Freight project, but this is not a relevant precedent for a DCO being promoted by a strategic highway company and relates to the certainty required in respect of the specific assets being delivered on that scheme (as well as the timing of the provision of such assets).
Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 148 - Definition of "detailed information"	Local highway authorities	The local highway authorities propose additional wording in this definition, as set out in their submission at D8 [REP8-150] . This request is reiterated in their Deadline 9A submission. The Applicant is required by its licence to utilise standards, including DMRB (see paragraph 5.31 of the Applicant's statutory licence (DfT, 2015)). The proposed reference in subparagraph (d) is therefore unnecessary, and again, in some cases the works will be subject to different principles and standards in line with the Design Principles [REP9-227] , so an excessively prescriptive definition is not appropriate in the case of this Project. This can be contrasted with the third party DCOs prayed in aid by LBH, whose promoters are not bound by the Applicant's licence, and so need to secure the relevant standards directly. So far as measures relating to traffic management are concerned, these are included, and appropriate provision is made in the oTMPfC, so new sub-paragraph (i) is also redundant. At Deadline 9A, the LHAs mistakenly suggest that the Applicant is suggesting that there are no such forums in private sector developments. This is not the Applicant's view:

Provision	Interested Party(ies)	Matter raised and Applicant's response												
		<p>unlike private sector developments, the Project dDCO includes a robust Traffic Management Forum based on the unparalleled experience the Applicant has in implementing DCOs, and that Forum addresses matters relating to construction traffic. Bringing traffic management within the scope of protective provisions would duplicate the work of that forum which – unlike private sector development – has been tried and tested.</p>												
<p>Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 148 - Definition of “work”</p>	<p>Local highway authorities</p>	<p>The Applicant notes that the LHAs request the definition of work refers to “on, to, over, or under” any part of the local highway network. The Applicant does not agree to this change. Works “over” the highway may not interfere with the highway and expanding the scope of the protective provisions to matters unrelated to an impact on highway features is rejected.</p>												
<p>Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 149 – design input</p>	<p>Local highway authorities</p>	<p>The local highway authorities propose increasing the period in which they have to consider and respond to design information supplied from 10 business days to 15 business days. The Applicant notes the following process is secured:</p> <table border="1"> <thead> <tr> <th>Stage</th> <th>Applicant's approach</th> </tr> </thead> <tbody> <tr> <td>Design meetings</td> <td>Included. 10 business days' notice for design meetings</td> </tr> <tr> <td>Design meeting feedback</td> <td>Included, responses to be provided in 10 business days.</td> </tr> <tr> <td>Detailed information provided</td> <td>Included, responses to be provided in 10 business days.</td> </tr> <tr> <td>Due regard, and response to representations in writing by Applicant</td> <td>Included.</td> </tr> <tr> <td>Arbitration preventing commencement of works</td> <td>Not included.</td> </tr> </tbody> </table> <p>The Applicant's approach is consistent with the much touted (two) SRN precedents, and in the case of many goes beyond them. It is important to stress that as a preliminary scheme would be 'fixed', the detailed design process is circumscribed in what it seeks to achieve. As noted in the table above, a number of matters will also be appropriately addressed as part of the Traffic Management Plan and Traffic Management Forum secured under Requirement 10. Temporary diversions, for example, will be subject to their own engagement and approval by the Secretary of State, giving rise to a concern about conflicting decisions with approvals granted by the Secretary of State even leaving aside the additional time and public expense incurred. To reiterate, the scope and purpose of the detailed design process is to refine</p>	Stage	Applicant's approach	Design meetings	Included. 10 business days' notice for design meetings	Design meeting feedback	Included, responses to be provided in 10 business days.	Detailed information provided	Included, responses to be provided in 10 business days.	Due regard, and response to representations in writing by Applicant	Included.	Arbitration preventing commencement of works	Not included.
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Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>the preliminary design (as presented in the Engineering Drawings and Sections [REP9-056 to REP9-070]), and provide more definition of its component parts (such as specific materials, planting species, interfaces and details). In that context, the Applicant considers a further week to be disproportionate.</p> <p>The Applicant notes that that the Government, in Getting Great Britain building again: Speeding up infrastructure delivery (DLUHC, 2023), laments, “<i>the delivery of big infrastructure projects in our country could be much better. It is too slow. Too bureaucratic. Too uncertain.</i>” It goes onto state “<i>the system responds with more process, but longer processes are not leading to better outcomes. All these factors detract from the focus we need on delivery. We need to speed up every part of the process, ... and hardwire a focus on delivery into every part of the system.</i>” Any suggestions that would protract the process, particularly in light of the substantial, and in many cases unprecedented, commitments and controls already provided, should therefore be rejected by the ExA.</p> <p>The Applicant notes that the D9A submission from the LHA appears to drop this request (though does not explicitly acknowledge this), but insists upon amendments which do not materially affect the obligations under subparagraph (6). The Applicant does not consider the amendments necessary and would note that they in fact allow the Applicant to protract the provision of its decision. The Applicant considers the requirement to provide notice of its decision upon request within 10 business days is adequately secured, and in accordance with much touted precedented cited by the local highway authorities. Nonetheless, the Applicant has removed the reference to “endeavour” to assure the local highway authority that it will meet this obligation.</p>
Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 150 - Local operating agreements	Local highway authorities	<p>The local highway authorities seek to insert matters which are already addressed in the substantive part of the Protective Provisions. At Deadline 9A, the local highway authorities dispute that the requests are covered in these paragraphs. For the benefit of the ExA, handover arrangements and the issue of final certificates are dealt with under the explicit terms of paragraphs 148 to 153, and 155. “Routine maintenance” is the subject of provisions specifically dealing with maintenance (paragraph 156), and would fall within paragraph 150(1)(e) (“repair arrangements in relation to local highways directly affected by the construction of the authorised development”). The “method of communicating” whether in relation to claims or otherwise is addressed in paragraph 150(1)(a) and (g) (“arrangements for dealing with and recording incidents during the construction period and the maintenance period”). The Applicant considers this superfluous drafting to be unnecessary, and would contribute to confusion (and underlines the Applicant’s</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>concern about the drafting proposed by the local highway authorities as set out in [REP7-190]).</p> <p>The Applicant also notes the request – contrary to the much touted A303 Sparkford to Ilchester Order – to amend the requirement to enter into a local operating agreement from “reasonable endeavours” to “best endeavours”. This is unacceptable and has the potential to introduce significant delays into the delivery of the Project, and runs a serious risk of cutting across the Applicant’s obligations to ensure value for money in accordance with its statutory licence under the Infrastructure Act 2015. The Applicant considers suggestions such as these are unbalanced taking into account the substantial compromise of the Applicant in including Protective Provisions – contrary to all but one SRN DCO (and, as noted, even that SRN DCO doesn’t go this far). At Deadline 9A [REP9A-113], the LHAs state that “<i>If the Applicant is doing all it can to enter into a local operating agreement, then it will be satisfying the requirement to use best endeavours.</i>” The Applicant considers this to be a misleading statement. Reasonable endeavours requires the Applicant to do all it can to enter into a local operating agreement, provided all those steps are reasonable.</p> <p>The Deadline 9A submission also seeks to rely on the use of “best endeavours” in Schedule 14 of the dDCO. This is wholly misconceived if the references provided are read correctly. For example, the Deadline 9A submission refers to paragraph 7(3) of Schedule 14. This is not a best endeavours obligation on the Applicant, it is a best endeavours obligation on a utility undertaker. It is appropriate given the delivery of this NSIP is necessary and has substantial public benefits. Similarly, the reference to paragraphs 12, 60, 76, 92, which refer to best endeavours in cooperating with various undertakers, is similarly misplaced because that overarching obligation to cooperate specifically requires that obligation to be met “<i>in the interests of safety and the efficient and economic execution of the authorised development</i>”. The concerns relating to unreasonable requirements, or acting in a way which conflicts with the Applicant’s licence (including its requirement to deliver value for money) simply does not arise given best endeavours are circumscribed in that manner in those paragraphs.</p> <p>For the reasons provided above, the Applicant does not agree to an amendment. The Applicant rejects that ratcheting of requirements such as these when proportionate safeguarding – well in excess of precedents – has already been provided.</p>
Schedule 14, Part 11 - Protective Provisions for Local Highway	Local highway authorities	The local highway authorities request that subparagraph (1) is amended to state “and” rather than “or complete incomplete works”. The Applicant has made this change in the dDCO submitted at Deadline 10.

Provision	Interested Party(ies)	Matter raised and Applicant's response
Authorities – paragraph 155		
Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraphs 153, 155 and 157	Local highway authorities	<p>It is welcome that the local highway authorities accept that a request for a 12-year latent defects period is no longer being progressed. The only remaining issues in relation to maintenance and final certificate are that the local highway authorities seek to curtail the determination of the Applicant in respect of the safety measures which would be implemented.</p> <p>The Applicant does not accept this, and notes that the Applicant is the strategic highways authority in England. It has ample experience in conducting road safety audits, and there is an explicit requirement for the auditor to be <i>“appropriately qualified”</i>. Local highway authority involvement is already secured because measures must be carried out <i>“to the reasonable satisfaction of the local highway”</i> authority. The measures, under the Applicant's drafting, must be carried out where necessary (with a requirement that the Applicant acts reasonably in that context). Appropriate protection is therefore in place. Moreover, given the Applicant's functions and licence, it is not clear that the proposals in the Second Joint Response meet the test of necessity for a provision to be so included. The Applicant would highlight that under the Applicant's licence, it must <i>“have due regard to the need to protect and improve the safety of the network as a whole for all road users”</i> and ensure <i>“that protecting and improving safety is embedded into its business decision-making processes and is considered at all levels of operations”</i>. Nothing raised at Deadline 9A addresses, nor undermines, this argument.</p> <p>The Applicant does not consider a requirement for private sector developers to agree to a curtailment of the powers to determine which safety measures are necessary is relevant in this context. The Applicant further notes that the much-cited and limited SRN precedents do not include this suggested wording: the A303 Sparkford to Ilchester Order uses the same drafting as the Applicant, namely <i>“Any works which the undertaker considers are required to be”</i>, and the M25 Junction 28 Order contains no requirement in relation to road safety audits at all – and for completeness, as the Applicant has explained in detail all other SRN DCOs contain no requirements in this context at all.</p>
Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 157	Local highway authorities	<p>The local highway authorities propose additional wording, as set out in their submission at D8 [REP8-150] which they say is to <i>“ensure traffic management finished prior to the final certificate being issued so that the impact of the works on the part of the network concerned is not still being experienced.”</i> As drafted, any traffic management measures, whether imposed by the Applicant under the DCO or the Local Highway Authority under its own powers, would prevent issue of a final certificate. Similarly, use of an otherwise completed</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>local road by a single construction traffic vehicle related to any part of the authorised development would prevent the issue of a final certificate, despite the road being a highway available for public use.</p> <p>These are inappropriate additions to a provision that otherwise deals with the issue of whether local highway works are physically complete and of a suitable standard for handover to the Local Highway Authority, as they do not relate to physical completion.</p>
<p>Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 156</p>	<p>Local highway authorities</p>	<p>The Applicant does not consider anything raised by the local highway authorities relating to commuted sums [REP8-150] affects the Applicant's position set out in Section 10.1 of the Applicant's response to Interested Parties' comments on the dDCO at D5 [REP6-085] and Section 9.1 of the Applicant's response to Interested Parties' comments on the dDCO at D7 [REP8-116].</p> <p>The Applicant notes that the local highways authorities distinguish between the Local Highway Authorities within and outside London, on the basis that those in London do not benefit from funding via the standard maintenance formula that applies to other Local Highway Authorities. The Applicant notes, however, that while London is not covered by the Highways Maintenance Block, the Government does provide funding for TfL in relation to highways maintenance (to be divided between TfL and the London boroughs, including LBH). In particular, the Government has set out that it is providing £2.8 billion for local authorities in the East of England, South East, South West and, importantly, London. Table 2: Local Authority Allocations, shows maintenance funding for local highways in London between 2023 and 2034 of at least £235,804,000 (Department for Transport (DfT), 2023c). The Applicant therefore confirms that its position that commuted sums should not be paid applies to all of the Local Highway Authorities, whether in London or not.</p> <p>The Applicant considers the attempt to rely on private sector development DCOs is inappropriate for the reasons described above. In addition, the Applicant would note that whilst other private sector development DCOs relied upon may have more general public benefits, the specific betterment being provided in the case of the Project is to the local road network. The Applicant does consider there has been any fundamental challenge to that principle. The Applicant notes that the proposed commuted sum provision does not include any requirement to offset the betterment provided by any sum which would be payable in the form of a commuted sum.</p> <p>At Deadline 9A, TfL repeats its position that the A127 bridge is a requirement to mitigate the impacts of the Project. This is simply not correct. The new bridge addresses historic severance, and provides a substantial betterment to the local road network. The Applicant is – at significant capital cost –</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		providing an asset which provides substantial enhancement on the local road network. TfL's attempts to suggest this particular structure are required to mitigate the impact (rather than another form of crossing) should therefore be rejected.
Schedule 14, Part 11 - Protective Provisions for Local Highway Authorities – paragraph 160	Local highway authorities	<p>Contrary to the claim in paragraphs 5.5 to 5.8 of the local highway authorities submission [REP8-150] (and the claim in the table in Section 6 that these matters have not been addressed), the Applicant rejects the payment of costs not just because of the prospect of section 106 agreements being reached, but also because of its principled position in relation to the payment of local highway costs as set out and signposted in paragraphs 2.4.1 and 2.4.2 of the Applicant's response to Interested Parties' comments on the dDCO at D6 [REP7-190]. In short, the funding of local highway authority costs in these circumstances is a matter for the Department for Transport, not the strategic highway company or has been provided for via section 106.</p> <p>The fact that the Applicant is also a highway authority also explains why the Protective Provisions for statutory undertakers and non-highway authorities deal with financial matters differently from the proposed Protective Provisions for local highway authorities: those other bodies are not ordinarily funded from highways budgets, but the Applicant and the local highway authorities are. Those budgets, rather than bespoke indemnities, remain the best way of dealing with financial matters for the respective highway authorities. Contrary to the claim that the Second Joint Response is based on relevant precedents, the Applicant would highlight that all but one of the SRN DCOs made to date contain no such a provision (and even the one which does – the A303 Sparkford – does not extend this to costs, nor does the indemnity go as far).</p> <p>The Deadline 9A response raises only one matter which is that their suggested "provision simply seeks to ensure that if the S106 monies are not sufficient to cover all the costs (since they were based not on the LHA estimates of full costs being recovered but based on what the Applicant was prepared to offer) then they are still recoverable." This fundamentally undermines the agreement which has been reached and tellingly acknowledges that provision for costs has been made.</p>
New Protective Provisions	ESW	Essex and Suffolk Water have suggested their own bespoke provisions. The Applicant's position on this is set out in the Applicant's comments on Interested Parties' submissions at Deadline 9 and 9A, submitted at Deadline 10 [Document Reference 9.216] .
New Protective Provision / Requirement	Padfield	Mr Padfield requests a Protective Provision or Requirement in connection with an access onto the M25. The Applicant rejects this unusual suggestion based on dubious legal submissions as set out in Section 4 of the Applicant's

