



Department for Transport

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25 March 2025

National Highways
Woodlands
Manton Lane
Bedford
MK41 7LW

Dear Sir/Madam,

PLANNING ACT 2008

APPLICATION FOR THE PROPOSED LOWER THAMES CROSSING DEVELOPMENT CONSENT ORDER

1. I am directed by the Secretary of State for Transport ('the Secretary of State') to say that consideration has been given to:

- The report dated 20 March 2024 ("the Report") of the Examining Authority ("ExA"), comprised of Rynd Smith LLB MA MRTPI FRSA, Janine Laver BA (Hons) MSc PGDL MRTPI, Ken Pratt BSc CEng CEnv CWEM CMgr FIWater FCIWEM FSAScot MICE MCMI, Ken Taylor BSc (Hons) PGDip MRTPI and Dominic Young JP BSc (Hons) MPlan MRTPI MIHE, who conducted an Examination into the application made by National Highways ("the Applicant") for the A122 (Lower Thames Crossing) Development Consent Order ("the Application") under section 37 of the Planning Act 2008 as amended ("PA2008") on 31 October 2022;
- The responses to the further consultations undertaken by the Secretary of State following the close of the Examination in respect of the Application; and
- Late representations received by the Secretary of State following the close of the Examination.

2. This letter is the statement of reasons for the Secretary of State's decision for the purposes of section 116(1)(a) of the PA2008 and regulation 23(2)(d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

3. Published alongside this letter on the Planning Inspectorate website is a copy of the ExA's Report of Findings and Conclusions and Recommendation to the Secretary of State ("the Report"). All "ER" references are to the specified paragraph in the Report.

Paragraph numbers in the Report are quoted in the form “ER XX.XX.XX” as appropriate.

4. This decision was delegated by the Secretary of State to the Parliamentary Under Secretary of State, Simon Lightwood MP. While this decision has not been taken by the Secretary of State, by law it must be issued in the name of the Secretary of State. All references to the Secretary of State are therefore to the Parliamentary Under Secretary of State acting on behalf of the Secretary of State.

THE APPLICATION

5. The Application was accepted for Examination on 28 November 2022. The Examination began on 20 June 2023 and was completed on 20 December 2023. The Examination was conducted on the basis of written and oral submissions submitted to the ExA and by a series of hearings. The ExA also undertook five accompanied site inspection and six unaccompanied site inspections.

6. The Development Consent Order (“the DCO”) as applied for would grant development consent for the construction of a new road crossing, the A122 (Lower Thames Crossing) (“the Proposed Development”) connecting Kent, Thurrock, and Essex. The DCO includes a request for a Deemed Marine Licence (“DML”). The elements comprising the scheme (collectively referred to as “the Proposed Development”) are:

- A general-purpose trunk road dual carriageway, connecting the A2/M2 at Thong (Kent) to the M25 at Thames Chase (London Borough of Havering and Essex), south of Junction 29.
- A major intersection at Thong connecting the Lower Thames Crossing to the A2/M2 and the local road network.
- A twin pair of bored tunnels carrying the Lower Thames Crossing under the River Thames from Chalk (Kent) to Tilbury (Thurrock).
- A tunnel service intersection at Tilbury.
- A major intersection at Baker Street (Essex) connecting the Lower Thames Crossing northbound and southbound to:
 - The A13 westbound and eastbound (including to the A1013 Manorway and to London Gateway Port).
 - The A1089 (and the Port of Tilbury).
 - The local road network via the Orsett Cock Roundabout.
- A limited intersection connecting the Lower Thames Crossing to the M25 northbound only and from the M25 southbound only at Thames Chase.
- Improvements to the M25 from Thames Chase, via Junction 29 to Junction 28.
- New and replacement public open spaces and recreational facilities.
- The management of land to mitigate acoustic, landscape and visual effects.

- The management of land to mitigate and/or compensate for biodiversity effects.
- New bridges accommodating walkers, cyclists and horse riders (“WCH”)
- New and replacement WCH routes

7. During the Examination, the Applicant made three formal change requests to the Proposed Development. Change Request 1 was made during the pre-application process, whilst Change Requests 2 and 3 were made during the Examination:

- Change Request 1 (recorded by the Applicant as MRC-01, MRC-02 and MRC-03)
 - MRC01: Reduction of the Order Limits required for nitrogen deposition compensation requirements.
 - MRC02: Increase in the North Portal headwall limits of deviation.
 - MRC03: Reduction of the Order Limits and relocation of utilities and Utility Logistics Hubs in East Tilbury.
- Change Request 2 (recorded by the Applicant as EC01 and EC02)
 - EC01: A request from the network utility supplier to re-align Works No. G5 east of Brentwood Road to reflect wider network operational changes and support the safe and timely delivery of utilities works.
 - EC02: A need for access of Fen Lane, Ockendon, for Statutory Undertakers to facilitate future maintenance and operational works on utilities works constructed for the Project.
- Change Request 3 (recorded by the Applicant as EC03 and EC04)
 - EC03: A minor increase to the Limits of Deviation in relation to a proposed WCH structure over the A127 to prevent any conflict with proposals for a new employment park (Brentwood Enterprise Park).
 - EC04: The correction of the land use for plot 16-41 to reflect the requirement for the powers of permanent acquisition of subsoil and rights, and temporary possession of land at the surface of this plot.

8. The ExA considered [ER 1.5.6] that three of the change components (CR1 MRC-03, CR2 EC-01 and EC-02) affected lands and rights to the extent that formal processes for ‘proposed provisions’ seeking additional land or rights under the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (the CA Regs) were required to be carried out by the Applicant. The Applicant has provided a Regulation 9(a) notice [OD-008] and Regulation 9(b) certificate [OD-009] which demonstrate that those duties were fulfilled. Further consideration of this issue is given within the Compulsory Acquisition section.

9. The Secretary of State notes that the ExA considered the change requests during the reporting period and recommended to the Secretary of State that the Application should be considered inclusive of (and amended by) the changes sought by the Applicant as set out in paragraph 7.

SUMMARY OF THE EXA'S RECOMMENDATIONS

10. The principal issues considered during the Examination on which the ExA reached conclusions on the case for development consent are set out in the Report under the following broad headings:

- The Principle of the Development and Consideration of Alternatives
- Traffic and Transportation
- Carbon and Climate
- Geology and Soils
- Tunnelling Considerations
- Waste and Materials
- Noise and Vibration
- Road Drainage, Water Environment and Flooding
- Air Quality
- Biodiversity
- Landscape and Visual Effects
- Historic and Cultural Environment Effects
- Social and Economic Considerations
- Greenbelt
- Other Outstanding Matters
- Habitats Regulations Assessment
- Compulsory Acquisition and Related Matters
- The Draft Development Consent Order, Supporting and Control Documents

11. For the reasons set out in the Report, the ExA recommended that the Secretary of State should make an Order granting development consent for the Proposed Development [ER 24.3.1] subject to the following outstanding matters being resolved [ER 24.2.21 and Table F2 of Appendix F]:

- An assessment of the effects of the Proposed Development within and adjacent to the Kent Downs National Landscape designated area, following the amendment of section 85 of the Country and Rights of Way (CRoW) Act 2000.
- Consideration of the ExA's preferred version of the outline Landscape and Ecology Management Plan ("oLEMP") and Design Principles Document
- Confirmation of an agreement between Essex Wildlife Trust and the Applicant for essential mitigation for barn owls and water voles outside of the Order Limits

12. The Secretary of State is satisfied that all matters listed above have been resolved.

SUMMARY OF SECRETARY OF STATE'S DECISION

13. The Secretary of State has decided under section 114 of the PA2008 to make with modifications an Order granting development consent for the proposals in this Application. The letter is the statement of reasons for the Secretary of State's decision for the purposes of section 116 of the PA2008 and regulation 31(2) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ("the 2017 Regulations").

SUMMARY OF SECRETARY OF STATE'S CONSIDERATION

14. The Secretary of State's consideration of the Report, responses to her consultations of 28 March, 19 April, 10 May, 21 May, 9 July, 26 July, 12 November, 28 November 2024 and 5 February and 28 February 2025, representations received after the close of Examination and all other material considerations are set out in the following paragraphs. Where consultation responses are not otherwise mentioned in this letter, it is the Secretary of State's view that these representations do not raise any new issues that were not considered by the ExA and/or do not give rise to an alternative conclusion or decision on the Order.

15. Where not otherwise stated in this letter, the Secretary of State can be taken to agree with the findings, conclusions and recommendations as set out in the Report and the reasons given for the Secretary of State's decision are those given by the ExA in support of the conclusions and recommendations.

16. The Secretary of State is content that the Proposed Development is a National Significant Infrastructure Project ("NSIP") in accordance with section 14(1)(h) and section 22(1) to (3) of the PA2008 for the reasons set out at [ER 2.2.5], and that section 104(2) of the PA2008 has effect in relation to the Proposed Development [ER 2.2.6].

17. Furthermore, the Proposed Development requires the diversion of several utility assets, four of which constitute an NSIP under sections 16 and 20 of the PA2008. These are as follows [APP-497]:

- Works No. G2 (Feeder 5 Phase 1) – a short (approximately 125m) gas pipeline diversion running through the south-east corner of Claylane Wood.
- Works No. G4 (Feeder 5 Phase 2) – an approximately 2.7km gas pipeline diversion, running in a roughly south-west direction from Gravesend Road south of St Mary's Church, crossing Thong Lane and the A122 finishing west of Thong village and north of Claylane Wood.
- Works No. G3 (Feeder 18) – an approximately 1.6km gas pipeline diversion running from north of Thong village, crossing Thong Lane and the A122 before diverting south-south-west and finishing in Claylane Wood.
- Works No. OH7 (overhead line (OHL) diversion ZB Route OHL) – The diverted line runs laterally from approximately 1.0km east of Hornsby Lane before turning north for approximately 1.5km.

18. This aspect of the application is also applicable to section 104(2), because it is subject to policy in the designated NPS for Overarching Energy (NPS EN-1), Gas Supply Infrastructure and Oil & Gas Pipelines (NPS EN-4) and Electricity Networks (NPS EN-5) [ER Table B2 of Appendix B].

19. In determining this Application, the Secretary of State must therefore have regard to any relevant National Policy Statements (“NPS”), and Local Impact Report (“LIR”) submitted, any matters prescribed in relation to development of the description to which the Application relates, and any other matters the Secretary of State considers to be both important and relevant to the decision [ER Table B1 of Appendix B]. Under section 104(3) of the PA2008, the Secretary of State must decide this Application in accordance with any relevant NPS which in this case is the National Policy Statement for National Networks (“NPSNN”) and for the energy elements, the energy NPSs set out above, subject to any of the exceptions in section 104(4) to (8) of the PA2008 applying [ER 2.2.7]. The Secretary of State does not consider any of the exceptions apply to this case. The Secretary of State has also had regard to the environmental information associated with this scheme as defined in regulation 3(1) of the 2017 Regulations. In making the decision, the Secretary of State has complied with all applicable legal duties and has not taken account of any matters which are not relevant to the decision.

20. Regarding the NPSNN, this was updated in March 2024 (“the Revised NNNPS”). The Revised NNNPS applies to all applications submitted after this date. Therefore, the NPSNN continues to provide a proper basis on which the Planning Inspectorate and the Secretary of State can make a decision on, this application. The Secretary of State acknowledges, however, that the Revised NNNPS is potentially capable of being an important and relevant consideration in the decision-making process. The extent to which they are relevant is a matter for the Secretary of State to consider within the framework of the PA2008, and with regard to the specific circumstances of each Development Consent Order.

21. The Secretary of State is aware that a new version of the NPPF was published on 19 December 2023. The statutory deadline for the Examination expired on 20 December 2023, and therefore in these circumstances, the ExA had no practicable mechanism to seek views from the Applicant or Interested Parties about the degree to which the NPPF – December 2023 changes should be taken into account [ER 2.5.4]. The ExA set out its summary observation that the publication of the NPPF – December 2023 does not have wide ranging implications for the Secretary of State’s decision [ER 2.5.5].

22. A further update to the NPPF was published on the 12 December 2024. The Secretary of State has considered the policies in the updated NPPF and considers that the modifications do not materially affect the policy in the NPPF published 5 September 2023. The Secretary of State considers that the updated NPPF would not support a different outcome in this case. The references in this letter and the Report are therefore to the NPPF published on 5 September 2023.

23. The Secretary of State has had regard to the LIRs prepared by Brentwood Borough Council (“BBC”), Dartford Borough Council (“DBC”), Essex County Council (“ECC”), Gravesham Borough Council (“GBC”), Kent County Council (“KCC”), London Borough of Havering (“LBH”), Medway Council (“MC”), Thurrock Council (“TC”) and

Tonbridge and Malling Council (“TMBC”) [ER 2.6.1] and Relevant Local Policies [ER Table B5 of Appendix B]. The Secretary of State also notes the ExA’s assessment, set out in section 2 of the Report, regarding other relevant legislation [ER Table B1 of Appendix B], relevant marine policies and plans [ER 2.4], other relevant national policies [ER 2.5], and transboundary effects [ER 2.9] and agrees these are matters to be considered in deciding this Application.