Provision	Interested Party(ies)	Matter raised and Applicant's response
		<p>comments on Interested Parties' submissions at Deadline 8 [REP9-276].</p>
Signposting responses – Schedule 16	Thurrock Council	<p>Thurrock Council repeats its objection about certified documents, and specifically requests that particular documents be “secured”. The Applicant’s position is set out on page 143 of [REP4-212]. The Council claims this does not “<i>address the Council’s detailed concerns, regarding why some of the documents are in the Schedule 16 and why some are not</i>”.</p> <p>The Applicant has explained that it has sought to secure the relevant documents under the relevant Requirements. That is appropriate for this Project.</p> <p>Please also see the Applicant’s response to Action Point 3 of ISH12 (Part 2) in the Deadline 9 Hearing Actions, submitted at Deadline 9 [REP9-279].</p> <p>The Applicant would add that this was the subject of detailed explanation and justification in the pre-application period. The Applicant notes that the Council has previously asked for documents to be secured where they are not realistically capable of being secured (e.g., the request to “secure” the Book of Reference or Crown Land Plans).</p> <p>At Deadline 9A, Thurrock Council repeats its claim that “<i>It is unclear why the applicant is unwilling to address them</i>” despite this being addressed on numerous occasions (both during examination, as shown above, and in three letters of correspondence prior to application submission). The Applicant considers this pattern of claiming disregard to comments is symptomatic of Thurrock Council’s submissions and deserves no weight. In that context, the Applicant highlights that most of Thurrock Council’s outstanding specific issues in relation to the DCO are not shared by other local authorities.</p>
Schedule 16	Thurrock Council	<p>Thurrock Council at Deadline 9A states that “<i>the Council agrees that the Mitigation Road Map should be secured as a separate document, that can be agreed as a first iteration prior to any DCO grant and maintained and updated during the construction period to inform the process and progress with discharging consents and control documentation</i>”. The Applicant strongly objects and considers this would be a recipe for uncertainty and confusion. The Applicant has included the Mitigation Route Map as a certified document in Schedule 16 but given that document is an explanation of the control framework, which is already secured, it is not appropriate to secure that document itself. As noted, a number of matters are signposted in that document, or replicated for ease of explanation. Such a proposal would lead to confusion about which document had the binding obligation. The Applicant has had a well-trodden path of securing, establishing relevant processes, and implementing the existing framework and is concerned about the risk of unintended consequences by introducing an “overarching”</p>

Provision	Interested Party(ies)	Matter raised and Applicant's response
		secured document – originally provided merely to signpost, summarise and explain – into the process. The Applicant notes there is no SRN, nor transport DCO, as far as it is aware, that has secured such a signposting document. In liaison with members of the team who worked on Thames Tideway (including senior members who were unaware of its existence), the Applicant confirms there is nothing from that project which affects its position.

11 Control Plan/Mitigation Route Map

11.1 Control Plan

- 11.1.1 The Introduction to the Application [[REP4-002](#)] describes the Control Plan as the framework for mitigating, monitoring and controlling effects of the Project and provides detail on the series of ‘control documents’ that present the mitigation measures identified in the Application (or as subsequently amended during Examination) that must be implemented during design, construction and operation. The control plan is illustrated in Plate 1.1 of the Introduction to the Application.
- 11.1.2 Within the Examining Authority’s First Written Questions (ExQ1), there was a request to the Applicant in ExQ1_Q16.1.4 to ‘...provide a single document containing a mitigation route map of the controls and mitigation measures that have been identified across a number of documents...’. The Mitigation Route Map [[REP4-203](#)] was compiled by the Applicant and submitted at Deadline 4 to provide an overview of the various controls to be used to secure environmental mitigation and the mechanism by which they are legally secured.
- 11.1.3 This environmental Mitigation Route Map was not intended to have a formal status, but instead the intention was to help the ExA and Interested Parties navigate the mitigation relied on in the ES and related documents, and its securing mechanism. However, at Issue Specific Hearing 12, it was requested by the ExA and Interested Parties that the Mitigation Route Map become a certified document. The Applicant agreed to include the Mitigation Route Map in the list of certified documents within the draft DCO submitted at Deadline 8 [[REP8-006](#)].
- 11.1.4 The Applicant is keen to avoid possible confusion that could be caused if the commitment details within the control documents referenced were to be duplicated in the Mitigation Route Map and so has not updated the Mitigation Route Map to incorporate this detail which is already provided in documents for certification.
- 11.1.5 The documents that comprise the Control Plan have been updated during the Examination process to take account of representations from, and discussions with, multiple stakeholders, including the statutory environmental bodies, local authorities and emergency services. Changes are highlighted in the tracked changes versions of these documents in the Examination Library.
- 11.1.6 In some instances, there were requests from stakeholders to update control documents and these were rejected, with clear explanations provided in each instance by the Applicant as to why it was not accepted.

11.2 Environmental Permitting

- 11.2.1 While the DCO will be the principal consenting mechanism for the development of the Project, at the appropriate stage the Project will be supplemented by other consent applications required for specific activities to deliver the Project, which are covered by the Environmental Permitting (England and Wales) Regulations 2016 (EPR).

- 11.2.2 The Consents and Agreements Position Statement [\[REP9-111\]](#) outlines the Applicant's strategy for securing environmental permits and types of permits needed to implement the Project and has been updated throughout the Examination.
- 11.2.3 Apart from flood risk activity permits, which are included in the EA's Protective Provisions in Schedule 14 Part 9 of the draft DCO, all other environmental permits required for the Project will be applied for by the undertaker at the appropriate Project stage in accordance with the EPR.
- 11.2.4 Environmental permits for using, treating, storing and disposing of waste can be complex, especially where third-party operations may be impacted. The Applicant has undertaken extensive early consultation with the EA to review the nature of the permit(s) required for different construction scenarios and has agreed in principle with the EA an Outline Environmental Permitting Strategy. This in-principle agreement is documented in item 2.1.79 of the SoCG with the EA, while the Outline Environmental Permitting Strategy document is presented in Annex C.17 of the SoCG [\[REP9A-006\]](#).
- 11.2.5 Furthermore, the Applicant has included a provision in Article 68 of Part 7 'Interface with Waste Operation Permits' of the draft DCO relating to interactions with third-party waste permits (such as landfill or waste recovery sites) which allows the EA to provide a regulator-initiated permit variation to the existing permit to allow the authorised works to be carried out.
- 11.2.6 Article 68 also allows the undertaker to make an application to surrender all or part of an existing permit within land that is part of the compulsory acquisition for the Project.
- 11.2.7 On this basis, the Applicant understands all matters associated with Environmental Permitting have been addressed and this is reflected in the SoCG with the EA [\[REP9A-006\]](#). Article 68 has also been agreed with Tarmac Cement and Lime Limited, as well as Veolia, two of the largest permit holders across the Order limits.

11.3 Control documents relating to design

- 11.3.1 The Application presents a preliminary scheme design along with measures to ensure that the detailed design achieves high quality environmental outcomes and, in particular, to ensure that mitigation and compensation measures are designed, monitored and managed collaboratively with key stakeholders to ensure that no materially new or materially different environmental effects arise in comparison with those assessed in the ES.
- 11.3.2 The preliminary design is set out in a series of documents, which include the General Arrangement Plans, Engineering Drawings and Sections, draft DCO, Environmental Masterplan, Design Principles, Carbon and Energy Management Plan, and the Stakeholder Actions and Commitments Register.
- 11.3.3 These documents are all secured through the draft DCO, as detailed in Table 14.1 of the Introduction to the Application [\[REP4-002\]](#). The documents present the preliminary design and apply constraints as to how the detailed design will be developed.

Design Principles

- 11.3.4 Requirement 3 of the DCO provides that detailed design must accord with the Design Principles [REP9-227], which contain a range of Project-wide commitments, together with detailed area-specific commitments. The Design Principles set out principles that underpin the design measures that integrate the Project into its context. They capture embedded mitigation measures and establish parameters that must be met in the final design of the Project.
- 11.3.5 As stated in the response to ExQ1_Q16.1.2 [REP4-202], the Design Principles were developed through stakeholder engagement and in response to comments received through public consultation.
- 11.3.6 Design Principle PRO.01 introduces independent scrutiny and commits the Applicant to engaging with the National Highways Design Review Panel with regards to the Project's detailed design.
- 11.3.7 During Examination, the Applicant committed, through Design Principle PRO.07, to consult with key stakeholders by means of structured engagement on key elements of the Project's design.
- 11.3.8 Comments from Stakeholders on the Design Principles during Examination (including Kent County Council, the Kent Downs AONB Unit, Gravesham Borough Council and Natural England) are set out in 9.214 Applicant's comments on Interested Parties' submissions at Deadline 8 [REP9-276] and in the Applicant's comments on Interested Parties' submissions at Deadline 9 and 9A [Document Reference 9.216]. These comments are on the detailed drafting of the Design Principles and the applicant has provided commentary on why it has or has not accepted the detailed comments. The applicant considers that the Design Principles provide a robust framework for managing the detailed design of the project and the applicant is confident that the framework is robust and goes beyond what is typically provided on a SRN DCO.

11.4 Controls on construction

- 11.4.1 Many of the documents that make up the Control Plan include measures to avoid or mitigate and manage the Project's impacts on the environment and local communities during the construction period. The measures outlined in the Control Plan documents are secured within the draft DCO [REP9-107], ensuring they are legally binding requirements for the Applicant to implement, either themselves or through their appointed Contractors. Non-compliance would be subject to planning enforcement by the relevant local planning authority under Part 8 of the Planning Act 2008.
- 11.4.2 The mechanism of managing construction impacts using a Control Plan secured via the draft DCO is a conventional one for major infrastructure projects, although the Applicant has been careful to produce a set of control documents that has been tailored to the precise needs of this particular Project.
- 11.4.3 While the control documents are designed to function individually to robustly manage effects in their area of influence, they are also designed to work as an integrated control framework.
- 11.4.4 The documents within the Control Plan that manage or constrain construction impacts and activities following the commencement of works such as the CoCP,

oSWMP and oTMPfC are outline documents to be developed further during detailed design in consultation with the relevant local authorities with approval by the SoS.

- 11.4.5 Each outline control document includes detailed information about how it would be updated from an outline document to a management plan before the works commence. They also include information about which stakeholders would need to be consulted on the updated plans.
- 11.4.6 In line with convention, requirements for construction can be discharged in relation to “parts” of the Project, with a control document for each “part” (see para 1(3) of Schedule 2 – “parts” are to be construed as references to stages, phases or elements). This provides the necessary flexibility for construction to progress efficiently, while ensuring the requirements remain binding and that construction works are consistent and coordinated.
- 11.4.7 The Applicant consulted on drafts of key control documents during the Community Impacts Consultation in July 2021. The Applicant’s Consultation Report (Part 5 of 6) [[APP-068](#)] includes information about feedback received on the draft control documents in Table 14.19, as well as information about how the Applicant had regard to that feedback.
- 11.4.8 Interested parties’, including Natural England and some Local Planning Authorities, have made representations regarding the level of detail and control within the CoCP and REAC. The Applicant included some additional measures to ensure that the Control Plan documents are robust and are effective controls for the construction of the project and management of the impacts while maintaining flexibility to allow for the details design process to respond to practical design considerations and allow for technical innovation.

CoCP and second iteration of the EMP

- 11.4.9 The Code of Construction Practice (CoCP) [[REP9-184](#)], which incorporates the Register of Environmental Actions and Commitments (REAC), has been developed iteratively and enhanced through extensive engagement with stakeholders. It sets out how the mitigation and management of environmental effects is secured in Requirement 4 of the draft DCO and will be delivered and maintained during the construction period.
- 11.4.10 Each Contractor will produce a second iteration Environmental Management Plan (EMP2), based on the CoCP and REAC, setting out their procedures for monitoring compliance with the mitigation measures.
- 11.4.11 The EMP2 is to be approved by the SoS following consultation with the bodies listed in Table 2.1 of the CoCP and secured through Requirement 4 of the DCO. The bodies are the Local Planning Authorities and Highways Authorities, plus the EA, Historic England, Natural England, the PLA, emergency services and TfL.
- 11.4.12 The Applicant will carry out site inspections and audits to verify the Contractors’ compliance. Relevant planning authorities, the EA, Natural England and the SoS, will be given access to the results of the site inspections and audits, along with the opportunity to attend and observe National Highways site inspections and audits.

- 11.4.13 The EMP2 will include nine management plans, including those governing site waste and materials (see the sections on the outline Site Waste Management Plan and outline Materials Handling Plan below), noise and vibration, air quality, ecology, soils, contaminated land, hazardous substances, and pollution prevention. These plans set out general (good practice) and specific (essential) mitigation measures to reduce noise, dust, light pollution, and other construction impacts on local people and the environment.
- 11.4.14 The CoCP also includes information about working hours, how compounds would be laid out and managed, including incidents, and the reinstatement of sites once construction is complete. These sections commit the Contractors to working within these boundaries, which have been subject to extensive consultation and engagement with the public and key stakeholders, such as environment bodies and local authorities, with feedback considered and incorporated into the Control Plan during the pre-application period and also during Examination.
- 11.4.15 The Applicant recognises that keeping members of the public and stakeholders well informed of construction activities, including traffic management measures, plays a key role in reducing impacts on local communities. Chapter 5 of the CoCP sets out the requirement for the EMP2 to include a Communications and Engagement Strategy.
- 11.4.16 In addition to the measures summarised above, which limit construction impacts on local communities and the environment, Section 2.6 of the CoCP also states that the Applicant will promote employment and skills among the local workforce, setting targets for getting out-of-work people into jobs on the Project, along with providing apprenticeships, free training, work placements, and other opportunities. Employment and Skills Plans will be included in the EMP2s produced by each Contractor, with these updated annually during the construction period in line with the Skills, Employment and Education Strategy, which is appended to the Stakeholder Actions and Commitments Register [\[REP9A-060\]](#).
- 11.4.17 The CoCP and REAC have been amended throughout the Examination process to respond to representations from and discussions with multiple stakeholders, including the statutory environmental bodies, local authorities and the emergency services. For example, measures to manage the impact of the workforce on the local community has resulted in revised wording within the Framework for Construction Travel Plan relating to the Worker Accommodation Working Group and an additional commitment in the REAC (PH002) relating to the provision of medical and occupational health services for construction workers [\[REP9-184\]](#). Further examples of the developments made to the commitments within this document are set out below in Table 11.1.

Table 11.1 Examples of changes made to the CoCP and REAC

REAC item	Change	In response to
AQ001 – Vehicle and plant emissions	Removal of the re term ‘where reasonably practical’ in relation to the use of ultra-low sulphur fuels in plant and vehicles.	Thurrock Council
AQ006 – Air quality monitoring during construction	Inclusion of monitoring for airborne asbestos	Thurrock Council
CH003 – Cropmark complex scheduled monument at Orsett and the associated non-designated area of cropmarks identified at Greygoose Farm (247)	Amendment to formalise the inclusion of non-designated heritage asset to be of equivalent value to Scheduled Monument and to secure the appropriate level of archaeological investigation.	Historic England Essex County Council Thurrock Council
CH010 – LPA access to archaeological mitigation sites	Making clearer activities already described within the dAMS-OWSI and securing Local Authority Archaeological Advisor roles.	London Borough of Havering
TB030 – Biodiverisy Net Gain	New commitment to provide commitment to undertake re-evaluation of the BNG metric post-detailed design.	Natural England
MB001 – Construction of northern tunnel entrance compound drainage pipeline and outfall	Ammended to ensure consistency between the REAC and the wording in the Deemed Marine Licence.	Port of London Authority
GS001 – Ground Investigation	Focus on scheme of ground investigation design to be consulted on with the relevant LPA.	Thurrock Council
NV015 – Actions in case of noise and vibration monitoring exceedance	Updated following ISH8 in line with a change to NV017 to stregnthen the scope of the commitments.	Thurrock Council, Gravesham Borough Council and Whitecroft Care Home
PH002 – Worker healthcare	Updated to provide a stronger commitment to the Integrated Care Board.	Integrated Care Boards and Thurrock Council
LV008 – Southern tunnel entrance compound, Bund	Detail of the phasing of works to reduce the visual effects on residential properties on Thong Lane and Rochester Road.	Gravesham Borough Council
CoCP – Terms of Reference for the Community Liaison Group	Strengthens the role of the Community Liaison Groups	Thurrock Council

- 11.4.18 The CoCP has a central role in the Control Plan, secured in the draft DCO, and forms a strong tool for the management of environmental and community impacts through the development of EMP2.

Preliminary Works Environmental Management Plan

- 11.4.19 The Applicant has adopted an innovative approach to the management and mitigation of preliminary works through the Control Plan. The Preliminary Works Environmental Management Plan [REP9-190] is secured through Requirement 4 of the DCO and provides a set of constraints similar to those in the CoCP for Contractors carrying out preliminary works which are defined in the draft DCO and relate to specific activities that may take place before the main works commence.
- 11.4.20 Preliminary works include archaeological investigations and pre-construction ecological mitigation, environmental surveys and monitoring, investigations into ground conditions and levels, and preparation of compound areas. In common with the CoCP and other control documents, the Preliminary Works Environmental Management Plan demonstrates a robust approach that ensures that these activities are carried out with consideration for local communities and the environment.
- 11.4.21 There have been few representations on the Preliminary Works Environmental Management Plan during the Examination other than concerns from parties including PoTLL about the possibility that preliminary works might include some non-minor works. However the specific activities are well defined in Table 1.1 of the Preliminary Works Environmental Management Plan and the Applicant is clear that they would only result in negligible or relatively minor environmental impacts

Outline Site Waste Management Plan

- 11.4.22 The outline Site Waste Management Plan (oSWMP) [REP9-186] is secured through Requirement 4 of the draft DCO and sets out the overarching procedures that would be applied for the management of waste during the construction period in accordance with the principles of the circular economy and the waste hierarchy. It emphasises prevention as the foremost priority, with reuse and recycling as the next-best options, and disposal considered the last resort. The document covers all waste-generating works occurring within the Order Limits during the construction phase of the Project.
- 11.4.23 The oSWMP has been developed in collaboration with regulatory bodies and local authorities, with only Thurrock Council providing objections to the Applicant's approach. Using proven methods, the Applicant has taken good practices from projects of similar scale and complexity in the development of this control plan. In addition, the control plans are supplemented by the inclusion of commitments outlined in the REAC, which specify targets and appropriate controlling limits, related to waste and material management.
- 11.4.24 The Applicant responded to stakeholder submissions throughout Examination. For example, changes were made to the oSWMP in response to feedback received during hearings and after further discussions with local authorities. The Applicant also accepted a request to update commitment MW007 at Deadline 6 to acknowledge that where no practicable alternative is available for waste

(reuse, recycle, recover) and waste has to be disposed of, then this action will be reported in the Construction Site Waste Management Plan. REAC commitment MW013 was updated at Deadline 7 to remove reference to 70% and commit to a minimum of 90% requirement to divert from landfill non-hazardous excavated, construction and demolition waste.

- 11.4.25 Broadly, the Applicant's approach has been supported by stakeholders and, where appropriate, the Applicant has addressed concerns raised during Examination.
- 11.4.26 Thurrock Council expressed the view that the oSWMP lacks detail in some areas and that stronger commitments should be introduced. For example, they asked for the setting of individual, material-level targets for reuse and recycling, as well as providing a cap on the quantities of excavated material allowed to leave the Order Limits.
- 11.4.27 In response to these concerns, the Applicant defended its position, noting that it has adopted a diligent and robust approach to waste and material management. The Applicant's approach aligns with the core principles of a circular economy and the waste hierarchy, forming the backbone upon which the oSWMP has been developed. The Applicant has gone further in its commitments and targets related to waste in comparison to other projects of similar scale. Furthermore, the Project has retained approximately 95% of its excavated material onsite, exceeding the approach of other projects of similar scale.
- 11.4.28 The oSWMP is an output of the environmental impact assessment to effectively manage the impacts associated with material and waste handling, ensuring a robust and sustainable solution. The Applicant considers that its approach is tried and tested, uses clear and concise language, with a level of detail that is appropriate for this stage of the Project.

Outline Materials Handling Plan

- 11.4.29 The outline Materials Handling Plan (oMHP) [\[REP9-188\]](#) is secured through Requirement 4 of the draft DCO and sets out the principles to which Contractors must adhere when developing their Materials Handling Plans (MHPs), including commitments that apply to the use of various modes of transport and associated infrastructure.
- 11.4.30 The Applicant has defined certain requirements around which Contractors must form their MHPs, making for the efficient movement of materials and reducing road vehicle miles and their associated environmental and community impacts. These requirements are set out throughout the oMHP, including paragraphs 1.3.11, 3.4.1, 3.4.12, 3.4.13, 8.2.20 and 8.3.3.
- 11.4.31 The Applicant recognises the sustainability benefits that can be realised from using the River Thames to transport materials to the Project and will seek to reduce the impacts of construction vehicle movements on the wider transport network by transporting materials as close to the construction worksites as possible before using the road network.
- 11.4.32 The Applicant has therefore committed to using port facilities for at least 80% by weight of bulk aggregates imported to the North Portal construction area ('the Baseline Commitment'), which amounts to 35% of the total bulk aggregates

across the Project. In addition, and subject to the exceptions set out in Section 6 of the oMHP, the Contractor would engage with aggregate and material suppliers collaboratively to maximise use of river transport for the import of bulk aggregates for the North Portal construction area beyond the Baseline Commitment so far as is reasonably practicable (the 'Better than Baseline Commitment').

- 11.4.33 The Applicant responded to stakeholder submissions concerning the oMHP throughout Examination, for example at Deadline 9 the Applicant submitted comments on Interested Parties' submissions at Deadline 8 [[REP9-276](#)] and again at Deadline 10 the Applicant has submitted a response to Interested Parties' comments on Deadline 9 and 9A submissions as appropriate [**Document Reference 9.216**] with these primarily centred on the commitment to use of port facilities (Applicant's Comments on IP submissions at Deadline 1 to 3 [[REP5-088](#)], Comments on LIRs Appendix H: Thurrock Council (Part 4 of 5) [[REP2-065](#)] and in Section E.2 of Post-event submissions, including written submission of oral comments, for ISH5 [[REP4-181](#)]). Examples of changes include updates to address concern about the lack of a derogation process for the river-use commitment and to categorically state that it would be possible to use river facilities to serve the Project both north and south of the River Thames. Similarly, the oMHP was updated to clearly highlight the Applicant's intent to develop a sustainable, multimodal and value-for-money solution for materials transport, which maximises river and/or rail use where appropriate.
- 11.4.34 Despite the alterations made, certain stakeholders, particularly the Port of London Authority and Thurrock Council, assert that the commitment to use port facilities should be enhanced. They say this enhancement should encompass compounds beyond the northern tunnel entrance compound and involve additional materials and plants, such as steel and cement.
- 11.4.35 In determining the river use Baseline Commitment and Better than Baseline Commitment, the Applicant has taken a proportionate approach, aiming to extract the environmental advantages associated with river use while simultaneously maintaining a level of adaptability that promotes a competitive and value-for-money Project.
- 11.4.36 The commitments to use the river for materials transport have been determined based on the merits to the Project and, when compared to other major projects, the Project exhibits a comparable level of commitment to river use. What distinguishes the Project from other major projects to which it is frequently compared is its modest proximity to the River Thames. Proximity to the river is a crucial factor influencing the potential benefits from river use, but only 13% of the Project is located at, on, or near the river. This is in contrast to projects such as Thames Tideway Tunnel, Silvertown Tunnel and Battersea Power Station, all of which are on or next to the river.
- 11.4.37 Construction of direct access between the River Thames and construction compounds south of the river is constrained by the Thames Estuary and Marshes Ramsar, and so river transport to southern compounds would be reliant on the road network from existing river infrastructure.
- 11.4.38 As such, it is appropriate that river use forms part of a broader multimodal commitment, set out in Section 8 of the oMHP which requires the Applicant to "*seek to maximise the use of rail and/or river facilities*". This acknowledges the

river's proximity but also its increased reliance for onward transportation via the public road network, which is the case for compounds other than the northern tunnel entrance compound. Furthermore, the Applicant does not rule out the use of port facilities when a sustainable opportunity exists beyond the scope of the oMHP commitments, but rather encourages it.

- 11.4.39 Regarding challenges asserting that the commitment should include materials beyond bulk aggregates, it is important to note that the Applicant's definition of bulk aggregates comprises over 70% of the materials required for the Project. Extending the scope of the commitments to other materials at this stage would be inappropriate given the lack of proximity of much of the Project to the river, the lack of a detailed design, and the wider judging criteria – including value for money and programme – which may mean that river use is not the most sustainable solution.
- 11.4.40 The Applicant's approach to the development of the oMHP, specifically the commitments to the use of the river for material transportation, is considered both appropriate and robust. It has been developed based on the Project's merits and leveraging the benefits of river transport for materials, while also establishing a path for further enhancement when developing the MHP, at which point further detail on material specification and associated supply capabilities will have been defined.
- 11.4.41 Additionally, the MHP will undergo consultation with relevant stakeholders, offering them opportunities to raise concerns and provide written representations. These representations will be considered for inclusion in the MHP which, upon submission for approval, will be subject to final confirmation by the SoS.

Framework Construction Travel Plan

- 11.4.42 The Framework Construction Travel Plan (FCTP) [[REP9-233](#)], secured through Requirement 11 of the draft DCO, sets out a framework with regard to the implementation of travel planning for the movement of personnel to and from the construction worksites and compounds (including the Utility Logistics Hubs (ULHs)) during the construction phase of all works related to the Project. The key aim of the FCTP is to minimise adverse local disruption or traffic impacts on the highway network from worker and visitor travel to and from construction compounds and ULHs. This will be achieved by reducing the number of single-occupancy vehicle trips and encouraging the uptake of sustainable and active modes of travel.
- 11.4.43 The FCTP also sets out measures to reduce trip length by (for example) helping workers find local accommodation (and thereby securing key measures as set out in the Workers Accommodation Report (WAR) [[APP-551](#)]).
- 11.4.44 The Applicant has applied a tried and tested approach to the development of the FCTP and has used best practice from other large infrastructure projects. Given that there are a number of unknown variables, such as the locations where the Project workforce would live and the way in which the Project's construction would take place, the Applicant has ensured that the FCTP includes a number of principles which secure the development of detailed site-specific travel plans which must be approved by the SoS prior to the commencement of works that they cover.

- 11.4.45 The Applicant considers that this is a robust and proportionate approach for this stage of the Project.
- 11.4.46 A draft FCTP was consulted on during the Community Impacts Consultation in July 2021, and feedback received during consultation, as well as technical engagement with stakeholders in advance of the DCO application, helped inform the FCTP submitted as part of the DCO application. The document has also been revised during Examination to include extra detail around workforce shuttle buses and additional commitments relating to the management of the Project workforce accommodation.
- 11.4.47 In addition, the Applicant has provided Terms of Reference for the Travel Plan Liaison Group, setting out how the group would be run along with a dispute resolution process. The Applicant considers that the Terms of Reference provide sufficient certainty to stakeholders about how their views will be considered in the development and management of travel planning during the construction phase.
- 11.4.48 Some Interested Parties have commented that the FCTP should commit to detailed targets. As set out in Section 7.1 of the FCTP, the Applicant considers that setting detailed targets at this stage to be inappropriate because of the number of uncertainties and lack of baseline data, meaning that any targets set now would likely be meaningless. The Applicant has, however, set out the areas in which it expects each of the site-specific travel plans to focus on and the FCTP commits to the targets being SMART.