Principle Of The Proposed Development

Policy Background

24. Paragraph 2.2 of the NPSNN identifies a critical need to improve the national networks to address road congestion. Paragraph 2.13 of the NPSNN highlights the importance of the strategic road network in providing critical links between areas, enabling safe and reliable journeys and the movement of goods in support of national and regional economies.

25. Paragraph 2.27 recognises that in some cases to meet the need for the development of the national networks, as set out in paragraphs 2.1 to 2.11, it will not be sufficient to simply expand capacity on the existing network. In those circumstances new road alignments and corresponding links, including alignments which cross a river or estuary, may be needed to support increased capacity and connectivity [ER 5.2.4]. Paragraph 4.2 of the NPSNN identifies that there is a presumption in favour of granting development consent for national networks NSIPs that fall within the need for infrastructure established in this national policy statement [ER 5.5.5].

26. Within the context set by the NPSNN, the Department for Transport publishes five year rolling investment programmes for roads under section 3 of the Infrastructure Act 2015 [ER 5.2.6]. Road Investment Strategy 2 (“RIS2”) is the current strategy covering from 2020 to 2025 and includes a commitment to the Proposed Development [ER 5.2.8]. The Secretary of State notes that a Written Ministerial Statement of 9 March 2023 affirmed the then Government’s commitment to the Lower Thames Crossing, although its timing and the two-year rephasing of the construction period announced places the substantial start of main construction activities beyond the end of RIS2 and into the likely beginning of the RIS3 period. The funding element of the scheme is further discussed in paragraphs 632-637.

The Need for the Development

27. The Applicant’s objectives for the Proposed Development as set out in the Need for the Project [APP-494] and the Planning Statement [APP-495] and are copied from the Report as below [ER 5.3.1].

Scheme Objectives	
Transport	<ul style="list-style-type: none"> • 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 and environment	<ul style="list-style-type: none"> • To minimise adverse impacts on health and the environment
Economic	<ul style="list-style-type: none"> • 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

Table 1 Table 4.1 from the Planning Statement [APP-495]

28. The Secretary of State notes that the need case for the Proposed Development is based to a large extent on relieving traffic at the existing Dartford Crossing (“DC”) which according to the Applicant is a strategic link between the UK and Europe [ER 5.3.2]. All parties generally accept that measures are required to tackle existing congestion at the DC, although there is some disagreement over how this is achieved [ER 5.5.1].

29. The Applicant argues that there is a clear and compelling need to address the long-standing transport problems at the DC, which currently constrains the economy and imposes a litany of adverse effects on nearby communities and that it has little scope for any further capacity improvements [ER 5.3.3]. Furthermore, the Applicant also sets out that there is a lack of alternative crossing points to the east of London, and this makes the DC one of the most unreliable sections of the Strategic Road Network (“SRN”), with the northbound approach to the crossing between M25 Junction 2 and the DC being the worst performing section of the whole SRN in terms of journey time reliability [ER 5.3.4]. The Applicant also highlighted that issues at the DC are not limited to the SRN and congestion, delays, and poor journey time reliability have knock-on effects on the Local Road Network, which in turn suppresses economic growth north and south of the River Thames, the south-east of England and the rest of the country [ER 5.3.5].

30. The Applicant’s assessment of the impact of the Proposed Development on the DC is set out in its Transport Assessment (“TA”) and summarised at [ER 5.3.7 - 5.3.9]. TC and Thames Crossing Action Group (“TCAG”) argued that the Proposed Development would fail to provide significant relief to the DC, that in 2037 volume to capacity at the DC meant conditions would not be free-flowing and therefore not meet the aim of the first transport objective set by the Applicant [ER 5.4.1]. GBC also argued that the Proposed Development would only provide short-term relief, and the net result would be an increase in traffic and therefore questioned if the Proposed Development was the right solution [ER 5.4.2]. Among others, the TCAG argued that the economic benefits claimed by the reduction of congestion would not be realised due to poor design and induced traffic demand [ER 5.4.3].

31. The Applicant responded that the Proposed Development would increase the supply of available road space over the River Thames to the east of London by over 80%, which would result in a reduction in the number of vehicles using the DC. The TA demonstrates that if the Proposed Development is not built, 2045 traffic levels using the DC would be 13% higher in the AM peak and 27% higher in the PM peak than they were in 2016 [ER 5.4.4]. The Applicant highlighted that a significant number of trips would choose to use the Proposed Development rather than the DC in its opening year with traffic levels on the DC being predicted to fall by around 19% with a 17% reduction in AM peak and a 21% reduction in the PM peak. Free flow, north-south capacity would be achieved, and volume capacity ratios are forecast to remain beneath 0.85 in both directions in each of the modelled time periods and forecast years [ER 5.4.8]. Even after the road has been open for 15 years, traffic levels using the DC are still predicted on average to fall by 14% [ER 5.4.5]. As well as at the DC, the Applicant also highlighted reductions in traffic flows to several approach roads to the DC [ER 5.4.6].

32. The Secretary of State, like the ExA, is satisfied that the modelling presented by the Applicant in the TA demonstrates that the DC and approach roads would perform better in all the assessment scenarios than without the Proposed Development [ER 5.5.2].

33. The Secretary of State notes the arguments put forward by Interested Parties highlighting that congestion levels at the DC would eventually return to present day levels. However, the Secretary of State notes the Applicant's comments that there would be few, if any, busy sections of the SRN that would see better or comparable journey time improvements as the DC when 2045 is measured against 2016. She concurs with the ExA that there is no requirement within the NPSNN for road schemes to provide congestion relief in perpetuity and agrees with the ExA's conclusion that traffic flows would be free flowing in all assessment scenarios relative to a situation where the Proposed Development is not built [ER 5.4.8 and 5.5.3].

34. The Secretary of State also notes the arguments raised that the Proposed Development would induce traffic demand that would not otherwise be on the network. Like the ExA, the Secretary of State notes that the Proposed Development may change behaviour in the way people travel but notes paragraph 2.23 of the NPSNN states that "Government's wider policy is to bring forward improvements and enhancements to the existing Strategic Road Network to address needs." [ER 5.5.4]. The Secretary of State is therefore satisfied that this is compliant with the NPSNN Paragraph 3.3 of the Revised NNNPS, which is considered an important and relevant consideration, provides further commentary on the issue of induced demand, stating induced demand is likely to have only a very marginal effect on overall traffic demand, although the scale of any induced demand is likely to be higher for highly congested schemes. Under Transport Analysis Guidance, government-funded investments in transport schemes need to consider the effects of variable demand (and the resultant induced or suppressed traffic). The Secretary of State notes the Applicant outlined, and took forward a variable demand model as part of its Transport Assessment [APP-520].

35. Overall, the Secretary of State, therefore, agrees with the ExA's conclusion that the Applicant has demonstrated significant benefits to the DC across all of the

assessment years and that the Proposed Development would meet the first transport objective to provide relief to the DC [ER 5.5.5].

36. ECC, KCC, LBH, TMBC and DBC all consider that the Proposed Development would improve network resilience, the second transport objective. TC, TCAG and DP World London Gateway (“DPWLG”) suggested that there would be no improvement to overall resilience [ER 5.4.9]. The Applicant presented a detailed qualitative assessment of four different types of disruption at the DC, and that assessment was supplemented by paragraphs 5.2.6 - 5.2.10 of the Need for the Project, which sets out that the Proposed Development would provide an alternative route to the DC for local and strategic traffic, thus giving people more choice when deciding how they want to cross the River Thames east of London as well as an alternative in the case of major incidents or closures at the DC [ER 5.4.10].

37. The Secretary of State has had regard to the concerns raised by Interested Parties that further modelling work should have been submitted to demonstrate the network impacts of closing one of the crossings [ER 5.4.9]. The Applicant set out that the complete closure of the DC or the Proposed Development had not been modelled, as the Lower Thames Area Model (“LTAM”) is not designed to make forecasts of events that would result in a significant change in demand [ER 5.4.11]. The Secretary of State agrees with the conclusion reached by the ExA that the modelling of a closure of the Proposed Development or the DC would not have assisted the Examination [ER 5.5.7] and agrees with the ExA’s overall conclusion that the availability of an alternative route would improve resilience as required by the NPSNN paragraphs 2.23 and 2.7, particularly so given the frequency of incidents and closures at the DC [ER 5.5.6].

38. The Secretary of State, in terms of the third transport objective, has had regard to the fact that the accident record for the DC and approach roads is already above the national average for roads of a similar classification and that it is plausible that there is likely to be further deterioration of road safety on the roads close to the DC if the Proposed Development is not delivered [ER 5.5.8]. It is noted from Table 66 and representations made by TC, TCAG and other Interested Parties [ER 5.4.13] that the Proposed Development would lead to additional fatalities, slight and serious injuries. However, it would also result in an accident saving per kilometre of 0.57 due to a better managed and less congested network. Regarding the absolute increase in accidents, the Secretary of State agrees with the ExA’s assessment that an accident rate is a more useful measure in cases such as this where significant lengths of new road are proposed [ER 5.5.9].

39. KCC acknowledged that the Proposed Development would have an overall positive impact on road safety for the SRN, based on the Applicant’s International Road Assessment Programme (“iRAP”), and that the Council in its LIR had raised concerns about negative safety impacts on roads within Kent County Council’s remit [ER 5.4.14] and sought a requirement to address this which would require the Applicant to carry out an iRAP scenario assessment of the Proposed Development [ER 5.4.15]. The Secretary of State notes that further consultation will be undertaken with relevant stakeholders as part of the Wider Network Impacts Management and Monitoring Plan (“WNIMMP”) [APP-545], with analysis of road safety being a key aspect of the assessment. The Secretary of State therefore agrees with the Applicant that a requirement is not necessary [ER 5.4.17].

40. The ExA was satisfied that the Proposed Development would be designed and built to the relevant safety standards for an All-Purpose Trunk Road [ER 5.5.10], and that safety audits undertaken by independent specialists were noted by the ExA as not raising any significant issues. Further audits would be undertaken as the design progresses in accordance with paragraphs 4.62 and 4.63 of the NPSNN [ER 5.5.11]. The Secretary of State agrees with the ExA's conclusion that the Proposed Development would meet the third transport objective to improve safety [ER 5.5.12].

41. The Secretary of State notes the Applicant's argument that the economy of the Lower Thames area has several strengths, including its proximity to London, port infrastructure and location on the nation's key internal trade route. However, severance caused by the River Thames, congestion at the DC and several other factors, including low educational attainment, skill levels and pockets of deprivation, damage the area's overall competitiveness [ER 5.3.12].

42. The Applicant's Economic Appraisal Report ("EAR") [APP-526] identified that the largest monetised benefit of the Proposed Development is journey time savings for road users, with two additional monetised benefits being journey time reliability and further productivity benefits for businesses as they are brought together through enhanced road connectivity [ER 5.3.15].

43. The Applicant argued that the majority of these monetised benefits relate to local authorities closest to the Proposed Development, including Gravesham and Thurrock [ER 5.3.15]. In response to GBC, who disagreed that the Proposed Development would support local economic growth [ER 5.4.18], the Applicant highlighted that identified areas that would experience an improvement in terms of accessibility to employment north of the River Thames and in Gravesham including Ebbsfleet, Gravesham Central, Chalk, Higham, Riverside, Riverview, Singlewell and Westcourt wards that would all experience an improvement [ER 5.4.18]; these wards being listed in paragraph 7.11.43 of the Applicant's Health and Equalities Impact Assessment [APP-539]. The Applicant also pointed to significant economic benefits to Gravesham residents during the construction phase through commitments in the Skills, Education and Employment Strategy ("SEE"), which would be secured by the Stakeholder Actions and Commitments Register ("SACR") [ER 5.4.19 and Table 88].

44. The Applicant considered that faster, 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 and quicker more reliable access to key markets and labour for the region's ports [ER 5.4.20].

45. The Secretary of State notes the discussion on the Applicant's business case and economic appraisal. Like the ExA, she considers the BCR to be primarily a tool for investment decision and considered that it was not a main issue for the ExA. The Secretary of State is content that there is no firm evidence to demonstrate that the Applicant's assessment of the economic impacts was carried out otherwise than in accordance with the Transport Appraisal Guidance ("TAG"). The Secretary of State

therefore agrees with the ExA that the economic benefits are robust and in accordance with paragraph 4.6 of the NPSNN [ER 5.5.14].

46. The ExA concluded that the Proposed Development will result in the creation of a significant number of jobs, associated employment and training opportunities for local people. Furthermore, connectivity between Kent and Essex would be improved, which would include access to employment areas. Connectivity improvements would also extend to leisure and non-business trips and to non-motorised users (“NMUs”). The ExA was satisfied that the Proposed Development would support sustainable economic growth across the region [ER 5.5.13]. The Secretary of State agrees with this conclusion.

The Secretary of State’s Conclusion on the Principle of the Proposed Development

47. The Secretary of State agrees with the ExA that the Proposed Development would meet the transport, economic and community objectives set out for the scheme through delivery of the benefits set out in Table 33 of the ExA’s report [ER 5.3.1]. The Secretary of State also agrees that there is a compelling need for the Proposed Development in accordance with the requirements of the NPSNN and that the objectives of the scheme will be met [ER 5.5.16, first indent].

48. Like the ExA, the Secretary of State finds that there is a presumption in favour of granting development consent for national network NSIPs that fall within the need for infrastructure established in the NPSNN and that the presumption in favour of the Proposed Development is therefore engaged [ER 5.5.16, first and third indents].

49. The Secretary of State notes the Applicant’s consideration of alternatives to the construction of the Proposed Development, as set out in Chapter 3 (Assessment of Reasonable Alternatives) of the Environmental Statement and summarised at in Chapter 4 of the ExA’s report. The Applicant set out that the alternatives have been assessed within the framework provided by the Design Manual for Roads and Bridges (“DMRB”) LA 104 Environmental Assessment and Monitoring,¹ and are set out at [ER 4.3.2]. The Secretary of State notes Transport Action Network’s submission of 17 March 2025, which sets out a consideration of high capacity alternatives to a road-based Lower Thames Crossing. The Secretary of State considered that assessments of how to address capacity constraints at the Dartford Crossing (DC) have been undertaken several times over the last sixteen years. A Department for Transport study from 2009 considered what improvements could be made to improve traffic at the DC in the short/medium term, what role other modes (light/heavy rail, bus) might play in any plans for new capacity [APP-141, paragraph 3.6.1], and identification and review of six potential route corridors that could serve as future new routes for improvements in cross river capacity [ER 4.3.3]. The use of new technology and amended layouts at the toll booths were examined for providing additional capacity at the DC, however, they were considered to provide short-term enhancements rather than long-term solutions. The Secretary of State notes that other modal options, including a rail crossing of the River Thames, were considered, however, the study concluded that there was no reasonable business case for the inclusion of rail

¹ <https://www.standardsforhighways.co.uk/tses/attachments/0f6e0b6a-d08e-4673-8691-cab564d4a60a>

passenger services as part of any future Lower Thames Crossing facility [APP-141, paragraph 3.6.3]. The Applicant reconsidered road and rail public transport solutions in 2017, in response to 2016 non-statutory consultation, and concluded that whilst the alternative modes could be complementary to the new road crossing of the Lower Thames, none had the capability of solving the identified strategic traffic problems at the DC, and meeting the scheme objectives [APP-141, paragraph 3.6.5]. The Secretary of State agrees with this conclusion and the EXA's conclusions at ER 4.5.2. Several Interested Parties suggested that a re-assessment of cheaper alternatives should be undertaken, including using public transport alternatives. However, given the comprehensive assessment of alternatives undertaken by the Department and the Applicant, the Secretary of State is content that the Proposed Development would meet the scheme's objectives. Consideration regarding value for money is given further consideration above.

50. Throughout the Examination, the question of an alternative alignment was raised by several Interested Parties, in response to a variety of issues [ER 21.2.91, ER 21.4.4, ER 21.4.6-7, ER 21.4.21]. The Secretary of State agrees with the ExA's view that to the extent that the preferred alignment and the Proposed Development cause harm to the natural environment, the built environment or communities, and particularly to designated sites, reasonable efforts to avoid and minimise harms have been made. [ER 21.2.13]

51. The Secretary of State notes that, under the common law, the existence of an alternative route will usually only be relevant in exceptional circumstances, as set out in (*R (CPRE Peak District) vs Secretary of State for Transport* [2023] EWHC 2917 at 40-44). The Secretary of State does not consider any such exceptional circumstances exist in this case.

52. The Secretary of State notes that options appraisals undertaken to consider mode, corridor location, route and crossing type and the consultation process were undertaken to refine the final alignment of Lower Thames Crossing, with a preferred route announcement made by the Secretary of State in April 2017² [ER 4.3]. The Secretary of State agrees with the ExA's conclusions at [ER 4.5.2] and is satisfied that the Applicant carried out an assessment of alternatives which satisfies the requirements set out in 4.26 and 4.27 of the NPSNN.

The Need for the Energy Diversions

53. The Applicant sets out at B.1.1 [APP-497], that to construct the Proposed Development, a number of utilities need to be diverted. Four of these utility diversions meet the requirements to constitute NSIPs in their own right [ER 1.3.25]. These are set out at paragraph 17, and are subject to the NPSs set out at paragraph 18 of this Decision Letter, which set out need cases for the Energy NSIP development included in the Proposed Development [ER 21.2.10]

54. The Secretary of State notes, as set out at B.1.2. [APP-497], that the utility works, including those meeting the criteria to be considered as NSIPs in their own right, were

² <https://www.gov.uk/government/consultations/lower-thames-crossing-route-options>

considered and integrated as part of the entirety of the Proposed Development in terms of design, impacts, mitigation measures and relevant controls.

55. The Secretary of State notes the Applicant's assessment at B.1.6, [APP-497] that the need case for the Proposed Development is for a road, and therefore direct responses to Chapters 1 to 3 of EN-1, Chapter 1 of EN-4 and Chapter 1 of EN-5 are excluded from the Applicant's Planning Statement. It is further set out in Table B.1, [APP-497], that the need for the utility infrastructure is defined by the need for the main road aspects of the Proposed Development and are assessed against the requirements of the NPSNN, rather than the Energy NPSs [APP-497].

56. The Secretary of State notes that it is not the primary purpose of the Proposed Development to deliver energy NSIP developments. Those elements of the Proposed Development have been brought forward to divert, replace and restore the functionality of NSIP energy networks that will be affected by the proposed highway NSIP. There is an overarching need case for the energy NSIPs, as they sustain the capacity and function of existing networks, replacing elements of those networks that are required to be moved as a consequence of the Proposed Development. The Secretary of State agrees with the ExA that the Proposed Development reinstates the energy networks to their previous capacity and is therefore consistent with the Energy NPSs [ER 21.2.10]. The Secretary of State, therefore, concludes that there is a need for the energy diversions.

Traffic and Transportation

57. The Secretary of State notes the Applicant's assessment of traffic and transportation matters, as set out in Parts 7.7-7.9 of the Environmental Statement, in particular the TA and associated appendices. Other documents submitted by the Applicant are detailed at [ER 6.3.1], and a number of which were updated throughout the Examination [ER 6.3.2 – 6.3.3] to address matters brought forward by Interested Parties.

58. The Secretary of State notes that a number of parties raised concerns about traffic and transportation matters [ER 6.4] and that the ExA considered the following matters during the Examination: [ER 6.1.2]

- Traffic modelling
- Port access
- Wider network impacts
- Construction effects
- Non-motorised users ("NMUs")
- Highway design

Traffic Modelling

59. The Secretary of State has noted the concerns raised by TC, Transport for London ("TfL"), Port of Tilbury London Limited ("PoTLL") and DPWLG pertaining to the traffic modelling carried out by the Applicant using the LTAM. The concerns are set out in [ER 6.4.4].

60. Among others, TC and TfL raised concerns that the evidence base for the LTAM was out of date and did not reflect recent changes such as COVID-19, Brexit, raised economic growth targets and rising fuel prices [ER 6.4.5]. The Applicant disputed that the age of the baseline data had reduced the reliability of the model and the Applicant pointed out that the use of the TAG, mandated by the NPSNN, does not provide a maximum age for the data that is used in a base year model [ER 6.4.6]. The Applicant pointed out that checks were made to ensure that the LTAM's base year was representative of current travelling patterns by the use of satellite navigation datasets for 2019 and 2023. The LTAM was assessed by an independent assurer within National Highways who approved the model as being suitable to assess the predicted impacts of the Proposed Development, of which part of that assurance included checking compliance with TAG [ER 6.4.7].

61. The ExA noted that there was a considerable amount of written material regarding modelling uncertainty submitted during the Examination. The broad concern raised by several local authorities was that the LTAM core scenario did not take into account emerging local plans or specific planned developments in their area. MC and TC made detailed submissions regarding the omission of specific planned developments in their area, including the Thames Freeport proposals. PoTLL, DPWLG, and TC were particularly critical of the Applicant's decision to exclude the Thames Freeport proposals from the core scenario [ER 6.4.8].

62. A related concern raised by a number of Local Highway Authorities ("LHAs") was that the LTAM had not properly considered modelling uncertainty at the national level with regards to future changes in traffic levels [ER 6.4.9].

63. BBC raised a concern that the LTAM does not take into account planned growth identified in the adopted Brentwood Local Plan, which was outlined to include a strategic employment allocation (E11 Brentwood Enterprise Park) [REP1-219, paragraph 3.1]. Concerns with the consideration of local growth were likewise raised by TMBC, who outlined that LTAM underestimates local growth in Medway Valley and elsewhere across their jurisdiction [REP1-299, paragraphs 6.2 – 6.4 and 11.1]. MC highlighted that the LTAM does not reflect the spatial distribution of relevant planned development and Medway's development needs [REP 1-256, paragraph 4]. MC identified that the modelled LTAM core scenario is based on a deficit of non-residential floor space (which were noted to be amongst the largest sites for economic growth in the Thames Estuary and wider region) and the inclusion of five highway schemes which they regard as being uncertain [REP 1-256, paragraphs 6 and 7]. In addition, GBC raised concerns that assumptions used in the LTAM, including that it does not include sufficient quantities of development and does not reflect the requirements of housing development required by the standard methodology in the NPPF [REP 1-228, paragraph 3.44]. It also stated that the 2016 baseline used was significantly out of date, both through the passage of time and the impact of changing working patterns post COVID-19 [REP 1-228, paragraph 3.42].

64. The Applicant responded to these concerns by emphasising that the approach to modelling uncertainty was dictated by TAG, which provides guidance on how scheme promoters should consider uncertainty [ER 6.4.10]. Like the ExA, the Secretary of State is satisfied that a 2016 base year was appropriate, and not in conflict with TAG, given that the Applicant undertook an exercise to compare the validity of the 2016 trip matrices against present day observations. It was further noted that the

strategic models used to assess other recent road schemes relied on a base year similar to the Proposed Development and as with LTAM, the base data was factored to the opening year and thus the Applicant's approach was well preceded [ER 6.4.39]. The Secretary of State also notes the ExA acknowledged that decisions on whether to include some development relied upon contemporaneous judgments being taken by the Applicant at the time of submission, and while matters may have moved on for a number of developments, that does not make the judgments exercised by the Applicant in late 2021 unreasonable. The ExA had not identified any serious errors in the Applicant's judgments [ER 6.4.40]. The ExA was satisfied that without details of the highway interventions needed to support the Thames Freeport proposals it would not be appropriate to include it in the Core Scenario [ER 6.4.41].

65. The Secretary of State is aware that to address concerns raised by TC and GBC in relation to validation and turning count data, the Applicant provided additional information and is satisfied that the LTAM was calibrated and validated in line with TAG guidance [ER 6.4.18-6.4.19].

66. By close of the Examination, the ExA concluded that Appendix B to the Combined Modelling and Appraisal Report satisfactorily explains the Applicant's approach to calibration and validation, demonstrating compliance with TAG [ER 6.4.44]. The Secretary of State accepts this conclusion. Alongside this, by the end of the Examination, the ExA considered that the LTAM complies both with TAG and is the sole modelling tool available for the purposes used by the Applicant [ER 6.4.45]. The Secretary of State also agrees with this conclusion.

67. The Secretary of State is aware that concerns were raised around whether the Applicant's use of localised traffic modelling was appropriate and robust [ER 6.4.4]. It is noted that a number of parties expressed concerns in their LIRs and WRs discussing these concerns over the overreliance on strategic modelling and lack of localised junction modelling on the local road network [ER 6.4.25]. The Applicant's overall approach to traffic modelling is set out in its response to the LIR of TC, the Localised Traffic Modelling Report ("LTMR") and section 8.2 of its closing statement which explain that the LTAM was the primary analytical tool used to assess the impact of the Proposed Development on the highway network [ER 6.4.26]. Despite its reliance on the LTAM, the Applicant accepted that localised traffic modelling can give different insights, and therefore has a role to play when considering large infrastructure projects. However, its stated position at the close of the Examination was that localised modelling, while helpful to understand the range of possible impacts and to test design solutions, should not be taken as bringing into question the national methodology, i.e. TAG, in respect of the LTAM modelling provided in the Traffic Assessment [ER 6.4.27].

68. The Secretary of State notes that the ExA expressed concern over the limited localised traffic modelling – in particular at key intersections in Thurrock which are critical for Port traffic. In response to the concerns raised by the ExA, the Applicant undertook additional localised traffic modelling at a number of critical junctions in Thurrock and LBH. The results of the localised modelling work were presented in the LTMR, with the second iteration of the LTMR including modelling at the Asda roundabout. The Applicant responded to concerns primarily raised by the PoTLL, and undertook some detailed work to look at the impact of construction traffic at the Asda roundabout [ER 6.4.28 – 6.4.30]. The Secretary of State accepts the conclusion drawn by the ExA, that paragraph 4.6 of the NPSNN requires that modelling should be

proportionate to the scale of the scheme [ER 6.4.49], and is in agreement with the ExA that the provision of localised modelling during the Examination via the LTMR enabled all parties to understand the broad range of possible impacts of the Proposed Development at particular locations across the Local Road Network [ER 6.4.48].

69. The Secretary of State has considered the discussion during the Examination on concerns raised, notably by TC, on the level of model convergence and inconsistency between the two modelling approaches used – the outputs of the LTAM as reported in the Traffic Assessment or the SATURN model and the VISSIM modelling as presented in the LTMR [ER 6.4.31].