Outline Traffic Management Plan for Construction

- 11.4.49 The outline Traffic Management Plan for Construction (oTMPfC) [[REP9-235](#)] secured through Requirement 10 of the draft DCO, presents the measures the Contractor would include within the Traffic Management Plan (TMP) to minimise the disruption on the road network arising from construction traffic. Furthermore, it sets out the commitment to establish a Traffic Management Forum, supported by a robust monitoring system, to facilitate the ongoing development of additional measures through consultation with relevant stakeholders, should the need arise.
- 11.4.50 The control measures committed to within the oTMPfC, and the amount of detail provided, go further than that expected at this stage compared with other projects of similar scale and complexity. The Applicant has taken successful practices from other projects, such as the inclusion of a Traffic Management Forum (TMF), which has been shown to be a successful mechanism in minimising the impacts of construction traffic and used on projects such as the A303-Sparkford to Ilchester Crossrail and HS2 Phase 1 & 2a. The Applicant considers this approach and level of detail is proportionate for this stage of the Project. The oTMPfC provides a robust mechanism and, through the TMF, a framework that is designed to be responsive in the delivery of appropriate measures.
- 11.4.51 The Applicant responded to stakeholder submissions concerning the oTMPfC throughout Examination; this is primarily outlined in the Applicant's Response to Comments Made on oTMPfC [[REP6-103](#)] and Comments on WRs Appendix C: Relevant Local Authorities & Transport Bodies [[REP2-048](#)]. For example, changes were made in response to feedback received during hearings and after

further discussions with local authorities. The updates included adding detail on monitoring locations, escalation processes and commitments to early construction of access routes from the strategic road network. Table 2.3 Stakeholder Considerations in the oTMPfC was also updated, and a new Terms of Reference for the TMF was added as an appendix to the document.

- 11.4.52 The necessity of securing the oTMPfC and its associated measures and processes is supported by stakeholders. However, certain stakeholders have expressed concerns regarding the precision of language in the oTMPfC, citing concerns about excessive flexibility. Additionally, some stakeholders have raised issues regarding the decision-making process at the TMF, emphasising the need for approval rights from the relevant local highways authority. In response to these concerns, the Applicant considers that the language used is appropriate for this stage of the Project, and is clear and precise. It is noted that the Applicant's approach is based on successful experiences on other schemes.
- 11.4.53 With regard to approval rights, the Applicant considers its current approach to be appropriate and robust. The decision-making process outlined in the TMF will allow participants to actively engage in the formulation and implementation of TMP proposals, providing a channel to raise concerns to the SoS, who holds the ultimate decision-making authority during the development of the TMP in line with the standard and widely precedented approach to SRN DCOs. Additionally, a Joint Operation Forum (JOF) is secured to address issues that are beyond the scope of the TMF but before matters are escalated to the SoS, if a modification to an approved TMP is required.
- 11.4.54 In conclusion, the Applicant's approach to the development of the oTMPfC is both robust and proportionate, setting out specific measures that have been tailored to the needs of the Project and that are suitable for this stage of development.

Additional controls during construction

- 11.4.55 Additional documents that make up the Control Plan will also impose constraints on how the Contractors can build the Project, benefiting the environment and local people. For example, the Carbon and Energy Management Plan [[REP9-239](#)] secured through Requirement 16 of the draft DCO, sets out how the Applicant will reduce emission of CO₂ and other greenhouse gases during construction, using innovative methods for road construction such as low-carbon materials.
- 11.4.56 The Carbon and Energy Management Plan was updated (Version 2 of the First Iteration) in at Deadline 7 [[REP7-150](#)] to secure a commitment by the Applicant to reduce the maximum carbon emissions during the construction phase. The reduction was achieved by embedding carbon in the procurement of the three design and build contracts. More information about this updated commitment can be found in Post-event submissions, including written submission of oral comments, for ISH12 [[REP8-111](#)] and in the Applicant's Comments on LIRs Appendix H: Thurrock Council (Parts 1 to 5) [[REP2-062](#) to [REP2-066](#)].
- 11.4.57 The outline Landscape and Ecology Management Plan (oLEMP) [[REP9-207](#)], secured through Requirement 5 of the draft DCO, sets out the requirements to establish, manage and monitor the parcels of land that perform landscape and

ecological mitigation functions, helping to manage the biodiversity impacts of the Project during construction.

- 11.4.58 The Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (dAMS-oWSI) [REP9-197], secured through Requirement 9 of the draft DCO, provides a framework for how any cultural artefacts discovered during construction will be treated. The Applicant updated the dAMS-oWSI following engagement with the London Borough of Havering with the provision of an additional appendix in relation to Palaeolithic archaeology.
- 11.4.59 The Stakeholder Actions and Commitments Register (SAC-R) [REP9A-060], secured through Article 61 of the draft DCO, lists commitments, including those related to the Project's construction, that have been given to stakeholders and are secured within the Application but which do not naturally sit within the REAC, the outline management documents, other control documents secured under Schedule 2 of the draft DCO, and are not contained within side agreements (agreed with specific stakeholders outside of the DCO).

11.5 Long-term management of mitigatory and compensatory land

- 11.5.1 The oLEMP [REP9-207], secured through Requirement 5 of the draft DCO, sets out the proposed establishment, management and monitoring of the parcels of land that perform landscape and ecological mitigation functions to reduce the impacts of the Project during construction and operation.
- 11.5.2 The oLEMP includes the following commitments relevant to long-term management:
- a. Commitments to aftercare, monitoring and maintenance activities relating to the landscaping and ecological features.
 - b. Measures for the replacement, during the first available planting season, of any tree or shrub planted as part of the LEMP that, within a period of five years or such period as may be specified in the LEMP after the completion of the part of the authorised development to which the relevant LEMP relates, dies, becomes seriously diseased or is seriously damaged in the construction of the authorised development.
- 11.5.3 All future management proposals would be cognisant of relevant legislation and, where appropriate, the relevant licensing requirements would be secured prior to works commencing.
- 11.5.4 Long-term management, maintenance and monitoring (beyond initial establishment periods) would be delivered by National Highways' Operational and Maintenance teams or through agreement with third parties (to be confirmed). These details will be discussed with all stakeholders in the development of the detailed LEMP in accordance with DCO Requirement 5.
- 11.5.5 For example, habitats and landscape outside the highways operational boundary could be managed in the long term through agreement with third-party stakeholders or adjacent landowners. However, any such agreements would not remove the Applicant's responsibility under the oLEMP, as secured

by Requirement 5 of the DCO, with the Applicant retaining ultimate responsibility for the management and maintenance of all land parcels identified in the oLEMP.

- 11.5.6 The timing of any land handover would depend on the management capabilities of the identified partner organisation, such as a third-party stakeholder or adjacent landowner.
- 11.5.7 During Examination, there have been discussions with stakeholders as to the meaning of ‘long term’ in the context of the management of land within the Order Limits that is designated for environmental mitigation or compensation. The Applicant has agreed that in this context the expression ‘long term’ means ‘in perpetuity’, which means the Applicant commits to own the management and monitoring of this land for as long as the land maintains its mitigatory or compensatory function – i.e., the Applicant’s obligations in this regard would not simply expire after a certain period of time.
- 11.5.8 The oLEMP was updated at Deadline 7 to state that the management of the land parcels and typologies will be undertaken ‘in perpetuity’ and also includes an agreed definition of what ‘in perpetuity’ means in this context.
- 11.5.9 Land within the Order Limits that is not proposed as ecological mitigation or compensation – such as highways verges, drainage ditches, attenuation ponds and earthworks – will be subject to Design Manual for Roads and Bridges (DMRB) standards GM 701 Series 3000 (Highways England, 2020c) and GS 801 Series 3000 (Highways England, 2020b), which establish the general maintenance and inspection requirements for all-purpose trunk roads.
- 11.5.10 As such, the oLEMP does not include routine vegetation management activities required for safety, such as maintaining visibility splays, or routine maintenance tasks such as rubbish removal, fence repair, or reinstatement of habitat following incidents or incursions into the verge.

Monitoring the success of habitat creation and long term management

- 11.5.11 The oLEMP Appendix 1: LEMP Terms of Reference [\[REP9-209\]](#) commits to the creation of an advisory group to monitor the implementation and success of the habitat creation and management programme.
- 11.5.12 The Applicant will appoint a monitoring party to work collaboratively with the advisory group and monitor the outcomes of works during the agreed management/monitoring period (as set out in Table 4.1). The monitoring party will include suitably qualified and experienced ecologists and landscape architects. Ultimate responsibility for any monitoring to be carried out successfully will remain with the Applicant.
- 11.5.13 An annual monitoring report will be prepared by the monitoring party (both during site establishment and up to and including the ‘design year’) and presented to the advisory group highlighting major works carried out and achievements met.
- 11.5.14 The advisory group will assure LEMP-related targets and commitments made to stakeholders. It shall meet regularly and will include a representative from National Highways, local planning authorities, Natural England, Kent Downs

AONB and local statutory environmental bodies, National Highways' Contractor and detailed design ecological consultant, and other appropriate parties.

- 11.5.15 Chapter 8 of the oLEMP includes information about the outline long-term management requirements for each type of habitat – such as wetland, water bodies, shrubs and trees, hedgerow, grassland, open mosaic, woodland – along with targets for success against which to compare the results of the long term monitoring.
- 11.5.16 Chapter 4 of the oLEMP includes information about habitat establishment durations in Table 4.1, with some habitats requiring five years to establish (wetland, ponds, hedgerow), others 20 years (grassland, mosaic and woodland), and others 25 years (ancient woodland and nitrogen deposition compensation). However, as stated above, the Applicant's management obligations in respect of the land would extend in perpetuity.
- 11.5.17 Ongoing consultation with stakeholders will develop the desired outcomes in terms of target habitat mosaic and long term management for inclusion in the detailed design and LEMP. The environmental advisory group will provide guidance on the detailed specifications.

Concerns about development on mitigation or compensation land

- 11.5.18 The status of areas designated as environmental mitigation or compensation land is set out in the Application. For example, the location mitigation measures are presented in the Environmental Masterplan [[REP9-130](#) to [REP9-148](#)], while design considerations are set out in the Design Principles [[REP9-227](#)], documents that are secured through Schedule 2, Requirement 5 of the draft DCO [[REP9-107](#)]. Establishment, management and monitoring of the land are set out in the oLEMP [[REP9-207](#)], also secured through Schedule 2, Requirement 5.
- 11.5.19 As set out in the DCO Application, land designated for environmental mitigation or compensation would be used for those purposes, as described and secured in the Application.
- 11.5.20 Any future development outside the land required for the Project would be decided by the relevant local planning authority or other relevant approval body.

11.6 Topic conclusion

- 11.6.1 The Applicant considers that the content of the CoCP, REAC and other control documents is based on measures that have been successful on other major projects and, in many respects, they go beyond precedents in the level of control they provide.
- 11.6.2 Furthermore, the iterative process for producing management plans, along with the processes for managing and enforcing the mitigation measures, are suitably robust, involving key stakeholders such as local authorities and environmental bodies. This provides certainty to stakeholders that any identified commitments will be delivered and that they will be appropriately engaged in the process of their delivery.

- 11.6.3 The EMP2, also referred to as the Construction Environmental Management Plan, will provide the necessary controls during construction, while the Environmental Management Plan (Third Iteration) (EMP3) will provide a framework for the management of environmental impacts once the Project is operational. EMP3 will be prepared during the final stages of the construction phase by the Contractors, based on the EMP2 and the LEMP, and not finalised until further engagement with key stakeholders.
- 11.6.4 In addition, the Control Plan takes a responsible, and now agreed, approach to environmental permitting and has considered sustainability matters in terms of the use of the river and minimisation of HGV and staff vehicle movements.
- 11.6.5 The proposals for the long-term management and monitoring of the land designated for environmental mitigation and compensation are also clearly set out.
- 11.6.6 Overall, the control documents collectively provide a substantive and workable foundation for the proposed management of environmental and community impacts during the construction and operational periods. The Control Plan has been devised and drafted after extensive consultation and engagement, while also providing robust mechanisms for further engagement with and input from key stakeholders during the lifetime of the Project.

12 Stakeholder engagement

12.1 Introduction

- 12.1.1 This section of the Closing Submission covers a summary of the engagement that the Applicant has undertaken in the pre-application (Section 12.2) and examination (Section 12.3) phases and, in doing so, describes how successful this was in the resolving or limiting of objections.
- 12.1.2 In the Applicant's experience across its portfolio of DCO promotions, the Project has been through a robust and unparalleled level of scrutiny, both through an extensive pre-application period and through examination of what is the most detailed DCO application it has ever submitted.

12.2 Pre-application engagement

- 12.2.1 The Applicant undertook extensive engagement with stakeholders throughout the pre-application stage of the Project which allowed stakeholders to shape the Project and facilitated continuous improvement to its design. This engagement was of a significant benefit to the Applicant as it provided a deeper understanding of local issues and enabled information to be gathered to support decision making.
- 12.2.2 The Applicant's continuous engagement programme ran in parallel with, and was complementary to, its formal extensive public consultations. At the end of 2018 the Applicant held the most comprehensive consultation it has ever undertaken and received a record breaking response with around 15,000 people attending 60 events and almost 29,000 people sharing their views on the proposals. There was significant support for the proposals with than 80% of respondents supporting the need for a new crossing and 70% supporting the location, however the Applicant recognised that there were areas of concern and focused on continuing to improve the proposals.
- 12.2.3 Meaningful engagement has therefore been a critical part of the development of the Project. The Applicant recognises that there is a myriad of stakeholders interested in the Project and sought to communicate and build relationships as much as possible, whether the stakeholders were supportive of the Project or not.
- 12.2.4 Understanding the importance of engagement, the Applicant held regular meetings and workshops with stakeholders throughout the pre-examination phase in order to try and reach agreement/consensus on matters relevant to the stakeholder.
- 12.2.5 In line with the underlying principles of the Planning Act 2008, the Applicant shared information in advance of the submission of the DCO Application to assist with the closing out of matters, but inevitably there were a number of matters which were not agreed at that point and these were documented within the relevant SoCGs that were submitted with the Application.
- 12.2.6 For further information on the engagement that took place in the pre-application period, the Applicant refers to the Statement of Engagement [[APP-091](#)].