70. The Secretary of State noted the careful consideration of the concerns raised by TC, PoTLL and DPWLG regarding the amount of divergence between the VISSIM outputs and the LTAM modelling, particularly in respect of the Orsett Cock Roundabout. She agrees with the ExA that the use of localised modelling can aid the understanding of traffic effects on specific locations, and that it is standard practice for transport assessments of local infrastructure schemes to use a combination of modelling approaches which all share different purposes [ER 6.4.51]. Having considered the traffic flows and journey times set out in tables 4.1-4.7 of the LTMR, the ExA did not consider the differences between the VISSIM and LTAM outputs are suggestive of underreporting in LTAM or give rise to an unacceptable degree of divergence [ER 6.4.52]. The Secretary of State, therefore, agrees with the ExA's view that the level of divergence between the VISSIM and LTAM modelling does not demonstrate a broader or systematic problem with the LTAM, and that the ExA is satisfied that the LTAM outputs provide sufficiently accurate detail of the impact of the Proposed Development in accordance with paragraph 4.6 of the NPSNN [ER 6.4.56].

71. The Secretary of State is aware of concerns that were raised, most notably by TC, around whether the level of information shared and the Applicant's level of collaboration with LHAs and Ports was appropriate [ER 6.4.20]. Overall, and notwithstanding that elements of the localised modelling work could have been shared earlier, the ExA were satisfied that the level of information sharing and engagement by the Applicant was both reasonable and appropriate to the scale of Proposed Development [ER 6.4.61]. As such, the Secretary of State considers this matter to be concluded, noting the Applicant has consulted appropriately, in accordance with paragraph 5.204 of the NPSNN.

72. The Secretary of the State is aware that TfL raised concerns about forecast traffic increases on the A127 west of M25 J29, and the Applicant's modelling methodology for areas where it considers the LTAM may have underestimated congestion at key junctions [ER 6.4.35]. The Applicant responded to these concerns that the size of zones built into LTAM tend to increase in size as one moves away from the alignment of the Proposed Development and that the number and pattern of trips into the Proposed Development were validated in accordance with TAG by comparing the forecast traffic flows with observed counts [ER 6.4.36]. The Applicant provided additional VISSIM modelling of the key junctions along the A127 which supplemented the junction modelling carried out by TfL and LBH [ER 6.4.37].

73. The Secretary of State agrees with the ExA that given the size of the LTAM, it is inevitable that the size of the zones would increase with distance away from the Proposed Development, and that the overall number and pattern of trips within the

model has been calibrated and validated by the Applicant in accordance with TAG. Therefore, any omitted trips are unlikely to have a significant impact on the pattern or model of trips within the modelled area [ER 6.4.64].

74. The Secretary of State accepts the ExA's conclusion that the modelling does not indicate an unacceptable or severe effect on junctions within LBH [ER 6.4.65]. Furthermore, it was concluded that the LTAM had been independently assessed to be suitable for the purpose of determining the transport effects of the Proposed Development and that there is nothing unreasonable in the Applicant's reliance on the LTAM nor is there any conflict with paragraph 4.6 of the NPSNN [ER 6.4.45]. The Secretary of State agrees with the ExA's conclusion.

Port Access

75. The Secretary of State notes that although PoTLL and DPWLG supported the principle of the Proposed Development, there were concerns regarding potential delays for port traffic using the Orsett Cock Roundabout ("OCR") to access the A1089 [ER 6.4.67].

76. When considering the impacts on Ports, the Secretary of State has paid due regard to additional policy in the form of the National Policy Statement for Ports ("NPSP"), which is an important and relevant consideration under section 104(2)(d) of the PA2008. There is nothing within paragraph 5.4.3 nor any other part of the NPSP which provides immunity for ports from wider delays on the road network. Further there is no requirement within either the NPSNN or NPSP to maintain the free flow of traffic to ports. While the Secretary of State has taken note of the ExA's acceptance of the importance attributed to ports in national policy, the NPSP must be seen and read in the context of the NPSNN which is the relevant national policy statement under section 104(2) of the PA2008 [ER 6.4.97].

77. In response to concerns raised by DPWLG regarding additional queuing and delay for DPWLG traffic, and by PoTLL, which could undermine the smooth running of the ports [ER 6.4.68], the Applicant presented information pertaining to the benefits of the Proposed Development on the port, including in relation to journey time benefits on journeys to the Ports [ER 6.4.73].

78. The ExA noted the concerns raised by the Ports and TC regarding the OCR, however, only the Applicant had carried out a holistic assessment which considered journey times to Ports from a range of destinations. The ExA put it to the Ports and TC, that any consideration of the Proposed Development would need to consider both positive and negative effects on port access, and there was no suggestion from any party that a holistic assessment of this kind would be inappropriate [ER 6.4.98]. Adopting and expanding that approach, the ExA considered that it is the overall impact of the Proposed Development on journey times to and from Ports that is a determinative issue [ER 6.4.99] and consequently the ExA has given weight to the journey time comparisons with and without the Proposed Development. The ExA concluded that even on a worst-case scenario a significant net reduction in journey times between the Port and regional destinations had been demonstrated [ER 6.4.100].

79. Concerns were also raised about the impact the Proposed Development could have on the OCR, including the Applicant's Traffic Assessment forecast of minor to moderate adverse impacts on the performance of the OCR [ER 6.4.81], a lack of localised junction modelling for the OCR, and disagreements over the subsequent VISSIM modelling of the OCR [ER 6.4.67]. The moderate adverse impacts of the Proposed Development were noted to include the utilisation of capacity at OCR created by the recent improvement works, which was a matter the ExA concluded should weigh against the scheme [ER 6.4.109]. The Secretary of State sees no reason to disagree with this conclusion.

80. The Secretary of State is aware that during the Examination, the Applicant introduced requirement 18 to the DCO to necessitate the provision of a scheme to ensure and optimise the performance of the OCR roundabout during operation [ER 6.4.92]. The Secretary of State notes that this was welcomed by the Ports and TC [ER 6.4.93] but that the agreement on the wording of the requirement remained outstanding at the end of the Examination [ER 6.4.94]. The Secretary of State notes that scope of requirement 18 is not limited, and should operational monitoring support the case for a larger scheme, this would not be precluded by the drafting of requirement 18 in the DCO [ER 6.4.107]. The Secretary of State therefore agrees with the ExA that the drafting for requirement 18 contained in the DCO is acceptable and would secure any mitigation at the OCR that is demonstrated to be necessary [ER 6.4.108].

81. The Secretary of State notes that by the end of the Examination, there remained an outstanding concern with the modelling of driver behaviour within the VISSIM model [ER 6.4.82 - 6.4.83]. The ExA concluded that the approach taken to modelling driver behaviour was appropriate and was consistent with other consented SRN road schemes. The fact that other approaches and/or model parameters could have been used does not make the Applicant's approach unreasonable [ER 6.4.103].

82. On the balance of the information, the Secretary of State sees no reason to disagree with the ExA on this matter and that overall, the evidence points to substantial net benefits for the Ports [ER 6.4.110].

Wider Network Impacts

83. The Secretary of State is aware that there remained significant disagreements between the Applicant, LHAs and other Interested Parties which remained outstanding at the end of the Examination, relating to the approach to mitigation and whether wider network impacts would be compliant with the NPSNN [ER 6.4.3].

84. The LHAs made representations that there was a policy requirement in the NPSNN for the Applicant to mitigate adverse impacts identified either in the TA or LTMR, with additional DCO requirements suggested by KCC, the Ports, LBH/TfL [ER 6.4.114].

85. In terms of Policy, the Secretary of State notes that paragraph 5.215 of the NPSNN recognises mitigation measures for schemes should be proportionate and reasonable. The Secretary of State also notes that the NPSNN recognises the need to provide mitigation but that in the case of national networks that will not be possible or reasonable in every case. The balancing of adverse impacts against benefits runs

through the NPSNN and the PA2008 (S104(7)). Therefore, as outlined by the ExA, where an adverse impact is identified but not mitigated it should be a factor that weighs against the Proposed Development in the overall balance [ER 6.4.126].

86. The Secretary of State is aware that a number of LHAs made further submissions in relation to the Revised NNNPS which they argued sets a higher bar for the delivery of mitigation [ER 6.4.117]. The ExA stated that should the draft NPSNN be designated during the decision period, the Secretary of State will need to consider its implications on the wider network impacts and mitigation.

87. As outlined in paragraph 20, the Secretary of State designated the Revised NNNPS in May 2024, which as noted in Paragraph 1.17 of the Revised NNNPS, is potentially capable of being an important and relevant consideration in the decision-making process for applications acceptable for Examination before its designation. The Secretary of State notes paragraph 5.283 of the Revised NNNPS, which states that the Applicant should provide evidence that the development improves the operation of the network and assists with capacity issues. As noted by the ExA at [ER 6.4.129], as would be expected of a scheme of this size, the Proposed Development would result in extensive wider network impacts across the road network and that some impacts would be positive and others would be negative, but that as a matter of planning judgment, the ExA had not identified that any of these effects would constitute unacceptable impacts [ER 6.4.129]. The Secretary of State considers, therefore, that the mitigation provided by the Applicant is sufficient under the NPSNN and the Revised NNNPS.

88. The Secretary of State further considered the concerns relating to the changes in traffic movement across the region as a result of the Proposed Development that would have beneficial and adverse impacts on the highway network [ER 6.4.111]. Beneficial impacts noted by the ExA include significant reduction in traffic on roads to the west of the Proposed Development with noted adverse impacts including increases in traffic on approach roads to the LTC [ER 6.4.112].

89. As the Secretary of State outlined in respect to the OCR, any adverse impacts identified should be weighed against the benefits, and the ExA considers the positive and negative effects of the Proposed Development on the Local Road Networks of KCC, LBH, ECC, and TC would be broadly equivalent, in the absence of any evidence to the contrary [ER 6.4.130]. The Secretary of State agrees with this assessment.

90. The Secretary of State notes that there was discussion at the Examination in relation to impact of the Proposed Development on Blue Bell Hill ("BBH") as a strategic link between the M2 and M20 and the impact, which the ExA concluded would be material but acceptable [ER 6.4.131]. The Secretary of State has noted that improvements to the BBH were included in an earlier iteration of the Proposed Development, but that element was omitted as part of the announcement of the preferred route as it would not meet the scheme's objectives [ER 6.4.132]. It is noted that it was concluded by the ExA that the requirements proposed by KCC for BBH relating to the funding of the improvement scheme (should full Large Local Majors funding not be received from DfT [REP7-198]) are not necessary to make the Proposed Development acceptable in planning terms [ER 6.4.133] and the Secretary of State has no reason to disagree with this.

91. The Secretary of State is aware that a number of LHAs requested that a requirement similar to requirement 7 of the Silvertown Tunnel Order 2018 be included in the DCO, notably KCC [ER 6.4.116]. The Applicant described that requirement as putting in place a framework for pre-opening mitigation and post-opening monitoring and mitigation, and considers a series of aspects including highways impacts, air quality and noise impacts, and socio-economic impacts [APP6-092, paragraph 4.1.4].

92. With regard to the request for a Silvertown type requirement the Secretary of State notes that both the Applicant [ER 6.4.121] and the ExA [ER 6.4.136] agreed that that requirement was an outlier – with the Applicant referencing the precedent from the A428 Black Cat to Caxton Gibbet DCO where it was found unnecessary given the Applicant's existing statutory duties under its Operating Licence [ER 6.4.121]. Furthermore, the Secretary of State notes that the ExA considered it germane that similar arguments were considered as part of the referenced A428 Black Cat to Caxton Gibbet DCO [ER 6.4.137].

93. The Secretary of State considers that it is important that each case is considered on its own merit and the fact that a requirement is included in one Order is not necessarily a reason for it to be included in another. Paragraphs 5.215 to 5.217 of the NPSNN, which outline the requirements for mitigation, do not require such an approach. The Secretary of State notes that the ExA concluded that a Silvertown Tunnel type requirement was not appropriate for the Proposed Development and the reasons for this [ER 6.4.138] and has no reason to disagree with this conclusion.

Construction Effects

94. The Secretary of State has considered concerns expressed by all parties that the construction of the Proposed Development would result in adverse impacts in a number of locations across the construction phase, with a series of issues raised by LHAs and stakeholders with regard to the methodology applied by the Applicant to assess the impacts in section 8 of the TA [ER 6.4.139]. It is noted that a wide range of concerns were also raised during the Examination in relation to the proposed Control Documents, notably the Outline Traffic Management Plan for Construction ("oTMPfC"), which the Applicant would use to manage and mitigate the construction impacts. As a result of concerns raised, the Applicant updated and amended the wording of the oTMPfC and other Control Documents [ER 6.4.140]. The Secretary of State notes that the ExA was satisfied that the Control Documents would follow established best practice procedures which are well precedented in recently made DCO's for large road schemes [ER 6.4.176].

95. The Secretary of State, in her consultation letter of 12 November 2024, sought further assurance from the Applicant as to what could be put in place to minimise disruption to local people during the construction phase of the scheme, including how agreed timetables will be met. The Applicant, in its response of 26 November 2024, highlighted that throughout the design process it had engaged extensively with key local stakeholders on potential construction impacts [paragraph 2.28]. It noted its Code of Construction Practice ("CoCP"), which ensures a number of robust commitments are carried through to the environmental management plan, as secured under requirement 4 of Schedule 2 to the DCO [paragraph 2.29], as well as its oTMPfC, and several commitments brought forward during the Examination and secured in the SACR. In the Applicant's view, the measures incorporated are appropriate, reflect best

industry practice, and go further, in light of the complexity of the Proposed Development, in ensuring minimisation of disruption. The Applicant added that the process of ensuring that stakeholders are consulted, and the relevant management plans which are independently considered by the Secretary of State, will ensure that further and specific measures, identified at the next stage of development, can be incorporated [2.34]. The Applicant stated it is continuing to refine both design and construction approaches, as outlined in the oTMPfC [paragraph 2.35].

96. The Secretary of State invited Interested Parties to comment on the Applicant's response in her consultation letter of 28 November 2024. Transport Action Network ("TAN"), in its correspondence of 8 January 2025, asserted that the longstanding concerns of Thurrock Council and Port of London Tilbury Limited about disruption from construction had not been addressed, and suggested that no further measures had been put forward by the Applicant in response to the Secretary of State's consultation, and that the Applicant was relying on previous commitments within the DCO. SPC noted that disruption for local residents will be maximal throughout the Proposed Development's construction, and that it is essential that local representatives are part of stakeholder discussions. TCAG, Sarah Staley and John Elliott all raised concerns about the impact construction would have on local residents.

97. Having considered the Applicant's and Interested Parties' responses from her consultation of the 12 and 28 November 2024, the Secretary of State agrees with the ExA that the approach to the management and mitigation of the construction impacts contained in the Control Documents would ensure potential construction impacts would be mitigated as far as practicably possible in accordance with established best practices [ER 6.4.181]. The Secretary of State notes the Applicant's commitment to incorporating additional measures and adjustments through the process and framework set out in the DCO, which will ensure that the Proposed Development continues to evolve in response to emerging opportunities and stakeholder feedback. The Secretary of State is aware that there were concerns about the local traffic impacts of construction traffic, notably from TC, who identified in its LIR 39 locations of concern. KCC and ECC raised similar concerns [ER 6.4.149]. In addition to this, the Secretary of State notes TC and PoTLL raised further concerns over the proposed construction route to the northern portal compound via the A1089 Dock Road/St Andrew's Road. Those concerns were based on the A1089 being the main point of access to the port and therefore delays, most notably at the Asda roundabout could have a significant adverse impact on the port operations during the construction period [ER 6.4.150]. In response the Applicant submitted a VISSIM forecasting report for the Asda roundabout, acknowledging that Temporary Traffic Management controls would be required [ER 6.4.151].

98. At the end of the Examination, there were outstanding concerns raised by PoTLL concerning the construction impacts on the Asda roundabout, but negotiations were ongoing between the Applicant and PoTLL to draft a Framework Agreement to address a number of these concerns. The ExA set out that an update would be provided on this to the Secretary of State [ER 6.4.153]. The Secretary of State requested an update on the protective provisions and PoTLL responded on 10 May setting out that this Framework Agreement remains unagreed. This matter is discussed at paragraph 611 of the Decision Letter.

99. The Secretary of State is aware that KCC and LBH expressed concerns on the effect of construction activity on public transport services, with £80,000 sought by KCC to fully fund mitigation for local bus services disrupted by temporary works [ER 6.4.162]. KCC re-iterated this point in its consultation response of 10 December 2024. The Secretary of State is content that the oTMPfC contains mechanisms to enable discussions to take place between the relevant contractor, LHA and public transport operators regarding public transport mitigation [ER 6.4.163] with further detail to be provided in the Traffic Management Plans (TMPs) to be produced, which will need to accord with the oTMPfC [ER 6.4.165]. The oTMPfC contains provisions which would seek to minimize delays and given this would help to establish the impact on bus services, the ExA did not consider a financial contribution as proposed by KCC would be reasonable or necessary at this stage. The Secretary of State noted that the ExA considered that any financial contributions should be based on actual losses supported by evidence at the time and not forecasts produced in the TA [ER 6.4.189 - 6.4.190]. The Secretary of State agrees with this conclusion.

100. Regarding public rights of way ("PRoW") and Walkers, Cyclists and Horse riders ("WCH"), TC raised concerns regarding the proposed closure of several PRoW and WCH routes, which according to TC would face closure of between 8 months and 5 years [ER 6.4.166]. The Applicant stated it had extensively engaged with TC to discuss the suitability of proposed temporary diversion routes during construction and the final proposals for closures and diversions and the associated commitments are secured within the oTMPfC and Rights of Way Plans [ER 6.4.167]. KCC also raised concerns about damage to its Local Road Network as a result of HGV construction traffic and higher volumes of general use during the operational phase of the Proposed Development [ER 6.4.168], with outstanding concerns remaining at the end of the Examination from TfL, KCC, LBH, TC and Kent and Medway Economic Partnership [6.4.170].

101. The Secretary of State notes that the ExA considers that while the Proposed Development will inevitably cause disruption to road, PRoW and public transport users, through the Control Documents the Applicant will appropriately manage and mitigate the adverse impacts in accordance with the NPSNN. These effects were noted by the ExA to weigh against the Proposed Development [ER 6.4.192]. The Secretary of State sees no reason to disagree with the ExA's conclusions.

Non-Motorised User ("NMU") Routes

102. The Secretary of State notes that the Proposed Development will generate 64km of new or improved provision to help improve connectivity, address historic severance and encourage active travel [ER 6.4.193]. During the Examination, several LHAs requested further detail from the Applicant on specific proposals [ER 6.4.198]. In response to these requests, the Applicant outlined that further information on the individual schemes would be provided at the detailed design stage and WCH routes would be designed in accordance with a suite of up-to-date design guidance [ER 6.4.199] with the Control Documents setting out a framework for how these matters would be addressed post-consent. All matters pertaining to the detailed design and diversion of PRoWs would be discussed with LHAs and other stakeholders at the appropriate time [ER.6.4.216]. The ExA was satisfied that the level of detail provided on NMU routes was commensurate to the scale and stage of proposed development

and allowed the stakeholders to come to an informed view about the proposals [ER 6.4.217]. As such, the Secretary of State considers this matter to be concluded.

103. The Secretary of State has had regard to concerns raised by KCC, GBC, LBH and TC relating to severance as a result of the Proposed Development [ER 6.4.200-6.4.205]. To allay KCC's concerns relating to Valley Drive the Applicant agreed to fund a feasibility study and works for a new crossing, to be secured via Unilateral Undertaking [ER 6.4.202]. To address concerns raised by TC relating to physical and traffic related severance at the A13/LTC interchange, the Applicant outlined that requirement 18 of the DCO and provision of a Pegasus Crossing on Rectory Road (secured via Design Principle S11.14) would mitigate severance impacts at this location [ER 6.4.204]. To address concerns raised by LBH about the approaches to the proposed new footbridge over the A127 west of the M25, it was noted by the ExA that the Applicant has agreed to carry out improvement works to the M25 overbridge. The ExA concluded that a lack of dedicated WCH to the footbridge is not a matter which weighs significantly against the Proposed Development [ER 6.4.203 and 6.4.222]. LBH further raised this issue in its consultation response of 12 December 2024. Having carefully considered the matter, the Secretary of State agrees with the ExA's conclusion.

104. KCC raised concerns regarding bringing Hares Bridge over the A2/HS1 up to cycling/equestrian standards. The Applicant explained that this would require extensive structural work including widening and/or replacement [ER 6.4.205]. This concern remained outstanding at the close of the Examination, and the ExA concluded that without evidence to contradict the Applicant's position, it would not be reasonable nor practicable to upgrade Hares Bridge particularly given the availability of alternative routes to the east [ER 6.4.224]. The Secretary of State agrees with this conclusion.

105. As is to be expected with a scheme of this size, the ExA outlined that there would be some negative impacts on NMUs during the construction phases, and the ExA found that these impacts would be mitigated as far possible by the commitments in the Control Documents [ER 6.4.229]. The ExA concurred with the Applicant that the quantum of new and improvement routes represents a significant improvement, leaving a very significant positive legacy, and thus found that the Proposed Development would accord with NPSNN paragraphs 3.17, 5.205, 5.215-5.216 [ER 6.5.6, twelfth indent]. The Secretary of State agrees with this conclusion.

106. It is noted by the Secretary of State that concerns were raised by KCC regarding National Cycle Route 177 ("NCN 177") and that a permissive route only would be provided through the construction site meaning if the landowner rescinded permission, the link south of the M2 for equestrians and cyclists would be lost [ER 6.4.206]. The Applicant highlighted that that the permissive route was temporary only, whilst the main highway works were taking place [ER 6.4.207]. Further concerns were raised regarding the new temporary routing of NCN 177, were raised by Active Travel England ("ATE"), SPC and the Cycle Advocacy Network about the need to dismount at Hares Bridge, part of the diverted route. The Secretary of State notes this issue but agrees with the Applicant's response due to the substantial cost that would be required to upgrade Hares Bridge, that the need for this route is temporary, and that there are alternative routes available, it would not be reasonable for the Applicant to undertake these works. The Applicant proposed permissive rights of way at Tilbury Fields, Thames Chase Forest and Ashenbank Woods, and the ExA concluded that specific

and credible reasoning was provided on why permanent rights could not be secured. Based on the specific circumstances of these three locations, there is a strong likelihood of these routes being retained in the long term [ER 6.4.225]. A number of parties raised concerns about proposed upgrades to certain routes and their impact on adjoining landowners' land ownership [ER 6.4.208 - 6.4.209]. In response to concerns raised by Tom Benton for a proposed bridleway in South Ockendon [ER 6.4.208] the ExA concluded that the route indicated by the Applicant is the optimum solution [ER 6.4.226]. The Secretary of State accepts the conclusions drawn by the ExA.

107. The Secretary of State, in her consultation letter of 12 November 2024, sought further assurance from the Applicant, requesting it to set out what further measures could be delivered as part of the Proposed Development to enhance and improve active travel opportunities. Whilst ATE are not statutory consultees for applications for DCOs, the Applicant was encouraged to seek views from ATE to help inform their response. The Applicant, in its response of the 26 November 2024, highlighted that it met twice with ATE following receipt of the Secretary of State's letter, and provided ATE's review of the public documents related to the DCO. ATE, in its review, confirmed that the Proposed Development has been designed with consideration for various modes of transport, including provisions for walkers, wheelers, cyclists and horse-riders (NMUs) in line with current national guidance. ATE provided some general comments and identified opportunities to improve the overall offer, which it set out for the Applicant's consideration. In response to this, the Applicant introduced two commitments to enhance active travel provision provided by the Proposed Development:

- During the design development of the footways, bridleways and cycle tracks, the Applicant will undertake structured engagement with stakeholders including local authorities, local highways authorities and ATE. This commitment is secured by a revision to the Design Principles, through an amendment to principle PRO.07 b.
- The Applicant will make available an active travel fund, valued at £1 million, to fund active travel studies and interventions that would enable local active travel provision to better integrate with the new and upgraded provision delivered by National Highways. This commitment is secured by an addition to the SACR.

108. The Secretary of State invited Interested Parties to comment on ATE's input, and the Applicant's response in her consultation letter of 28 November 2024. TfL, KCC and ECC welcomed the additional funding provided by the Applicant, although TAN considered this did not go far enough, given the scale of the Proposed Development. Furthermore, TAN highlighted that whilst the Applicant had stated that WCH routes shall be designed in accordance with Cycle Infrastructure Design (LTN 1/20) guidance, this could be considered with other industry best practice, standards and guidance as set out in Design Principle PEO.04 [REP9-227], meaning that less exacting could hold sway, with TAN asserting that for active travel, the Applicant tends to do the bare minimum. Having considered the responses to the consultation letters of the 12 November and 28 November 2024, the Secretary of State is content that the Applicant has looked to enhance and improve active travel opportunities, working alongside ATE

at the decision stage, and committing to working with ATE in the detail design stage, which provides sufficient assurance that active travel opportunities have been fully explored.

109. The Secretary of State acknowledges that LBH, TfL and KCC requested commuted sums for highway infrastructure, for which they would become responsible following the creation of additional WCH routes and improvements of existing WCH routes, arguing that this would place an increased maintenance burden on them [ER 6.4.210].

110. During Examination the Applicant outlined that it does not provide commuted sums to LHAs for assets provided via major DCO projects, as maintenance of the SRN and local roads is provided by DfT through a set formula based on road length. That funding is refreshed every few years to take account of changes in road length and number of highway structures, meaning the amount of funding that each LHA receives will be amended to recognise the additional maintenance responsibilities [ER 6.4.211 – ER 6.4.213]. Noting article 10(1) of the DCO will ensure that where a new local highway is constructed it is completed to the reasonable satisfaction of the LHA, the Secretary of State agrees with the ExA that it is not necessary for the Applicant to pay commuted sums [ER 6.4.227]

111. The Secretary of State notes the concerns raised by TfL on this matter with regard to commuted sums, its reference to their inclusion in Part 7 of Schedule 9 to the M25 Junction 28 Development Consent Order 2022, and its argument that the highway network is funded differently in London compared to elsewhere [REP1-304 and REP5-114]. The Secretary of State sees no reason to disagree with the ExA that the fact that different arrangements exist in London, does not mean there is no funding for highway maintenance and, after considering representations, the provision of new bridges over the A127 goes beyond what is needed to mitigate the changes, and would address historic severance issues on the west side of the M25, providing significant betterment to TfL and the residents of LBH [ER 6.4.228].