Statements of Common Ground (pre-application)

- 12.2.7 Central to this engagement was the development of SoCGs. Even accounting for the scale of the Project, the Applicant considers that the pre-application progress made on SoCGs compares very favourably when benchmarked against guidance on DCOs, and other DCO applications. It is relevant to note that draft SoCGs are not mandatory application documents, and not formally a “required” part of the process until the first relevant deadline set for the examination stage.
- 12.2.8 The Applicant submitted 43 SoCGs with the Application to support the Planning Inspectorate and ExA to understand where matters were agreed, not agreed and under discussion. To further assist, a Statement of Commonality [[APP-092](#)] was provided to understand areas of commonality across the SoCGs which were prepared between a range of stakeholders and the Applicant.
- 12.2.9 Paragraph 115 of Planning Act 2008: Guidance on the Pre-Application Process (Department for Communities and Local Government, 2015) (referred to in the remainder of this section as Guidance) accepts that ‘*applicants and consultees will not always agree about whether or how particular impacts should be mitigated*’. The Applicant provided an explanation of its position on all issues and sought to work towards finding common ground with stakeholders without engaging in unduly protracted discussions in relation to matters where there are fundamental differences between the parties, as this limited time to resolve other matters where an agreed position could feasibly be reached. For many matters, they remained as ‘Matters Under Discussion’ to allow the Interested Party opportunity to review and consider the full Application.
- 12.2.10 For information on individual SoCGs, the Applicant refers to the respective SoCG.

Acceptance for Examination

- 12.2.11 The Applicant considers that the approach to sharing information and resolving matters prior to submission of the DCO application was reasonable and proportionate and that the process of engagement and consultation met the requirements set out in the Planning Act 2008 in both word and intent of the Guidance, and as such the Applicant considers that the test of adequacy was met.
- 12.2.12 The Applicant welcomed confirmation of this as identified in the Acceptance Letter from the Planning Inspectorate [[PD-001](#)]:
- “The Planning Inspectorate has decided to accept this application for Examination. In reaching this decision, the Planning Inspectorate has:*
- *In respect of section 55(3)(e), had regard to the matters set out in section 55(4), and concluded that the applicant has complied with Chapter 2 of Part 5 of PA2008; and*
 - *in respect of section 55(3)(f), had regard to the extent to which those matters set out in section 55(5A) have either been complied with or followed, and concluded that the application (including accompaniments) is of a satisfactory standard.”*

- 12.2.13 This is demonstrable evidence that the pre-application consultation and engagement complied with the relevant legislation and guidance.

12.3 Engagement during the Examination

- 12.3.1 Understanding the importance of continued engagement during the examination, the Applicant has held regular meetings and workshops with stakeholders throughout examination. The purpose of this was to:
- a. Provide updates on the examination process
 - b. Continue engagement on SoCGs and agreements in order to try and reach agreement/consensus on matters relevant to the stakeholder
 - c. Undertake topic-based workshops on items such as traffic modelling and environmental matters
- 12.3.2 The Applicant recognises that stakeholder engagement involves negotiation, and appreciates that major infrastructure projects present opportunities for resolving existing challenges in the local area and leaving a positive legacy. However, as a publicly funded project, there are many factors that need to be considered and balanced when making such decisions, including the following:
- a. Whether the requested proposal sufficiently mitigates an actual impact identified in the ES and whether it is proportionate to the impact identified. There were a number of requests for changes that did not respond or correlate to identified effects in the ES.
 - b. Whether there is policy that supports the proposal and if the matter is a material planning consideration, or if the request is contrary to government policy and guidance or, in the case of section 106 agreements, whether the obligation sufficiently meets the legal and planning tests. There were a number of requests for section 106 obligations that did not meet these planning tests.
 - c. The views of other stakeholders, including those with statutory duties that could be impacted, as the Applicant has sought to ensure that decisions made do not prejudice another stakeholder from fulfilling its statutory obligations or generating onerous secondary consent obligation.
 - d. Whether the Applicant has the ability to implement such requests, or whether the responsibility for resolving a matter actually sits with another body.
 - e. If more appropriate avenues exist such as the Applicant's designated funds programme which works in partnership with stakeholders to promote legacy projects, more details of which can be found in the Benefits and Outcomes Document [[APP-553](#)].

- 12.3.3 Additionally, some local authorities would like to see the design and construction proposals developed to a level of detail that is not proportionate to the current stage of development. The Applicant maintains that certain matters can only be developed and resolved during the detailed design and construction planning process that would be triggered by the grant of the DCO. The application, through the Control Plans, has been designed to deliver a framework that enables the progressive development of the Project in accordance with a precedented process and approach.
- 12.3.4 Where the Applicant has taken the view that a suggestion or request is not in alignment with one or more of the factors above, justification has been provided in the respective SoCGs.

Statements of Common Ground (Examination)

- 12.3.5 In addition to the 43 SoCGs submitted at Application, a further 30 IPs engaged in the SoCG process meaning that there are 73 IPs (74 including Swale Council, who subsequently withdrew from the SoCG process) with an SoCG, and one or more new or updated SoCGs were submitted at every examination deadline (except Deadline 6A) and, in conjunction, an updated Statement of Commonality [[REP9A-004](#)].
- 12.3.6 In addition to the regular meetings with the IPs to seek to reach final positions on outstanding SoCG matters, multi-disciplinary workshops were held during the examination. These included but were not limited to:
- a. Climate
 - b. Construction
 - c. Design
 - d. EIA methodology and assessment
 - e. Health and Equalities Impact Assessment
 - f. Traffic and Wider Network Impacts
- 12.3.7 A summary of engagement undertaken with each IP during examination is recorded in the back of the respective SoCG.
- 12.3.8 The SoCGs included in the Deadline 9A submission present the final positions reached against each matter for each IP.
- 12.3.9 By Examination Deadline 9A:
- a. 21 SoCGs (29% of the total number) have all (238) matters agreed.
 - b. 56% (1,165) of all matters are agreed.
 - c. 42% (874) of all matters are not agreed.
 - d. 2% (45) of all matters remain under discussion as they are points of detail to be discussed at either the detailed design or construction phases or are subject to a separate agreement.

- 12.3.10 The top 10 headings where matters are either all or broadly all agreed are:
1. Cumulative effects – matters raised by two parties, 100% of matters agreed.
 2. Marine Biodiversity – matters raised by four parties, 100% of matters agreed.
 3. Road Drainage and the Water – matters raised by 11 parties, 91% of matters agreed.
 4. Cultural Heritage – matters raised by nine parties, 89% of matters agreed.
 5. Material Assets and Waste – matters raised by seven parties, 86% of matters agreed.
 6. Protective Provisions – matters raised by 22 parties, 77% of matters agreed.
 7. Geological and Soils – matters raised by four parties, 75% of matters agreed
 8. Need for the Project – matters raised by 20 parties, 75% of matters agreed
 9. DCO and Consents – matters raised by 34 parties, 74% of matters agreed.
 10. Consultation and Engagement – matters raised by 22 parties, 73% of matters agreed
- 12.3.11 The top 10 headings where matters are broadly not agreed are:
1. Wider Network Impacts – matters raised by 23 parties, with 87% of matters not agreed.
 2. Traffic and Economics – matters raised by 25 parties, 84% of matters are not agreed.
 3. Climate – matters raised by six parties, 83% of matters are not agreed.
 4. Socio Economics – matters raised by six parties, 83%, of matters are not agreed.
 5. EIA Methodology – matters raised by seven parties, 71% of matters are not agreed.
 6. Noise and Vibration – matters raised by 10 parties, 60% of matters are not agreed.
 7. Planning Statement/Policy – matters raised by 11 parties, 55% of matters are not agreed.
 8. Air Quality – matters raised by 16 parties, 50% of matters are not agreed.
 9. Charging – matters raised by 12 parties, 50% of matters are not agreed.

10. Habitats Regulations Assessment (HRA) – matters raised by two parties, 50% of matters are not agreed.

12.3.12 Table 12.1 presents the status of position of matters at Deadline 9A compared to the position at Application, which shows demonstrable evidence of the results of the extensive engagement undertaken throughout examination.

Table 12.1 Status of final positions of matters compared to positions at application

	At Application	At D9A	At Application	At D9A	At Application	At D9A	Total for each cohort at D9A
Cohort	No. Matters Agreed		No. Matters Under Discussion*		No. Matters Not Agreed		
Statutory Environmental Bodies	231	323	86	3	31	81	407
Business and Industry	15	32	39	20	12	41	93
Statutory Undertakers, Utility Providers, and Regulators	115	292	171	22	11	25	339
Local Authorities and Transport Bodies	128	421	444	0	201	543	964
Community and Parish Councils	59	97	52	0	131	184	281
Total	548	1,165	792	45	386	874	2,084

**A small number of matters remain as 'under discussion' as they are points of detail to be discussed at either the detailed design or construction phases or are subject to a separate agreement.*

12.4 Status of Statutory Undertakers' Objections at Examination Close

Statutory undertakers and electronic communication code operators

12.4.1 The following statutory undertakers or electronic communication code operators which hold land or rights pursuant to s127 and/or s138 of the Planning Act 2008 did not make any objections to the Order:

- a. Airwave Solutions Limited
- b. Arqiva Limited
- c. British Telecommunications PLC
- d. Cellular Radio Limited
- e. Cornerstone Telecommunications Infrastructure Limited
- f. Energis Communications Limited
- g. EXA Infrastructure Services UK Limited
- h. On Tower UK 1 Limited
- i. On Tower UK 2 Limited
- j. On Tower UK 5 Limited
- k. On Tower UK Limited
- l. Royal Mail Group Limited
- m. RWE Generation UK PLC
- n. South East Water Limited
- o. Verizon UK Limited
- p. Virgin Media Limited
- q. Vodafone Limited
- r. Zayo Group UK Ltd

12.4.2 The following companies within the holdings of UK Power Networks which hold land or rights pursuant to s127 and s138 of the Planning Act 2008 did not submit an in principle objection to the Planning Inspectorate, but subsequently have notified the Applicant that there is no objection to the Order:

- a. Eastern Power Networks PLC

- b. South Eastern Power Networks PLC
- c. UK Power Networks (Operations) Limited
- d. UK Power Networks (South East Services) Limited
- e. UK Power Networks Holdings Limited
- f. UK Power Networks Services (Contracting) Limited
- g. UK Power Networks Services (South East) Limited

12.4.3 Following extensive engagement and the thorough SoCG process, the following statutory undertakers which hold land or rights pursuant to s127 and s138 of the Planning Act 2008 have withdrawn their prior objection to the Project:

- a. Anglian Water Services Limited
- b. Cadent Gas Limited
- c. Southern Gas Networks PLC
- d. Thames Water Utilities Limited
- e. Thurrock Flexible Generation Limited

12.4.4 The following parties which hold land or rights pursuant to s127 and s138 of the Planning Act 2008 have outstanding objections to the Order (and have been grouped where they have the same objection presented by one of those parties). For further information regarding the status and nature of their objections and the Applicant's closing position regarding those matters, see Section 7.5: Statutory Undertakers:

- a. Environment Agency
- b. Northumbrian Water Limited, including:
 - i. Essex and Suffolk Water Limited (who are an operating arm of Northumbrian Water Limited)
- c. HS1 Limited, including:
 - i. London and Continental Railways Limited (whose interests are managed by HS1 Limited)
- d. Lumen Technologies UK Limited
- e. National Gas Transmission PLC (formerly National Grid Gas PLC), including:
 - i. National Grid PLC (who were the parent company of a merged National Gas Transmission PLC and National Grid Electricity Transmission PLC)

- f. National Grid Electricity Transmission PLC, including:
 - i. National Grid PLC (who were the parent company of a merged National Gas Transmission PLC and National Grid Electricity Transmission PLC)
- g. Network Rail Limited
- h. Port of London Authority Limited
- i. Port of Tilbury London Limited, including:
 - i. British Railways Board Limited (Port of Tilbury London Limited own the land in which British Railways Board Limited have an interest)
- j. Southern Water Services Limited

12.5 Responding to Interested Parties' submissions into the Examination

- 12.5.1 When responding to Interested Parties' submissions, the Applicant has been mindful that, given the scale and complexity of the Project, there was a need for information submitted into the Examination to be provided in a manner which was proportionate and accessible for all Interested Parties, the Examining Authority and the Secretary of State to allow for appropriate consideration.
- 12.5.2 In that spirit, the Applicant did not seek to repeat the detailed responses which it had given previously in relation to many of the matters that were raised at multiple deadlines by the same Interested Parties. The Applicant would note that, in a large number of cases, where an Interested Party disagreed with the Applicant's response on a particular matter, the Interested Party reiterated its previous submissions with no new information, or arguments. In those circumstances, the Applicant signposted to its previous responses, rather than repeat them, in order to minimise the amount of additional paperwork being put into the process.
- 12.5.3 Responses were therefore only set out in response to new comments, or where a response goes beyond what has previously been addressed by the Applicant or to address factual inaccuracies.
- 12.5.4 Where a response was not provided directly into the Examination, the submissions either fed into the relevant SoCGs or direct engagement with the Interested Parties.

Conclusion

- 12.5.5 The Applicant's plans have been shaped by the most comprehensive programme of consultation and engagement ever undertaken for a UK road scheme. To date there have been 375 days of consultation resulting in over 95,000 responses. Businesses ranging from trade associations, representative organisations, and major employers such as ports and distribution hubs have also shown significant levels of support throughout the development of the Project.

- 12.5.6 This feedback, along with the results of ongoing engagement and the findings of surveys and investigations, have shaped the design of the Project and led to some major improvements, including putting around 80% of the route in a tunnel or in cutting to reduce its visual impact, extending the tunnel to reduce the impact on important habitats.
- 12.5.7 Although a number of stakeholders have maintained in-principle objections to the Project, the engagement process has allowed for constructive discussions, resolving issues and improving the proposals.
- 12.5.8 The Applicant will build on the relationships established and will continue with its engagement in the post-examination period in relation to matters such as the discharge of requirements, through the numerous advisory groups to be established under the outline management plans.

13 Section 106 Agreements

- 13.1.1 This section of the Closing Submission provides a summary of the final positions of the six section 106 (s106) Agreements that the Applicant has proposed as part of its application for development consent.
- 13.1.2 The six S106 agreements are with Kent County Council, Brentwood Borough Council, Essex County Council, Gravesham Borough Council, London Borough of Havering and Thurrock Council.

13.2 Fully executed s106 agreements

Brentwood Borough Council

- 13.2.1 Agreement has been reached, and the Applicant refers the Examining Authority to the fully executed s106 agreement between the Applicant and Brentwood Borough Council which was submitted at Deadline 10 [**Document Reference 9.164 (3)**]

Essex County Council

- 13.2.2 Agreement has been reached, and the Applicant refers the Examining Authority to the fully executed s106 agreement between the Applicant and Essex County Council which was submitted at Deadline 10 [**Document Reference 9.165 (3)**].

Gravesham Borough Council

- 13.2.3 Agreement has been reached, and the Applicant refers the Examining Authority to the fully executed s106 agreement between the Applicant and Gravesham Borough Council which was submitted at Deadline 9 [[REP9-266](#)].

Thurrock Council

- 13.2.4 Agreement has been reached, and the Applicant refers the Examining Authority to the fully executed s106 agreement between the Applicant and Thurrock Council which was submitted at Deadline 10 [**Document Reference 9.169 (3)**].

13.3 Fully settled but not yet executed s106 agreements

London Borough of Havering

- 13.3.1 Agreement has been reached between the parties; the s106 agreement has only been signed by the Applicant. London Borough of Havering has confirmed agreement to the wording in the s106 agreement and advised that its formal signatory process has not completed. It is expected that the agreement will be executed in January 2024.
- 13.3.2 The Applicant refers the Examining Authority to the London Borough of Havering's Deadline 9A submission titled 'Update on s106 Agreement' which set this position out [[REP9A-114](#)].
- 13.3.3 The Applicant also refers the Examining Authority to the final (but not fully executed) s106 agreement between the Applicant and London Borough of Havering that was submitted at Deadline 10 [**Document Reference 9.168 (3)**].

13.4 s106 Unilateral Undertakings

Kent County Council

- 13.4.1 The Applicant refers the Examining Authority to the s106 unilateral undertaking from the Applicant to Kent County Council that was submitted at Deadline 10 [Document Reference 9.167 (3)].
- 13.4.2 A s106 could not be reached between the Applicant and Kent County Council and so the planning obligations are presented in the form of a unilateral undertaking from the Applicant to Kent County Council.
- 13.4.3 In summary, the unilateral undertaking provides the following:
- a. Annual financial contributions (index-linked) towards various officer posts to assist the County Council in meeting its obligations on account of the Project.
 - b. The Applicant also covenants to pay to the Council a one-off payment of £30,000 to assist the County Council to make the necessary changes to the Historic Environment Record that would result from the Authorised Development and to upgrade the online Historic Environment Record.
 - c. An index-linked payment of £102,610 to mitigate severance effects on Valley Drive, Gravesend. The payment is to meet the County Council's costs of a study to identify the optimal location of a pedestrian crossing to address the potential impacts on pedestrians on Valley Drive and the construction of the pedestrian crossing. The works must be carried out within 18 months of the construction end date.
 - d. A payment of £4.24 million for an AONB Compensatory Enhancement Fund to fund measures and projects that meet a funding criterion that primarily conserves and enhances the natural beauty and special qualities of the Kent Downs AONB and its setting. An additional sum is included to meet the costs in managing and administering the fund.
 - e. An index-linked payment of £28,050 to meet the County Council's costs of implementing HGV restrictions along Henhurst Road and related measures. The sum includes the costs of a feasibility study and for addressing the adverse consequences of the Henhurst Road restrictions.
- 13.4.4 The contents of the unilateral undertaking are understood to be agreed by Kent County Council, but the reason for an agreement not being reached is because of certain matters that the Applicant was not prepared to include in the s106 agreement.
- 13.4.5 It is the Applicant's view that these requests are either already appropriately provided for and secured by control documents (principally the oTMPfC [REP9-235] and the dDCO [REP9-107] (in respect to items (a), (d) and (e)); or are not required in order to make the Project acceptable in planning terms (in respect of items (b) and (c)). The Applicant's position on these matters is set out within the

SoCG between the parties submitted at Deadline 9A [[REP9A-052](#)] under items 2.1.8, 2.1.108 (DL-1), 2.1.170 (DL-6) and 2.1.25-28.

- 13.4.6 The Applicant considers that the s106 agreements and the unilateral undertaking includes scope that meet the tests for inclusion of matters within s106 obligations.

13.5 Content of the s106 agreements

Schedule 1 – Officer Support Contributions

- 13.5.1 This schedule features in all s106 agreements and the single unilateral undertaking.
- 13.5.2 In summary, the agreement provides the following:
- a. An annual financial contribution (index-linked) towards various officer posts to assist the Council in meeting its obligations on account of the Authorised Development.
 - b. Payment of said financial contribution is triggered by an input date i.e. the intended first date on which work falling within a relevant role at the Council is requested or required by National Highways in respect of matters under the Development Consent Order in respect of the Authorised Work.
 - c. Payment of the said financial contribution will cease six months post the construction end date which is defined as the date when the road tunnels are open for public use.
- 13.5.3 Additional contributions are provided for Essex County Council and London Borough of Havering with respect to a one-off payment to assist the councils to make the necessary changes to the Historic Environment Record that would result from the Authorised Development and to upgrade the online Historic Environment Record.
- 13.5.4 The calculations for these contributions were based on benchmarking market rates for the various officer posts.

Schedule 2 – Severance Contributions

- 13.5.5 This schedule features in the Thurrock Council s106 agreement (and the Kent County Council unilateral undertaking).
- 13.5.6 In summary, the agreement provides payment of a sum to mitigate severance effects on Brennan Road, Thurrock.
- 13.5.7 In response to comments by the Thurrock Council at ISH12, the Applicant confirms that this contribution is index linked.

14 Project modifications during the Examination

14.1 Changes and amendments

- 14.1.1 Following the submission of the Application, the Applicant has continued to engage with stakeholders with a view to addressing their comments and agreeing common ground, while also continuing with detailed Project development.
- 14.1.2 This led to the submission of modifications to the Project through seven changes which were considered to require a formal request to change the Application (in accordance with the guidance in Advice Note Sixteen). The Applicant notified the Examining Authority of a number of additional ‘amendments’ which were not considered to require a formal request to change the Application.
- 14.1.3 All formal changes were accepted into the Examination and subject to consultation where necessary. The acceptance of the changes is set out in [\[PD-031\]](#), [\[PD-039\]](#) and [\[PD-045\]](#). A summary of the changes, consultation and procedure is set out in this section along with a summary of the additional amendments.

Formal Change requests

- 14.1.4 The Applicant submitted formal requests for seven changes to the Application over three submissions, subject to proportionate consultation where necessary (as agreed with the Examining Authority). A brief description of the changes is set out in Table 14.1.
- 14.1.5 The Applicant would also note that the changes identified below with the change codes MRC03, EC01 and EC02 involved proposals for the further acquisition of permanent rights over additional land for the purposes of the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (CA Regulations).
- 14.1.6 The Applicant was unable to obtain the consent of all those persons with an interest in the relevant land to the further acquisition of these permanent rights. Accordingly, the Applicant has complied with the requirements of the CA Regulations in relation to the changes.
- 14.1.7 In response to the Applicant’s notification and publicity pursuant to Regulations 7 and 8 of the CA Regulations, one relevant representation and one written representation were received. The Applicant’s response to these representations can be found in its Cover Letter and Submissions for CA Regulations Deadline 2 [\[CARDL2-001\]](#). On 8 December 2023, the Examining Authority also published its Initial Assessment of Issues in relation to changes EC01 and EC02 [\[PD-050\]](#). In addition, whilst dates for an Open Floor Hearing under Regulation 16, an Issue Specific Hearing under Regulation 14 and a Compulsory Acquisition Hearing under Regulation were reserved, these were subsequently cancelled by the Examining Authority as they were not required.
- 14.1.8 Finally, the Applicant notes that, in response to the Examining Authority’s request set out in [\[PD-050\]](#), no further comments from Interested Parties relating to these changes were submitted at Deadline 9A. As a result, the

Applicant has no further comments to make in relation to the changes at Deadline 10.

Table 14.1 Changes submitted into the Examination by the Applicant

Change code	Change title	Summary description	Notification and Change Application	Acceptance into Examination
Change Request 1				
MRC01	Blue Bell Hill and Burham nitrogen deposition compensation sites	<ul style="list-style-type: none"> Removal of farmland from the Order Limits (Work No. E2 and part of Work No. E1) to retain agricultural land while still providing sufficient nitrogen deposition compensation. 	[AS-082] and [AS-083] [CR1-002]	Procedural Decision 33 29 August 2023
MRC02	Limits of deviation on bored tunnel headwall (north of alignment)	<ul style="list-style-type: none"> Increase in North Portal headwall limits of deviation from 125m up to 275m (associated with Works No. 4A and shown on Sheet 2 of the Tunnel Limits of Deviation Plans [REP4-074]). 	[AS-082] and [AS-083] [CR1-002]	Procedural Decision 34 29 August 2023
MRC03	East Tilbury utilities relocations and Order Limits reduction	<ul style="list-style-type: none"> Reduction in Order Limits, west of East Tilbury Relocation of Linford bore pipeline (Works No. MUT6) west of East Tilbury Relocation of Muckingford Road and Low Street Lane Utility Logistics Hubs (ULH 11 and 12 respectively) Land designation change for Plot 23-96. 	[AS-082] and [AS-083] [CR1-002]	Procedural Decision 35 29 August 2023
Change Request 2				
EC01	Brentwood utilities change – Land Use change and works alignment change	<ul style="list-style-type: none"> Request by the utility network provider (Cadent Gas) to realign Works No. G5 to reflect wider network operational changes and support the safe and timely delivery of utilities works Increase of approximately 428m² to land required for 'temporary possession of land and permanent rights' and corresponding reduction of land designated 'temporary possession of land'. 	[CR2-001] and [CR2-002] [CR2-003]	Procedural Decision 39 25 September 2023
EC02	Fen Lane Land Use change	<ul style="list-style-type: none"> Request from NGET and an anticipated request from Cadent, UKPN and Openreach to provide future maintenance and operational access to utility works off Fen Lane, 	[CR2-001] and [CR2-002] [CR2-003]	Procedural Decision 39

Change code	Change title	Summary description	Notification and Change Application	Acceptance into Examination
		Ockendon, resulting in changes to land designations on affected land plots.		25 September 2023
Change Request 3				
EC03	A127E WCH bridge- Limits of Deviation	<ul style="list-style-type: none"> Increase in Limits of Deviation to the north of the WCH bridge over the A127, to the east of the M25 junction 29, to allow for a proposed bridge to be constructed by Brentwood Enterprise Park, should that be granted planning consent. 	[CR3-001] [CR3-002]	Procedural Decision 42 2 November 2023
EC04	Redesignation of land Plot 16-41	<ul style="list-style-type: none"> Correction of land designation to also include temporary use of land to allow construction of public right of way, which was identified elsewhere in the original application. 	[CR3-001] [CR3-002]	Procedural Decision 42 2 November 2023

Amendments

14.1.9 The Applicant submitted ten amendments into the Examination. A description of these amendments is set out in Table 14.2.

Table 14.2 Amendments submitted into the Examination by the Applicant

Amendment code	Amendment description
EA01	An amendment to the designation of open space land and associated replacement land requirements associated with Claylane Wood
EA02	A correction to the location of the temporary drainage pipeline and outfall, required during the construction phase, from the North Portal work area
EA03	A reduction in the rights required over land plots 16-45 and 16-46 which are located on the northern embankment and within the River Thames
EA04	A reduction in the land required for construction of temporary utility works affecting the Condozers Scout Activity Centre
EA05	A reduction in the land required for the construction of utility works by approximately 1.7 hectares south of the junction of Low Street Lane, Church Road and Station Road near Linford.
EA06	Tunnel subsoil acquisition - setting the level at which subsoil could be acquired by reference to Ordinance Datum
EA07	The removal of land from the Order Limits within plot 21-10
EA08	The removal of the car park proposals (Work No. 1P) from the Application.
EA09	A reduction to the Limits of Deviation for the tunnel to exclude land over which the Applicant does not have powers to undertake the works.

Amendment code	Amendment description
EA10	Designation of land at Chalk Park as replacement open space on a precautionary basis.

14.2 Conclusion

- 14.2.1 All of the modifications, while very minor in some cases, were intended to improve the Project, alongside additional commitments made during Examination.
- 14.2.2 The final suite of Application Documents fully reflect these changes and amendments.

15 The planning balance and conclusions

15.1 The Planning Balance

- 15.1.1 The Planning Balance is presented at Chapter 8 of the Planning Statement [\[REP9-215\]](#). Sections 8.1 to 8.6 largely correlate with the early chapters of this Closing Submission in that they address:
- The legal and policy context for the consideration of the Project (Section 8.1)
 - The need for the Project (Section 8.2)
 - The consideration of reasonable alternatives (Section 8.3)
 - The benefits and opportunities of the Project (Section 8.4)
 - The potential adverse impacts of the Project and how the Applicant has sought to apply the mitigation hierarchy to minimise these impacts (Section 8.5)
 - Other potentially important and relevant matters (in the context set by paragraph 104(2)(d) of the 2008 Planning Act) (Section 8.6)
- 15.1.2 Section 8.7 sets all of these considerations in the context of paragraph 4.3 of the NPSNN (DfT, 2014) which requires decision makers, when considering a proposed development, to take into account:
- 'its potential benefits, including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term or wider benefits;*
- its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.'*
- 15.1.3 In doing so Section 8.7 of the Planning Statement [\[REP9-215\]](#) considers impacts in the specific context set by the relevant policies of the NPSNN (and where relevant the appropriate Energy NPSs for the utility NSIP components of the Project), concluding that it is the Applicant's view that there is a clear, overriding and compelling case in the public interest for the Project and the policy presumption in favour of the Project and the overall planning balance lie strongly in favour of the grant of development consent.
- 15.1.4 This chapter of this report provides a review of the matters considered as part of this balancing exercise in Section 8.7 of the Planning Statement [\[REP9-215\]](#) taking into account matters considered during Examination alongside an additional brief commentary reflecting on whether or not those matters have any material bearing on the planning balance. The Applicant's position is that they do not.

Needs case

- 15.1.5 Subject to the consideration of detailed policies and the legal constraints of the PA2008, there is a presumption in favour of granting development consent for national networks NSIPs that fall within the need for infrastructure established in the NPSNN.
- 15.1.6 There is a clear and compelling need to address the long-standing transport problems at the Dartford Crossing, which constrain the economy and impose negative issues on nearby communities. The Applicant set a number of objectives for the Project in response to this need and has explained (in the Need for the Project [APP-494] and summarised in Chapter 4 of this document) how the Applicant has addressed them. It is not necessary to repeat the details again here.
- 15.1.7 There has been no credible challenge by any IPs at the Examination hearings to this need. Parties may disagree as to what is the most appropriate solution (which has been addressed extensively through the consideration of alternatives – see below) but the Applicant considers that there is a clear consensus on the need to address the problems at the Dartford Crossing.
- 15.1.8 The compelling need to address these long-standing issues and opportunity in the public interest to do so through the development of an additional road crossing should be afforded substantial weight in the planning balance.