112. In response to the Secretary of State's consultation letter of the 9 July and 12 November 2024, GBC raised the issue of the cessation of the Gravesend – Tilbury passenger ferry service, which was withdrawn on 1 April 2024. GBC highlighted that the ferry is intrinsic to the Framework Construction Travel Plan for NMUs. The Applicant responded to GBC in its consultation response of 7 August 2024 with regard to the impact on the Framework Construction Travel Plan and re-iterated its argument in the SoCG [REP9A-050] with GBC that it does not anticipate that construction workers would use the ferry to commute to construction compounds. The Applicant did highlight that the Framework Construction Travel Plan, although currently an outline document, currently commits to the provision of a shuttle bus, which would serve each of the ferry piers (paragraphs 3.3 and 3.4). The Secretary of State agrees with the Applicant and is content that requirement 11 of the DCO secures appropriate provision of shuttle buses and would allow Site Specific Travel Plans to reflect the circumstances of river transport options at the time of preparation. The Applicant stated in its response of 12 December 2024 that issues regarding continuance of the ferry service are separate from the Proposed Development, and that it is not required to mitigate, minimise or otherwise compensate for a matter rising in connection with the Proposed Development (paragraph 2.18). The Secretary of State notes that the Applicant is engaged in the Thames Estuary Growth Board's forum, which aims to find

a pathway towards the re-establishment of a permanent ferry crossing between Gravesend and Tilbury (paragraph 2.24 of 12 December response).

Highway Design

113. The Secretary of State notes that various issues were raised in relating to the design of the Proposed Development [ER 6.4.231] including concerns raised by TC, GBC and KCC regarding the removal of the fuelling station on the A2 at Cobham and the omission of East Tilbury service area from the submitted proposals.

114. When considering the concerns raised relating to fuelling stations and service areas, the Secretary of State has paid due regard to additional policy in the form of the DfT Circular 02/2022 (“the Circular”) and that this is an important and relevant consideration directed to within the NPSNN. The Secretary of State notes paragraphs 71, 74-76, 79-81 pertaining to the provision of roadside facilities.

115. GBC pointed out that the East Tilbury service area was initially included in the proposals because the fuelling station on the A2 at Cobham would be removed. This would result in journeys along the LTC exceeding the recommended distances, specified in paragraph 81 of the Circular. TC argued that the lack of a service area could result in drivers leaving LTC to seek facilities in Thurrock for rest or refuelling that could impact on the local road network and facilities [ER 6.4.232]. GBC argued that the inclusion of the service area would have met the Government’s commitment to provide frequent electric vehicle charging points. KCC were concerned that the removal of Cobham service station and could exacerbate the existing deficit of lorry parking spaces in the area [ER 6.4.233 and APP1-243].

116. The Secretary of State has noted that the Applicant’s response to the concerns raised by GBC and KCC stating that the East Tilbury service area was partly removed due to objections from TC, and in line with the paragraph 71 of the Circular, which sets out that the private sector should promote and operate service areas to meet the needs of travelling public [ER 6.4.234]. With regard to the Applicant’s position, the Secretary of State notes that paragraph 71 sets out that “in most cases it is for the private sector to promote roadside facilities, although there may be a role for the company and local highway authorities to provide these where a need arises”.

117. The ExA noted the reasons for the omission of the Tilbury service area but considered that such facilities serve important purposes beyond the convenience they afford to the travelling public, and in many cases that EV charging facilities and lorry parking are essential facilities [ER 6.4.250]. The ExA concluded that the omission of the East Tilbury service area would not necessarily bring the Proposed Development into conflict with Circular 01/22 and noted that at paragraph 5.261, the draft, now revised, NPSNN states that the Government is committed to the delivery of infrastructure needed to support a transition to alternative fuels including electric vehicles and recommended that the Secretary of State may therefore wish to give this matter further consideration [ER 21.2.31].

118. It is noted that the ExA considered it regrettable that a flagship project of the type proposed would not benefit from a service area [ER 6.4.250]. Although the lack of service area would not be unacceptable on safety grounds, it is a matter, the ExA

concluded, that weighs against the proposed development [ER 6.4.251]. The Secretary of State agrees with the ExA that this is a negative consideration.

119. The Secretary of State sought comments on this issue in the consultation letter dated 21 May 2024. Within the Applicant's response, dated 29 May 2024, the Applicant outlines that maximum distances between signed services for both LGV drivers and HGV drivers will be exceeded in some instances.

120. The Applicant further outlined that there is a need for more HGV parking in the region [A.3.4] and the loss of Cobham Rest and Service Area will result in a reduction of provision [A.2.11]. The Secretary of State acknowledges that the Applicant reiterated that it was working with other stakeholders to address this need and improve the provision and frequency of roadside facilities [A.3.4].

121. Further comments were sought from Interested Parties by the Secretary of State in the letter dated 6 July 2024. KCC, Shore Parish Council ("SPC") and GBC provided additional representations, in which the Secretary of State notes further concerns were raised about the loss of Cobham services and its subsequent negative impact, including exacerbating existing HGV parking shortage issues, increased demand on Tollgate services and across the local road network. It is noted that these concerns are associated with the detrimental impact on the operation of the local road network without any mitigation.

122. Both GBC and KCC raised concerns about the alternate HGV provision on the Swanscombe Peninsula, highlighted by the Applicant in paragraph A2.10 of its response of 6 July, for reasons including the need to divert away from the SRN, therefore affecting the local road network, and the sites in question not benefiting from planning permission. Both queried whether they should be disregarded from the Applicant's response to the Secretary of State's Rest and Service Area question. The Secretary of State notes that the precise detail of this alternate provision referred to by the Applicant is not provided.

123. The Secretary of State notes that in SPC and KCC's representations, the proposed loss of Cobham Services is identified as contrary to policy contained in the Circular, with KCC stating that it 'disputes' the Applicant's interpretation of Paragraph 71, and that removal of the services appears in contradiction to Paragraph 80 of the Circular. The Secretary of State agrees and considers that the removal of A2 Cobham Services and omission of Tilbury Service Area does not comply with the policies contained within the Circular. These include responsibility for provision of services where there is a need (paragraph 71), and expectations on maximum distance between signed motorway services (paragraph 76) and HGV parking (paragraph 81). The Secretary of State also notes that paragraph 80 of the Circular outlines that "...existing truckstops (including closed facilities) on or near to the SRN must be retained for their continued and future use unless it can be clearly demonstrated that a need no longer exists".

124. The Secretary of State accepts that the loss of Cobham Services, the deviation from the Circular, the need for and lack of provision together weigh negatively against the Proposed Development. The Secretary of State therefore considers this weighs more heavily against the Proposed Development than was assessed by the ExA.

125. However, the Secretary of State notes that the main concerns relate to the loss of rest areas for HGVs, and the number of spaces that will be lost following the loss of Cobham Services is 10. Whilst the Secretary of State is mindful that this may exacerbate existing problems, as highlighted by the local authorities, she is content that this loss is small and outweighed by the significant traffic and transport benefits that the Proposed Development will bring. In addition, the Proposed Development does not preclude such facilities coming forward in the future, something the Secretary of State notes that separate working groups are looking into on a regional /national level [ER 6.4.251].

126. The Secretary of State is aware that the ExA concluded that the Proposed Development accords with GD300 standards required for All-Purpose Trunk Road expressways and has been subject to an independent Road Safety Stage 1 Audit, which did not raise significant issues [ER 6.4.235].

127. The Secretary of State notes that concerns were raised that the Proposed Development adopts many elements of a smart motorway design and would therefore amount to 'smart motorway by stealth', as the Government placed a moratorium on the construction of new smart motorways in April 2023 [ER 6.4.236]. The Applicant clarified in its responses to this issue that the Proposed Development would be an All-Purpose Trunk Road with green signs rather than a smart motorway and that the status of the road is set out in article 15 of the DCO and the Classification of Roads Plans [ER 6.4.237]. The ExA was satisfied that the Proposed Development is an All-Purpose Trunk Road and not a smart motorway and further satisfied that there would be no conflict with the Government's announcement on smart motorways [ER 6.4.252]. The ExA concluded from the provided evidence that the Proposed Development accords with the requisite GD300 standards and would make the fullest use of modern technology beyond that of a conventional All-Purpose Trunk Road [ER 6.4.248]. The Secretary of State agrees with these conclusions.

128. The Secretary of State notes that concerns were raised by LBH that its residents would not be eligible for the Local Residents Discount Scheme [ER 6.4.238]. In response, the Applicant noted that in its Road User Charging Statement [APP-517] it makes clear that the DCO would allow the Secretary of State to impose or waive charges to use the proposed tunnels and this would apply to Gravesham and Thurrock residents as the two areas hosting the tunnel portals and that existing arrangements for the DC would remain unchanged [ER 6.4.238]. The ExA considers the Local Resident Discount Scheme is appropriate and attempts at widening its geographical scope would inevitably give rise to a host of issues identified by DfT in the Local Residents Discount Scheme and Dart-Tag Review (2013), including generating more traffic, reducing income and being an extra cost to administer. The report concluded that any extension of the LRDS to other boroughs or parts thereof would generate more traffic and lead to further boundary issues [ER 6.4.254]

129. The Secretary of State notes that the Road User Charging Statement provided by the Applicant only sets out that the DCO would allow the Secretary of State to enter into the same discount arrangements offered in relation to the DC [APP-517, paragraph 2.2.3]. Furthermore, the Secretary of State notes that the Applicant states that this allows the Secretary of State to enter into the same discount arrangement offered to Dartford and Thurrock residents for the Dart Charge with residents who pay council tax to GBC or TC [APP-517, paragraph 2.2.5]. The Secretary of State notes

that this is unlikely to change under the alternative funding options (Section 2.2 of the Applicant's Road User Charging Statement – 27 February 2025). Such arrangements are for the Secretary of State to enter into, not the Applicant. Thus, the Secretary of State accepts the conclusion drawn by the ExA.

130. Under both the Full Public Delivery and the Public Tunnel and Design, Build, Finance, Operate and Maintain (“DBFOM”) Road Option outlined as part of the Applicant's updated Funding Statement, provided on the 27 February 2025, the Secretary of State will remain the charging authority for the Proposed Development and the DC (Section 2.1.6 of the Applicant's Road User Charging Statement – 27 February 2025). To implement a Regulated Private Entity option, whereby a private sector receives the charging revenue for both the Lower Thames Crossing and the Dartford Crossing, it is considered that primary legislation would be required which would provide the statutory basis for that regime. There are two routes by which the Regulated Private Entity option could make provision for user charging at the Lower Thames Crossing (Section 2.1.7-8 of the Applicant's Road User Charging Statement – 27 February 2025):

- the private sector charging regime could be implemented at the Dartford Crossing which would automatically apply at the Lower Thames Crossing, and the powers under the DCO to charge for the Lower Thames Crossing could be transferred (under article 8) to the private sector body – by virtue of Schedule 12 to the DCO, the charging regime at the Lower Thames Crossing would replicate that at the Dartford Crossing; or
- the draft DCO contains a permissive power for the Secretary of State to charge for use of the Lower Thames Crossing tunnels. As that power is permissive, road user charges are capable of being imposed at the Lower Thames Crossing (and the Dartford Crossing) under a separate new charging powers established by primary legislation, instead of imposing charges at the Lower Thames Crossing under the DCO charging regime. The Secretary of State would be able to consider any potential different outcomes to those assessed under this Application for the DCO charging regime before using this power.

131. The Secretary of State is satisfied that parity between the charges between the two crossings will be maintained across all three of the funding models proposed by the Applicant in its updated Funding Statement. The Secretary of State notes the appraisal of the impacts of the Proposed Development, as detailed in the Combined Modelling and Appraisal Report is based on the assumption that the same charges apply at both crossings, and the cost of these charges to road users stay constant in real terms over the Proposed Development's appraisal period. (Section 2.1.9 of the Applicant's Road User Charging Statement – 27 February 2025). The Secretary of State also notes that under the Regulated Private Equity model, the impact of the proposed changes to VAT on the forecast traffic flows on the network would be negligible and, in line with the principles of proportionate appraisal, would not merit the re-running of the Applicant's traffic model and the assessments that use the traffic flows forecast by the traffic model (Section 2.1.10 of the Applicant's Road User Charging Statement – 27 February 2025).

132. The Secretary of State notes that ECC raised concerns regarding a reduction from three lanes to two for the southbound section of the Proposed Development

between the M25 and A13 interchange arguing that such a reduction is short sighted as the carriageway is likely to need widening in the future [ER 6.4.239]. In terms of the two-lane southbound section of the Proposed Development, the ExA noted that ECC did not dispute the modelling work underpinning the Applicant's decision to reduce the number of lanes, and that work shows that this section of the LTC would continue to operate within capacity even in 2045. The ExA was also aware of the wider environmental benefits resulting from the reduction of lanes and was satisfied that the reduction from three lanes to two was justified [ER 6.4.255]. The Secretary of State has no reason to disagree with this.

133. The Secretary of State is also aware that concerns were raised about the proposed layout of the LTC/A2 junction, which includes a reduction of lanes of the main A2 carriageway. The Applicant provided clarification during the Examination on the rationale for the design of the A2/LTC interchange and presented slides to explain how local traffic movements would pass through the junction [ER 6.4.243]. The ExA acknowledged the complex nature of the A2/LTC junction and the potential for drivers to take a wrong turn onto the Proposed Development, but nonetheless considered such concerns would be satisfactorily addressed through a carefully designed scheme of signage [ER 6.4.258]. Overall, the ExA concludes that the Applicant has given appropriate regard to the design and positioning of the Proposed Development's main junctions and link roads to give the best benefits possible for all road users and highway safety standards [ER 6.4.259]. The Secretary of State agrees with this conclusion.

134. Furthermore, the Secretary of State is aware several Interested Parties were critical of the lack of public transport infrastructure to enable bus services to access the Proposed Development. While the Applicant confirmed that there was no dedicated infrastructure it argued that there would be nothing to preclude operators from using the Proposed Development [ER 6.4.241]. The Applicant indicated that the Proposed Development would give operators the opportunity to provide connections between Essex and Kent that are not currently feasible due to severe congestion at the DC and overall, the Applicant believed that there would be considerable benefits to public transport passengers and operators in the wider area [ER 6.4.242]. The Secretary of State, in her consultation letter of 12 November 2024, requested the Applicant to set out what further measures could be delivered as part of the Proposed Development to enhance and improve public transport. The Applicant highlighted its position, as described above and at [ER 6.4.242], and considered that would be inappropriate for it to provide funding for new or existing bus services, particularly given the context of its statutory functions and responsibilities under its licence granted under the Infrastructure Act 2015. It considered that decisions relating to existing and/or public transport routes, and the funding of them, should be made by local authorities or commercial operators. The Applicant indicated that it has started to assist with examining opportunities for local bus routes using the Proposed Development, by sharing data from the Applicant's transport model with LHAs.

135. The Secretary of State invited Interested Parties to comment on the Applicant's response in her consultation letter of 28 November 2024. KCC, in its response of the 10 December 2024, considered the current LTC design represents a missed opportunity to embed public transport modes from the outset, and that it would be unlikely that any local bus operator will be able to deliver commercially viable services

due to unreasonable public transport journey times for targeted local trips across the Thames. TfL, in its response of the 12 December 2024, also expressed disappointment that the Applicant had not demonstrated a proactive approach to encouraging public transport trips, and requested that the Applicant considered targeted interventions to improve bus performance and reliability as part of the Proposed Development. ATE also suggested that the Applicant consider pump-priming a north-south service to support non-car journeys across the river, and TAN also raised concerns at the lack of improved connectivity for public transport.

136. Whilst noting the consultation responses above, the Secretary of State agrees with the ExA that the evidence shows that the Proposed Development would result in wider net benefits to bus operators in the Lower Thames area through the opening up of new route between communities in Kent and Essex as well as the reduction in congestion around the DC [ER 6.4.256].

137. The Secretary of State is aware that at the end of the Examination there were a series of outstanding matters regarding the provision of emergency service rendezvous points (“RVPs”), which are required by the emergency services in the event of a major incident, at the northern and southern tunnel portals [ER 6.4.244]. Alongside confirming extensive engagement had been carried out both before and throughout the Examination and that the designs were in accordance with DMRB CD352 and guidance provided by the emergency services [ER 6.4.245], it is noted that the Applicant introduced several new Design Principles aimed at addressing the matters raised [ER 6.4.246]. The ExA concludes that despite the outstanding concerns in relation to the design of RVPs, from the available information the RVPs appear to be designed in accordance with relevant standards and guidance [ER 6.4.260] with genuine and reasonable attempts undertaken by the Applicant to address concerns, as evidenced through updates to the Design Principles and SACR. The ExA was content that among other things, these make it clear that the Emergency Services and Safety Partners Steering Group would be consulted on behalf of the emergency services regarding the design and of the RVPs including possible alternative locations. Based on the commitments made by the Applicant, the ExA is satisfied that the Proposed Development will provide suitable RVPs [ER 5.4.261].

The Secretary of State’s Conclusion on Traffic and Transportation

138. The Secretary of State accepts the ExA’s conclusion that the Applicant’s approach to traffic modelling is in accordance with TAG, is of sufficient detail to enable the impacts to be properly understood, and proportionate to the scale of the scheme, in accordance with paragraph 4.6 of the NPSNN [ER 6.5.6, first indent].

139. The Secretary of State agrees with the ExA that the Proposed Development would have a moderate adverse effect on the operation of the OCR, utilising capacity created by recent improvement works, which is a matter that weighs against the Proposed Development. Like the ExA, she agrees that the impacts have been mitigated as far as reasonably possible through requirement 18 of the DCO and thus accordingly, there would not be an unacceptable effect on the operation of the OCR [ER 6.5.6, tenth indent]. The Secretary of State is in agreement with the ExA that the approach to manage and mitigate construction impacts contained in the Control Documents would ensure potential construction impacts to be mitigated as far as possible in accordance with established best practice [ER 6.5.4].

140. The Secretary of State also sees no reason to disagree with the ExA's conclusion that whilst the omission of the East Tilbury service area is regrettable, the design of the Proposed Development complies with the criteria for good design in NSPNN paragraphs 4.28 to 4.35 [ER 6.5.6, thirteenth indent]. The Secretary of State considers that the removal of Cobham Service area, which would contravene the DfT Circular 01/2022, and the removal of Tilbury Service Area, weighs against the Proposed Development. The Secretary of State notes that the number of spaces that will be lost following the loss of Cobham Services is 10. Whilst the Secretary of State is mindful that this may exacerbate existing problems, as highlighted by the local authorities, she is content that this loss is small and outweighed by the significant traffic and transport benefits that the Proposed Development will bring.

141. The ExA concludes that the Proposed Development would accord with paragraphs 2.10, 2.33 and 4.2 of the NSPNN which provide a presumption in favour of new network infrastructure projects for which there is a compelling need [ER 6.5.6, third indent]; and given the extent of new and improved NMUs, there would be a significant improvement in the quantity and quality of NMU routes near the alignment of the Proposed Development and would also help to address historical severance issues which would accord with paragraphs 3.17, 5.205, 5.215-5.216 [ER 6.5.6, twelfth indent].

142. The Secretary of State agrees with the ExA that traffic and transport matters should be given very significant positive weight in the overall balance [ER 6.5.6, sixteenth indent] due to the substantial national, regional and sub regional transport benefits it will bring including relieving congestion, improving resilience on the network and improving safety ER 6.5.6, second indent]

Carbon and Climate

143. Section 104 of the PA2008 sets out that the Secretary of State must decide an application for a national networks NSIP in accordance with the NPSNN, unless she is satisfied that one or more of the following exceptions contained in section 104(4) to (8) apply: doing so would lead to her being in breach of any duty imposed on her by or under any enactment; doing so would be unlawful by virtue of any enactment; the adverse impact of the proposed development would outweigh its benefits; or doing so would lead to the UK being in breach of its international obligations.

144. The UK's international obligations include its obligations under the Paris Agreement, which was ratified by the UK Government in 2016, after the NPSNN was designated in 2014. This is translated in the UK by way of the carbon budgets set under the Climate Change Act 2008. In June 2019, the Government announced a new carbon reduction 'Net Zero' target for 2050 which was given effect by the Climate Change Act 2008 (2050 Target Amendment) Order 2019. This is a legally binding target for the Government to cut carbon emissions to net zero, against the 1990 baseline by 2050.

145. The Climate Change Act requires five-yearly carbon budgets to be set 12 years in advance so as to meet the 2050 target. Six carbon budgets have been adopted. The time periods covering the third ("3CB"), fourth ("4CB"), fifth ("5CB") and sixth ("6CB") carbon budgets are 2018-2022, 2023-2027, 2028-2032 and 2033-2037 respectively. The Secretary of State notes the Climate Change Committee's advice to

the UK Government on the level of the Seventh Carbon Budget (2038-2042), published on the 26 February 2025 that the Secretary of State for Energy Security and Net Zero must take into account when setting that budget. Achieving net zero will require future greenhouse gas (“GHG”) emissions to be aligned with these and any future new or revised carbon budgets that may be set out by Government to achieve the 2050 target. Compliance with the Climate Change Act 2008 (as amended) would provide a route towards compliance with the Paris Agreement. The Secretary of State further notes that the UK’s Nationally Determined Contribution (“NDC”) is to reduce greenhouse gas emissions by at least 68% compared to 1990 levels by 2030 and that Article 4(2) provides that Parties shall pursue domestic mitigation measures with the aim of achieving the objectives of the NDC. The Government’s policy with respect to the NDC is set out in the Carbon Budget Delivery Plan.

146. The Applicant’s assessment of the Proposed Development’s impact on Climate is set out in Chapter 15 and Appendices 15.1 to 15.3 of the ES [ER 7.3.1]. This includes an assessment of GHG emissions (assessed as carbon dioxide equivalent emissions and referred to here as carbon emissions) with regard to construction and operational effects of the Proposed Development. The Secretary of State notes that the impact assessment methodology applied by the Applicant is set out in the DMRB LA 114 Climate (“DMRB LA 114”) as updated in June 2021, which requires the calculation of estimated carbon emissions from the construction and operation of the scheme and assessment of these against the carbon budget period in which they arise. The Secretary of State notes that “an environmental statement is required to include such information as is reasonably required to assess the environmental effects of the development and which the applicant can reasonably be required to compile having regard to current knowledge” [ER7.4.36] and agrees with the ExA that the Applicant’s ES satisfies this requirement [ER 7.5.2].

Assessing the Impacts of the Proposed Development

147. The Applicant’s assessment of the impact of the Proposed Development on Climate is outlined at ER 7.3. This includes a summary of the expected impact of the Proposed Development at construction and operational stage on carbon emissions [ER 7.3.9 and 7.3.14].

148. The Applicant set out that the worst-case scenario for the construction phase, in terms of carbon emissions, is 1.763 MtCO_{2e}, with the total net operational emissions over a 60-year period as 6.596 MtCO_{2e} using the DfT 2022 TAG GHG workbook. This would be reduced to 2.324 and 2.938 MtCO_{2e} (respectively) as a result of the Decarbonising Transport: A Better, Greener Britain (2021) (“Transport Decarbonisation Plan”) depending on how successful implementation of this is. With regard to the construction phase, the Secretary of State notes that the worst case for carbon emissions will be set out as a contractual obligation for those that undertake the construction of the Proposed Development [ER 7.3.17].

149. The Carbon and Energy Management Plan (“CEMP”) is secured through requirement 16 of Schedule 2 to the DCO. The first iteration of the CEMP sets out the Applicant’s carbon ambitions and mechanisms for achieving it, and the second iteration will set out further detail, and will be determined by the contractors and their designers when developing the detailed design. This will need to be in accordance with the first iteration, demonstrate how contractors will comply with the maximum level

of emissions, and set out what further measures will be put in place during construction to reduce carbon emissions below this level. The third iteration will need to be approved by the Secretary of State and relates to long term commitments to manage and minimise carbon emissions during operation and maintenance [ER 7.4.61 - 7.4.65].

150. The Secretary of State notes that concerns were raised about the CEMP by TC, who considered that the second iteration of the CEMP needed to be in accordance with the first iteration, and not just substantially in accordance with it, and presented a list of best practice considerations relating to host community carbon emissions and climate vulnerability impacts in Annex K to its LIR [ER 7.4.66]. Concerns were also raised by Climate Emergency Policy and Planning (“CEPP”), who considered that the CEMP only provides additional administrative steps in an oversight process, and does not provide for public scrutiny, with no guarantee that there will be adequate checking that the full decarbonisation being claimed by the Applicant is achieved [ER 7.4.72]. The Secretary of State, however, agrees with the ExA that the CEMP is fit for purpose with adequate control mechanisms, adequately secured in the DCO, and that there is a justifiable degree of flexibility between the first and second iteration [ER 7.4.66].

151. The Secretary of State requested the Applicant, in her consultation letter of the 12 November 2024, to set out what further measures could be implemented to reduce the carbon emissions that will result from the Proposed Development, as well as how these could be secured in the DCO. The Applicant was invited to update its latest assessment of the impact on carbon to reflect any further suggested measures. If the Applicant was not able to put forward any additional measures, it was invited to set out the reasons why and how the existing measures will ensure the lowest possible carbon impact.