Alternatives

- 15.1.9 The Applicant has demonstrated, through an extensive process of assessment and re-assessment exercising sound planning judgement, accordance with all relevant legal and policy requirements in respect of the consideration of alternatives (as summarised in Chapter 5 of this document).
- 15.1.10 The consideration of alternatives has been subject to questions and submissions during the course of the Examination (including in relation to alternative modes, routes and designs) which do not alter the Applicant's position that the required additional capacity and network resilience is best provided in the form of the Project having regard to the relevant legal and policy requirements. The Applicant's view is that no credible challenge to this conclusion has been made out by IPs during the course of the Examination.

Project benefits and opportunities

- 15.1.11 In meeting the need to address the problems at the Dartford Crossing the Project would deliver additional economic, community and environmental transport benefits. These are set out in Chapter 4 and Section 8.6 of this document and are not repeated in full here though each, in addition to the overarching need, weigh positively in the planning balance.
- 15.1.12 This section of the Strategic Road Network is a limit on the economic capacity of the local and national economy, and constrains links to ports providing important international links. The Project will provide vital relief for the Dartford Crossing and the approach roads, improving journey time reliability for all road users on the A282 and the M25, and on critical sections of the A13 and the A2.
- 15.1.13 In addition, the Project will provide three new public open spaces, Chalk Park, Tilbury Field and Hole Farm, there will be new and improved walking cycling

and horse riding routes both north and south of the River Thames. The Project has potential for technical innovation, particularly the development of low carbon construction and the use of hydrogen fuels. Finally, during construction, there will be a once-in-a-lifetime opportunity for access to employment, skills development and apprenticeships for local residents.

National policy accordant

- 15.1.14 The review of planning policy within this Closing Submission, with cross-reference to the Planning Statement [REP9-215], has demonstrated the Project's compliance with the following National Policy Statements: NPSNN, NPS EN-1, NPS EN-4 and NPS EN-5 and, in so far as they may be relevant to the consideration of this DCO application, the 2021 draft revisions to NPS EN-1, NPS EN-4 and NPS EN-5, the March 2023 draft NPSNN and the final November 2023 published versions of the Energy NPSs.
- 15.1.15 Subject to any updates identified and reflected in this document which update the planning analysis, the full assessment of relevant policy is addressed in the Planning Statement and Appendices A and B to the Planning Statement [REP9-217 and REP9-219] as well as, during the course of the Examination, Policy accordant assessment of the Project against the Consultation draft NPSNN (published March 2023) [REP9-260] and Applicant's response to ExA ISH 12 AP23 on Suite of Energy National Policy Statements [REP9-274].
- 15.1.16 The Project complies with the Government's strategic vision for the development of the national road network, wider policies for economic performance, safety, technology, sustainable transport and accessibility.
- 15.1.17 The Project also broadly aligns with other relevant national planning and transport policies, along with the development plans of the 'host' local authorities, demonstrating accordant with paragraph 5.173 of the NPSNN. Relevant legal obligations, as set out in the NPSNN, including those under the Habitats Regulations (paragraph 4.22) and Water Framework Directive (paragraph 5.225) are also complied with.
- 15.1.18 Where potential is shown for the Project to result in adverse impacts, this does not imply non-compliance with the policy provisions of the NPSs – which anticipate that national infrastructure projects will inevitably lead to some adverse environmental effects – as set out in detail in Chapter 6 of the Planning Statement [REP9-215] and summarised below.
- 15.1.19 In considering such residual adverse effects this policy compliance, alongside the extensive proposals for mitigation and compensation to reduce effects, is instructive in the weight that can be given to these effects in the overall planning balance.

Air quality

- 15.1.20 Compliance against the policy requirements of the NPSNN is reported in paragraphs 6.5.28 to 6.5.32 of the Planning Statement [REP9-215] and in Planning Statement Appendix A: NPSNN Accordant Table [REP9-217]. It is the Applicant's position that nothing has materially changed during the course of the Examination Hearings which fundamentally alters that assessment of policy accordant.

- 15.1.21 The Project does lead to a significant air quality effect as a result of the impacts on designated habitats and In accordance with paragraph 5.12 of the NPSNN it is acknowledged that the SoS must give air quality considerations substantial weight where a project would lead to a significant air quality impact. The identification of proposed nitrogen deposition compensation areas with habitat creation, described in Section 9.5: Biodiversity of this Closing Submission, would however provide sufficient permanent compensation for these effects.
- Cultural heritage
- 15.1.22 Chapter 6 of the Planning Statement [[REP9-215](#)] and Chapter 9 of this Closing Submission have identified that the Project will result in substantial harm to four designated heritage assets and one non-designated asset of archaeological interest of equivalent significance to a Scheduled Monument (namely Asset 247).
- 15.1.23 Paragraph 5.131 of the NPSNN invites decision makers to give great weight to the conservation of designated heritage assets – with the more important the asset, the greater weight it should be afforded. The Applicant has demonstrated that this harm is considered to be wholly exceptional (in terms of the Scheduled Monument and Asset 247) and exceptional (with regards to the three Grade II Listed Buildings). This is supported by the agreement of the suitability of proposed mitigation measures with Historic England as recorded in the SoCG [[REP5-036](#)].
- 15.1.24 In accordance with paragraph 5.133, the Applicant has also demonstrated that the identified occurrences of substantial harm are necessary in order to deliver substantial public benefits that outweigh that loss or harm.
- 15.1.25 It was established during the Examination (including in the Deadline 4 response to written questions (EX1 Q12.1.14 and Q12.1.15) that, although not altering the conclusion of substantial harm, there may be opportunities to relocate one of the Listed Buildings (Thatched Cottage) and has agreed to continue to work with relevant bodies to investigate this further subject to identification of a suitable receptor site.
- 15.1.26 Where harm to the significance of a designated heritage asset is less than substantial, paragraph 5.134 of the NPSNN similarly prescribes that any harm should be weighed against the public benefits of the project which again is demonstrated.

Landscape and visual

- 15.1.27 Paragraph 5.157 of the NPSNN obliges the decision-maker to consider whether a project has been designed carefully to avoid adverse effects on the landscape and to minimise harm to the landscape by reasonable mitigation. The landscape design evolution of the Project is described in Chapter 6 of this Closing Submission and demonstrates that the Applicant has taken considerable care in seeking to minimise and mitigate landscape and visual impacts in accordance with NPS policy.
- 15.1.28 During the Examination numerous additional design principles and other commitments were made by the Applicant in response to comments and suggestions made by IPs as explained in Section 6.4 of Chapter 6 of this

Closing Submission. The effect of these changes to mitigate these landscape and visual impacts is to make the Project better overall.

- 15.1.29 Paragraph 5.150 of the NPSNN advises that ‘great weight’ should be given to conserving landscape and scenic beauty in nationally designated areas. Paragraph 5.152 of the NPSNN establishes a strong presumption against new road building (among other things) in AONBs unless there are compelling reasons, and any benefits outweigh the costs very significantly.
- 15.1.30 Chapter 6 of the Planning Statement [[REP9-215](#)] and Appendix F to the Planning Statement [[REP9-225](#)] explain how the Applicant has afforded great weight to the impacts on the AONB. They also demonstrate the compelling reasons that exist to justify the impacts and establish that the Project benefits very significantly outweigh the impacts in terms of the defined and overriding need for the Project, the absence of viable route alternatives with fewer adverse impacts within the AONB and the stated policy support for the Project as a major new road infrastructure project.
- 15.1.31 As set out in Chapter 9 of this Closing Submission the impacts upon the AONB have been considered through the Examination; however, the Applicant considers that the conclusion remains unaltered that there are compelling reasons to justify the impacts and that the benefits of the Project very significantly outweigh the impacts. Accordingly due weight has been afforded to AONB impacts in accordance with relevant NPS policy.
- 15.1.32 The Applicant has also been in ongoing dialogue with the Kent Downs AONB Unit and agreed a supplemental, compensatory enhancement fund to enhance the wider landscape and other aspects of the environment in accordance with paragraph 5.153 of the NPSNN. The fund has been secured through a unilateral undertaking from the Applicant to Kent County Council.

Biodiversity

- 15.1.33 In relation to the loss of habitat and ancient woodland, paragraphs 5.29, 5.32 and 5.35 of the NPSNN require that consent should not be granted for projects which would result in adverse effects or the loss of such designations unless the benefits clearly outweigh the impacts.
- 15.1.34 The Project would lead to the loss of 7.36ha of ancient woodland habitat and ten veteran trees. The loss of 7.36ha of ancient woodland accounts for the loss set out at the time of the application in October 2020, reductions in the loss that have been secured with additional design principles introduced during the Examination, and the addition of a further 0.44ha following the designation of The Wilderness. This reflects a slight increase on the loss originally reported in the application to reflect the redesignation of part of The Wilderness as ancient woodland (addressed further below).
- 15.1.35 To offset these adverse effects, ancient woodland compensatory planting is proposed to create more woodland habitat and also to link up existing areas of woodland to build resilience into the network of designated sites and habitats. In total, 80.75ha of ancient woodland compensatory planting would be provided. Specific tree planting and management measures are also proposed to offset impacts to the veteran tree resource. It is considered that the national need for, and benefits of, the Project identified in Chapter 4 of this Closing Submission clearly outweigh these impacts, particularly when considered alongside the

significant landscape scale compensatory habitat creation that would be provided as part of the Project.

- 15.1.36 Additionally, an increase in traffic volume during the operation of the Project would lead to the potential degradation of habitat quality within a number of designated sites and habitats, as a result of increases in nitrogen deposition on these areas. Some sites have been assessed as experiencing significant adverse effects as a result of increased nitrogen deposition, after appropriate mitigation measures have been applied. Further landscape-scale compensation (described above) has been developed to account for these significant effects which would again create more high quality semi-natural habitat that would link existing retained designated sites and habitats.
- 15.1.37 There have been changes proposed during the Examination to the area of landscape compensation to be provided. This has been proposed in response to feedback provided during public consultation in respect of a landowner's participation in a Countryside Stewardship scheme. Whilst the area has been reduced as set out in change MRC01 (see Chapter 14 of this Closing Submission) the Applicant has demonstrated in Chapter 9 of this Closing Submission that the land proposed is still sufficient to deliver the compensatory benefits originally anticipated from the wider area.
- 15.1.38 The Applicant has recognised the ecological value of The Wilderness based on the habitats and species it contains and has sought to minimise the Project's impacts on it. Subsequent to the Accompanied Site Inspection No 2 the Applicant has acknowledged the sensitivities of The Wilderness and the need to further minimise the loss of vegetation and tree clearance at this locality, which is in line with the existing REAC commitment LV001 [REP9-184]. The Applicant introduced amendments secured via a new Design Principle and REAC commitment that will reduce the loss of woodland at The Wilderness by approximately 4,000m². These are set out in new clause S12.19 in the Design Principles [REP9-227] and new REAC commitment LV034 [REP9-184] to reduce impacts on the sensitive ecological characteristics of the site.
- 15.1.39 The Applicant responded to the ExA's Rule 17 letter of the 8 December regarding the status of The Wilderness as potential ancient woodland in its D9A submission 9.224 Applicant's response to Procedural Decision 45 The Wilderness [REP9A-079]. That submission concludes that it is the Applicant's position that no further changes are required to the ancient woodland compensation planting proposed to address adverse effects to ancient woodland.
- 15.1.40 The Applicant is also proposing that land at Hole Farm and Hole Farm Community Woodland would be utilised to offer multiple benefits, including as a nitrogen deposition compensation site, an ancient woodland compensation site, and as replacement special category land as described in Chapter 9 of this Closing Submission.
- 15.1.41 Accordingly, the Applicant does not consider that the discussions during the Examination hearings affect the planning balance in respect of biodiversity.

Geology and soils

- 15.1.42 Paragraph 5.176 of the NPSNN invites decision makers to afford little weight to the loss of agricultural land in grades 3b, 4 and 5. By implication, therefore,

some weight should be afforded to the loss of land in agricultural grades 1, 2 and 3a – the so-called best and most versatile (BMV) agricultural land. The Project does result in the loss of some BMV agricultural land. However, that loss has been minimised through project design and a large proportion is a temporary loss which will be reinstated post construction of the Project. Only 1.1% of the loss is of the highest (Grade 1) quality. It is considered therefore that the loss of BMV agricultural land does not weigh heavily in the planning balance, not least as it was not credibly challenged during the Examination hearings.

Waste management

- 15.1.43 With regard to the provisions of paragraph 5.43 of the NPSNN and arrangements for waste management, although the Project would result in the exceedance of the DMRB LA 110 (Highways England, 2019) target of use of >1% of regional landfill capacity and so represent a significant effect (at 2.7%). However, the effect is below that threshold at a national level. Furthermore, Project design has ensured that the generation of waste would be minimised and mitigation measures ensure that the vast majority of waste generated by the Project would be reused within the Project (ES Appendix 11.1: Excavated Materials Assessment [[APP-435](#)] and ES Addendum [**Document Reference 9.8 (10)**]).
- 15.1.44 During the Examination the ExA asked IPs about the appropriateness of the waste management procedures in the oSWMP [[REP9-186](#)], enforceability of the waste targets and the application of the waste hierarchy. However, none of these matters are considered to affect the planning balance in respect of waste management.

Noise and vibration

- 15.1.45 The temporary and localised noise, transport and air quality impacts during construction have been minimised and mitigated through Project design and secured control measures. There are no air quality effects reported for the construction phase of the Project so the clauses of paragraph 5.12 of the NPSNN do not apply. There will be significant environmental noise effects.
- 15.1.46 Along the route of the Project and in three distinct areas outside of the Project Order Limits, the noise assessment (ES Chapter 12: Noise and Vibration [[APP-150](#)] and ES Addendum [**Document Reference 9.8 (10)**]) have identified that there will be significant adverse noise effects. These occur due to new road traffic noise at locations of an existing low ambient noise level. For those effects which are remote to the Project they occur as a result of a small increase in noise levels on the existing road network. The Applicant has mitigated these impacts (paragraph 5.198 of the NPSNN) as far as reasonably practicable, but in the context of Government policy on sustainable development (NPSNN paragraph 5.195) these effects remain. Any residual adverse effects need to be balanced against beneficial effects in those areas which will see noise improvements from the removal of traffic from the Dartford Crossing and the other benefits the Project will deliver (see Need for the Project [[APP-494](#)]).
- 15.1.47 During the course of the Examination hearings representations have been made by Whitecroft Care Home, notably at Deadlines 1, 5 and 7, and at CAH2, CAH5 and ISH8. The Applicant provided responses to representations

received, notably in Comments on WRs Appendix F: Landowners [REP2-051] and in Applicant's Response to Comments Made by Kathryn Homes Limited, Runwood Homes Limited and Runwood Properties Limited at D5 [REP6-098] respectively in relation to written representations.

- 15.1.48 The Applicant set out how the draft Development Consent Order makes provision that if appropriate the Care Home could be acquired with a view to relocation (see Annex A.8 of the Applicants post hearing submissions for ISH14 [REP8-114]). In response to this, the Care Home owners have stated at Deadline 9A that they agree that this achieves the outcome they seek [REP9A-143].
- 15.1.49 As any loss of care beds spaces would be temporary, and given the level of provision in the Thurrock Council area against identified needs, the relocation of the care home does not weigh heavily in the planning balance.

Population and Human Health

- 15.1.50 The output of the population and human health assessment has been used to determine compliance with the NPSNN. Compliance against the policy requirements of the NPSNN is reported in various places in the Planning Statement [REP9-215] and in Planning Statement Appendix A NPSNN Accordance Table [REP9-217]. Matters related to health are addressed in paragraphs 6.4.77 to 6.4.83 of the Planning Statement [REP9-215]; matters related to public open space are addressed at paragraphs 6.5.266 to 6.5.273; matters related to walkers, cyclists and horse riders are addressed at paragraphs 6.3.12 to 6.3.14 and 6.5.326.
- 15.1.51 It is the Applicant's position that, while there have been changes made to the Project during the course of the Examination Hearings as described above in order to respond to important matters raised by IPs, these changes have sought to improve the Project overall and do not materially alter that assessment of policy accordance.
- 15.1.52 The assessment is compliant with principles contained in paragraphs 4.81 and 4.82 of the NPSNN (relating to the need to identify and set out the assessment of significant adverse health impacts and to identify measures to avoid, reduce or compensate for adverse health impacts as appropriate, respectively).

Open space and recreation

- 15.1.53 Paragraph 5.174 of the NPSNN advises decision makers that they should not grant consent for development on open space (including playing fields) or sports and recreational land or buildings unless the land is shown to be surplus to requirements or the benefits of the project (including need) outweigh the loss. Chapter 6 of the Planning Statement [REP9-215] and Planning Statement Appendices D (Open Space) [REP7-136] and G (Private Recreational Facilities) [APP-502], identify that the Project will result in adverse impacts on a number of such facilities. However, most of these impacts are temporary and occur only on parts of sites during construction of the Project. Only one private recreational facility (see Appendix G: Private Recreational Facilities [APP-502]) would be lost in its entirety and that loss would be more than compensated for by way of creation of a new area of parkland on part of the site which will be an enhanced

recreational space in terms of quality and quantity in a suitable location which would be better accessible to the public.

- 15.1.54 The Stakeholder Actions and Commitments Register (SAC-R) [[REP9A-060](#)] has been updated to incorporate three new commitments specific to areas of green and open space, namely the Ron Evans Memorial Field, Thames Chase and Folkes Lane Woodland (SAC-R commitments SACR-014, SACR-015 and SACR-016 respectively). In the case of the Ron Evans Memorial Field and Folkes Lane Woodland, the commitment relates to ensuring that a proportion of replacement open space is landscaped and made available for public access prior to public access to existing open space within the Order Limits being restricted. In the case of Thames Chase, the commitment ensures that a proportion of replacement open space is landscaped and made available for public access by the end of the third year of the construction period.

Road drainage and water environment

- 15.1.55 Paragraph 5.78 of the NPSNN requires that ‘*substantial weight should be attached to the risks of flooding and coastal erosion*’. Chapter 6 of the Planning Statement [[REP9-215](#)], supported by a Flood Risk Assessment (FRA) (ES Appendix 14.6 [[APP-460](#) to [APP-464](#), [REP1-171](#), [APP-466](#) to [APP-468](#) and [REP7-130](#)]) identifies that the majority of the Project lies within Flood Zone 1 (the lowest risk zone). The FRA considers all sources of flood risk associated with the Project and provides the rationale for small parts of the Project to be located in Flood Zone 3. It demonstrates how the Project complies with the requirements of the National Planning Policy Framework (NPPF) in terms of passing the ‘sequential test’ and the ‘exception test’. The NPSNN does make provision for linear networks infrastructure to cross flood risk areas provided appropriate mitigation is provided to ensure that the infrastructure remains functional in the case of a flood event (paragraph 5.104). This mitigation is provided as described in Section 6 of part 6 of the FRA and summarised in Chapter 6 of the Planning Statement [[REP9-215](#)]. Accordingly, the matter of flood risk is not considered to weigh heavily in the planning balance.

Green Belt

- 15.1.56 In terms of Green Belt, paragraph 5.178 of the NPSNN establishes a presumption against inappropriate development unless very special circumstances exist to justify that inappropriate development. The decision-maker is required to attach substantial weight to harm to the Green Belt in reaching a planning balance.
- 15.1.57 Chapter 6 of the Planning Statement [[REP9-215](#)] and Appendix E of the Planning Statement [[REP9-223](#)] presents the Applicant’s assessment of the Project against relevant Green Belt policy both in terms of accordance with relevant NPS policy, the NPPF (to which the NPSNN refers), and also an appraisal against relevant local plan policy. This is supplemented by Applicant’s response to ExQ2 Q13.1.3 – Green Belt Harm Assessment [[REP7-181](#)] and Responses to the Examining Authority’s ExQ2 Appendix I: 13 Social, Economic & Land-Use Considerations [[REP6-116](#)] question ExA2_Q13.1.2 Green Belt: applicability of ‘inappropriate development’.
- 15.1.58 The Applicant’s position is that the whole Project represents inappropriate development in the Green Belt but that ‘very special circumstances’ are

demonstrated in accordance with paragraph 5.178 of the NPSNN. This conclusion is reached based on the defined and overriding need for the Project, the lack of viable alternatives, wider policy support and its temporary or limited impacts.

Carbon

- 15.1.59 Paragraph 5.18 of the NPSNN sets out the Government's commitment to meet its legally binding carbon commitments. It notes that an increase in carbon emissions from a scheme is not reason to refuse development consent unless an increase in emissions is so significant that it would have a material impact on the ability of Government to meet its targets. Paragraphs 6.5.33 to 6.5.44 of the Planning Statement [REP9-215] summarises the Applicant's position in terms of Carbon which is expressed in greater detail in Planning Statement Appendix I Carbon Strategy and Policy Alignment [APP-504] and the 7.19 Carbon and Energy Management Plan [REP9-239]. Planning Statement Appendix A NPSNN Accordance Table [REP9-217] demonstrates the Project's accordance with paragraph 5.18 of the NPSNN. These documents demonstrate that the Project would not have a material impact on the ability of Government to meet its carbon reduction targets.

Conclusion

- 15.1.60 This chapter deals with the planning balancing exercise required by paragraph 4.3 of the NPSNN, weighing the adverse impacts of the Project against its benefits.
- 15.1.61 The starting point for this balance is the demonstrable and compelling need for the Project which engages the presumption in favour of granting development, in accordance with paragraph 4.2 of the NPSNN and should be afforded substantial weight in the planning balance. In this context, the Project very clearly delivers against national policy, and comprises an integral part of government policy in the form of the Road Investment Strategy.
- 15.1.62 The consideration of the alternative ways that this need could potentially be met is not in itself a matter which falls within the scope of the planning balance exercise insofar as all legal and policy requirements have been duly satisfied. The extensive optioneering process as described at length in the Application is, however, relevant in that it has sought to avoid and minimise adverse impacts.
- 15.1.63 The transport, community and environmental and economic benefits set out in Chapter 5 of the Need for the Project [APP-494] and summarised in Chapter 4 of this report also individually and collectively weigh significantly in the planning balance in addition to meeting the overarching need.
- 15.1.64 The NPSNN (and other NPSs that have effect) anticipates that nationally significant infrastructure projects for national networks are likely to result in adverse effects and establishes specific policies which set the framework for the acceptability or otherwise of different impacts.
- 15.1.65 The Applicant has demonstrated that, where residual adverse effects occur, this has followed a lengthy process of engagement and design refinement (including during Examination through the changes to the Application and additional proposed commitments) which has sought to avoid and then minimise and

mitigate those impacts. Where it has not been possible to satisfactorily mitigate impacts then compensatory measures have been proposed.

- 15.1.66 The weight afforded to residual adverse effects should, therefore, be commensurate with the fact that these have each been demonstrated to be acceptable in compliance with the individual relevant policies.
- 15.1.67 Under the provisions of section 104(3) of the Planning Act 2008, the Secretary of State must decide the Application in accordance with any relevant national policy, except where subparagraphs (4) to (8) of that section apply. The Applicant has demonstrated that the Project accords with the relevant NPSs and considers that none of the exceptions in sub-paragraphs (4) to (8) are engaged in this case. For the purposes of section 104(7) of the Planning Act 2008, the substantial benefits of the Project demonstrably outweigh its adverse impacts.
- 15.1.68 Through the robust testing of the Applicant's case through the Examination, and having regard to changes proposed to the Application and additional commitments made, it is the Applicant's view that the conclusion remains at the culmination of this process, that there is a clear, overriding and compelling case in the public interest for the Project. Accordingly, the policy presumption in favour of the Project and the overall planning balance lie strongly in favour of the grant of development consent.

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Glossary

Term	Abbreviation	Explanation
A122		The new A122 trunk road to be constructed as part of the Lower Thames Crossing project, including links, as defined in Part 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1)
A122 Lower Thames Crossing	Project	A proposed new crossing of the Thames Estuary linking the county of Kent with the county of Essex, at or east of the existing Dartford Crossing.
A122 Lower Thames Crossing/M25 junction		New junction with north-facing slip roads on the M25 between M25 junctions 29 and 30, near North Ockendon.
A13/A1089/A122 Lower Thames Crossing junction		Alteration of the existing junction between the A13 and the A1089, and construction of a new junction between the A122 Lower Thames Crossing and the A13 and A1089, comprising the following link roads: <ul style="list-style-type: none"> • Improved A13 westbound to A122 Lower Thames Crossing southbound • Improved A13 westbound to A122 Lower Thames Crossing northbound • Improved A13 westbound to A1089 southbound • A122 Lower Thames Crossing southbound to improved A13 eastbound and Orsett Cock roundabout • A122 Lower Thames Crossing northbound to improved A13 eastbound and Orsett Cock roundabout • Orsett Cock roundabout to the improved A13 westbound • Improved A13 eastbound to Orsett Cock roundabout • Improved A1089 northbound to A122 Lower Thames Crossing northbound • Improved A1089 northbound to A122 Lower Thames Crossing southbound
A2		A major road in south-east England, connecting London with the English Channel port of Dover in Kent.
Application Document		In the context of the Project, a document submitted to the Planning Inspectorate as part of the application for development consent.
Construction		Activity on and/or offsite required to implement the Project. The construction phase is considered to commence with the first activity on site (e.g. creation of site access), and ends with demobilisation.
Design Manual for Roads and Bridges	DMRB	A comprehensive manual containing requirements, advice and other published documents relating to works on motorway and all-purpose trunk roads for which one of the Overseeing Organisations (National Highways, Transport Scotland, the Welsh Government or the Department for Regional Development (Northern Ireland)) is highway authority. For the A122 Lower Thames Crossing the Overseeing Organisation is National Highways.
Development Consent Order	DCO	Means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects (NSIP) under the Planning Act 2008.

Term	Abbreviation	Explanation
Development Consent Order application	DCO application	The Project Application Documents, collectively known as the 'DCO application'.
Environmental Statement	ES	A document produced to support an application for development consent that is subject to Environmental Impact Assessment (EIA), which sets out the likely impacts on the environment arising from the proposed development.
Highways England		Former name of National Highways.
M2 junction 1		The M2 will be widened from three lanes to four in both directions through M2 junction 1.
M2/A2/Lower Thames Crossing junction		New junction proposed as part of the Project to the east of Gravesend between the A2 and the new A122 Lower Thames Crossing with connections to the M2.
M25 junction 29		Improvement works to M25 junction 29 and to the M25 north of junction 29. The M25 through junction 29 will be widened from three lanes to four in both directions with hard shoulders.
National Highways		A UK government-owned company with responsibility for managing the motorways and major roads in England. Formerly known as Highways England.
National Planning Policy Framework	NPPF	A framework published in March 2012 by the UK's Department of Communities and Local Government, consolidating previously issued documents called Planning Policy Statements (PPS) and Planning Practice Guidance Notes (PPG) for use in England. The NPPF was updated in February 2019 and again in July 2021 by the Ministry of Housing, Communities and Local Government.
National Policy Statement	NPS	Set out UK government policy on different types of national infrastructure development, including energy, transport, water and waste. There are 12 NPS, providing the framework within which Examining Authorities make their recommendations to the Secretary of State.
National Policy Statement for National Networks	NPSNN	Sets out the need for, and Government's policies to deliver, development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of NSIPs on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
Nationally Significant Infrastructure Project	NSIP	Major infrastructure developments in England and Wales, such as proposals for power plants, large renewable energy projects, new airports and airport extensions, major road projects etc that require a development consent under the Planning Act 2008.
North Portal		The North Portal (northern tunnel entrance) would be located to the west of East Tilbury. Emergency access and vehicle turn-around facilities would be provided at the tunnel portal. The tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations.
Operation		Describes the operational phase of a completed development and is considered to commence at the end of the construction phase, after demobilisation.

Term	Abbreviation	Explanation
Order Limits		The outermost extent of the Project, indicated on the Plans by a red line. This is the Limit of Land to be Acquired or Used (LLAU) by the Project. This is the area in which the DCO would apply.
Planning Act 2008		The primary legislation that establishes the legal framework for applying for, examining and determining Development Consent Order applications for Nationally Significant Infrastructure Projects.
Project road		The new A122 trunk road, the improved A2 trunk road, and the improved M25 and M2 special roads, as defined in Parts 1 and 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1).
Project route		The horizontal and vertical alignment taken by the Project road.
South Portal		The South Portal of the Project (southern tunnel entrance) would be located to the south-east of the village of Chalk. Emergency access and vehicle turn-around facilities would be provided at the tunnel portal. The tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations.
The tunnel		Proposed 4.25km (2.5 miles) road tunnel beneath the River Thames, comprising two bores, one for northbound traffic and one for southbound traffic. Cross-passages connecting each bore would be provided for emergency incident response and tunnel user evacuation. Tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations. Emergency access and vehicle turn-around facilities would also be provided at the tunnel portals.

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