152. The Applicant, in its response of 26 November 2024, presented its approach to both the construction and operational phase. Regarding construction, the Applicant set out that its CEMP is designed for the Proposed Development to align with and contribute to securing Net Zero Strategy targets. The Applicant highlighted that the CEMP achieves this through 24 secured carbon commitments, which set an upper limit for the use of carbon in construction, based on industry practice. The Secretary of State notes that the Applicant was able to commit to a reduction in the commitment during the Examination to a maximum of 1.44 MtCO₂e. The Applicant introduced two further commitments to a revised CEMP submitted to the Secretary of State. This included an approach to carbon neutral construction, aligned to ISO 14068, which would offset residual construction carbon emissions, although the Applicant states it will prioritise investment in carbon reduction solutions ahead of offsetting. This commitment can be amended by the Secretary of State on application in writing by the Applicant, where it is demonstrated to the Secretary of State’s satisfaction that residual construction carbon emissions cannot be responsibly offset for less than a mean average cost of £45/tCO₂e. The Applicant also introduced a “stretch target” of 0.84 MtCO₂e for emissions in the construction phase, although the Secretary of State notes this is not a binding commitment. Regarding the operational phase, which includes emissions within the control of the Applicant and road-user emissions, the Applicant highlighted its Net Zero Highways strategy, which states that corporate-level emissions related to the Proposed Development would be net zero throughout the appraisal period, and emissions relating to maintenance, repair and replacement

would be net zero by 2040. The Applicant stated that it cannot control the implementation of policies related to reducing road-user emissions as the levers to control this are delivered by Government. It stated that the policies of the Transport Decarbonisation Plan will have a large effect in reducing road-user emissions associated with the Proposed Development, and reflected a net-zero trajectory consistent with the UK's Carbon Budgets.

153. The Secretary of State invited Interested Parties to comment on the Applicant's response in her consultation letter of 28 November 2024. On construction emissions, KCC welcomed the opportunities that the Applicant's investment in low carbon construction could provide, and ECC noted the measures being implemented by the Applicant to seek to reach close to carbon neutrality in the construction phase. TAN and Dr. Andrew Boswell both suggested that the updated CEMP provided nothing further to the Secretary of State to aid in her decision, and that construction emissions were no different to those provided at the close of the Examination (1.44 MtCO₂e), which considered to be significant. TAN, Dr. Andrew Boswell and John Elliot considered that the Applicant has underestimated both the carbon impact of the construction phase, and the costs of delivering its carbon commitments. Dr Andrew Boswell also submitted evidence regarding the non-efficacy of carbon offsetting projects. On operational emissions, the Secretary of State notes the submission made by TfL, which TAN supported, which expressed the view that it is the Applicant's responsibility to put in place credible, effective measures to reduce carbon emissions, including, but not limited to, strong commitments to encourage both public transport and active travel. TfL suggested that the CEMP could be further aligned with Net Zero targets by investigating mitigation and the reduction of user carbon emissions from the opening year.

154. The Secretary of State, considering the submissions made at the Examination and to her consultations of 12 and 28 November 2024, is satisfied that the information provided for construction and operation reflects an assessment of the impact of the emissions of the Proposed Development itself. The net carbon emissions would equate to 0.058% of CB4, 0.053% of CB5 and 0.048% of CB6 [Table 15.17 of the Applicant's ES (APP-153)]. This means contributions in any of the carbon budgets are expected to be a maximum of 0.058% in the relevant carbon budget. The Secretary of State also considers that this is an acceptable way to approach an assessment of the in combination impacts of the Proposed Development for the reasons set out more fully below. The Applicant concluded that emissions would not have a material impact on the ability of Government to meet its carbon reduction plan targets and carbon budgets [ER 7.4.36].

155. The Secretary of State considers that there is no set significance threshold for carbon, but as set out in paragraph 5.18 of the NPSNN, an increase in carbon emissions is not a reason to refuse development unless any increase is so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets. The question of whether there is a material impact is a judgement call to be made by the decision maker. In this case, the Secretary of State is satisfied with the assessment of the Proposed Development's impact on carbon emissions (including cumulative effects), that it complies with the requirements of paragraphs 5.16, 5.17 and 5.18 of the NPSNN, and noting the predicted impact on carbon budgets as set out above is, like the ExA satisfied that the Proposed Development would be

unlikely to materially impact the ability of the Government to meet its carbon reduction targets. Like the ExA, the Secretary of State further notes the IEMA Guidance, which sets out that the crux of significance 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 [ER 7.4.42].

156. The Secretary of State notes the ExA's analysis of what was the draft revised NPSNN set out at [ER 7.2.9 - 7.2.18], but that the draft revised NPSNN has since been replaced by the Revised NNNPS. The Secretary of State notes that the Revised NNNPS states that approval of schemes with residual carbon emissions is allowable and can be consistent with meeting carbon budgets, net zero and the UK's Nationally Determined Contribution but that where an increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of the Government to achieve its statutory carbon budgets, consent should be refused. In this respect, as far as relevant to the Proposed Development, the Secretary of State does not consider there to be a material difference between the requirements of the 2014 NPSNN and the Revised NNNPS, and that the latter does not weigh against granting consent for the Proposed Development.

157. The Government has set out wider policies and proposals for decarbonising all sectors of the UK economy to meet the 2050 target 17 in 'The Net Zero Strategy: Build Back Greener', published by Government in October 2021, and the Carbon Budget Delivery Plan, published in March 2023, (together referred to as the 'Net Zero Strategy'). It identified how the UK will need to overachieve on 5CB to meet its international climate targets and stay on track for 6CB. The Net Zero Strategy sets out the action Government will take to keep the UK on track for meeting the UK's carbon budgets, the 2030 Nationally Determined Contribution ("NDC") and establishes the UK's longer-term pathway towards net zero by 2050.

158. The Secretary of State notes that there has been a successful challenge to the Secretary of State for Energy Security and Net Zero's assessment for the purposes of section 13 Climate Change Act 2008 reflected in the Carbon Budget Delivery Plan ("CBDP") and that the Government is required to produce a revised CBDP within the next 12 months (see *R (Friends of the Earth) v Secretary of State for Energy Security and Net Zero* [2024] EWHC 995). The CBDP was not quashed and remains government policy and sets out Government's commitment to comply with Carbon Budgets and the NDC in the Paris Agreement. Noting CEPP's comments at [ER 7.4.55], whilst it is not for this process to assess the effectiveness or otherwise of these policies, (as has been confirmed by recent case law: see for example *R (Save Stonehenge World Heritage Site Ltd) v Secretary of State for Transport* [2024] EWHC 339 at 214), the Secretary of State has no reason to consider that the Proposed Development will hinder delivery of the Net Zero Strategy or any updated strategy. The Secretary of State is satisfied, in light of the net construction and operation emissions that have been identified, that consenting the Proposed Development will not affect the delivery of the Net Zero Strategy, or net zero in principle, nor will it have a material impact on the ability to meet the national targets, including 5CB (and overachievement in the Net Zero Strategy) or the 6CB, and it will not lead to a breach of the UK's international obligations in relation to the Paris Agreement or any domestic enactments or duties.

159. The Secretary of State is satisfied that the Applicant has assessed GHG emissions from the Proposed Development against UK carbon budgets, which are a means for the UK to achieve compliance with the Paris Agreement and is content that assessment against the carbon budgets is sufficient for consideration of compliance with the UK's international obligations. The Secretary of States notes the Government's intention to comply with the NDC as set out in the Net Zero Strategy and that it has quantified proposals in place to deliver 92% of the NDC, that unquantified policies will close the gap and further measures can be brought forward if required. In considering section 104 of the PA2008, the Secretary of State is satisfied that the Proposed Development would be unlikely to cause the UK to be in breach of its international obligations including the obligations contained in the Paris Agreement 2015.

160. Noting the comments from CPRE Essex [ER 7.4.21] and CEPP [ER 7.4.55], the Secretary of State notes the progress report of the Climate Change Committee ("CCC") submitted to Parliament on 23 June 2023. The CCC's advice was that the rate of emissions reductions in the UK will need to significantly increase to meet its 2030 NDC and the 6CB. The CCC advice included a recommendation that the Government should carry out systematic review of current and future road-building schemes to assess their consistency with environmental goals and to ensure that decisions do not lock in unsustainable levels of traffic growth and develop conditions that only permit schemes to be consented where they are consistent with net zero. The then Government responded to the CCC's report on 26 October 2023, stating in particular that National Highways already provide environmental impact assessments to allow consenting authorities to take decisions that are consistent with environmental policy and legislation and that, as set out in the Transport Decarbonisation Plan, the Government will continue to adapt and take further action if needed to decarbonise transport.

161. The Secretary of State is content that the CCC's advice is not planning policy but simply advice to Government, which Government is free to accept or reject. The CCC's advice is directed at the issue of achieving compliance with carbon budgets overall and the CCC has not set out any recommendations with respect to individual planning decisions or development consent applications. The approach to development consent applications is set out in the NPSNN. There are other policy mechanisms available outside of the PA2008 and NPSNN which can address any difficulties in meeting the NDC and/or the 6CB. The Secretary of State therefore gives the CCC's advice neutral weight.

Examination issues

162. The Secretary of State notes objections were put forward by Dr Boswell on behalf of CEPP, which the ExA considered to be similar to those raised by the same party as part of Judicial Review proceedings for three decisions issued on the A47 cases [ER 7.4.3]. This included concerns about the approach taken to assessing the cumulative impacts of carbon emissions and an argument that that the policy starting point should be that where a project directly or indirectly provided for substantial increases in carbon, this should weigh against development consent being granted and that it should not be acceptable for Applicant to be able to manage down carbon emissions resulting from construction, [but that] operational carbon emissions would be managed within the framework of the legalised UK carbon emissions [ER 7.4.4]. Dr Boswell also

maintained his position regarding the Applicant's failure to contextualise the GHG emissions from the Proposed Development [ER 7.4.55] and the Applicant's response is set out [ER 7.4.56] and [ER 7.4.57]. The Secretary of State notes that a number of other parties also raised concerns on a range of matters relating to carbon emissions and climate change as set out in ER 7.4.

163. The ExA was satisfied that the Applicant's application and submissions respond to all matters raised by both Interested Parties and the ExA in respect of carbon and climate and particularly to submissions from Dr Boswell in respect of the IEMA significance criteria [ER 7.5.3]. The Secretary of State has no reason to disagree with this.

164. The Secretary of State notes that at the close of Examination the main matters before the ExA related to the following.

- Localised climate and carbon assessments; and
- Assessment of carbon emissions.

Localised climate and carbon assessments

165. TC raised concerns about the impact of carbon on the local area and argued that there is a requirement for the Applicant to undertake an assessment of the impact on local climate and carbon impacts and about the ability of the Council to meet more challenging carbon reduction targets as a result of the Proposed Development to deliver its legal requirements regarding transport decarbonisation as a relatively small unitary authority [ER 7.4.47]. TC also argued that the Proposed Development's compliance with the then draft Revised NNNPS should be based on the impact on the Proposed Development on the 2% relating to the SRN, not the national budget, to ensure a transparent approach to appraising significance of infrastructure [ER 7.4.69].

166. Noting that since the close of Examination the draft NPSNN has been replaced by the Revised NNNPS, and that the Proposed Development is being assessed against the 2014 NPSNN, the Secretary of State agrees that neither the Revised NNNPS, the NPSNN, EN-1 or the 2017 Regulations specify a requirement for local or regional carbon assessments. The Net Zero Strategy is clear that there are currently no net zero statutory targets on local authorities or communities and there is no requirement in national legislation or policy for an assessment against local or regional carbon budgets. Noting that there are also no sectoral targets and that the only statutory carbon budgets are those at a national level and that the impact of carbon emissions is not limited to a specific geographic area, the Secretary of State is satisfied that an assessment against the statutory carbon budgets has been undertaken and that paragraph 4.4 of the NPSNN has been complied with. The Secretary of State, like the ExA is therefore satisfied that the ES is not required to consider local or regional targets noting that has been confirmed through recent Court Cases [ER 7.4.71]

Assessment of Carbon Emissions

167. CEPP raised concerns that the Proposed Development risks the legal requirement to deliver the 5CB and 6CB under the Climate Change Act 2008, breaching international obligations, and section 104 of PA 2008 [ER 7.4.72]. This is considered above, but additionally, the Secretary of State considers that the approach set out in the NPSNN continues to be relevant in light of international obligations and

domestic obligations related to reducing carbon emissions that have been introduced since the NPSNN was designated.

168. Carbon budgets are economy-wide and not just targets in relation to transport, meaning increases in one area can be compensated in another. A detailed assessment of how Government compensates for emissions from one sector through reductions in another, and the policies that are put in place to meet carbon budgets, are outside the scope of consideration for this application. Government is however, legally required to meet the carbon budgets which provide one pathway to Net Zero, and the Secretary of State considers that the Proposed Development is consistent with existing and emerging policy requirements to achieve the UK's trajectory towards net zero.

169. CEPP also argued that the GHG emissions from the Proposed Development were major adverse against the significant thresholds in the IEMA guidance [ER 7.4.72]. The Applicant disagreed arguing that their approach followed in the ES aligned with the NPSNN policy and IEMA guidance and leads to a conclusion that the significance of effects resulting from the Proposed Development's GHG emissions would not be significant [ER 7.4.73]. The ExA concluded that the Applicant's methodology complies with guidance and policy, and in particular the Applicant's cumulative assessment complies with the IEMA guidance and that the effects of the Proposed Development's carbon emissions are not significant [ER 7.4.73]. The Secretary of State agrees with this assessment.

The Secretary of State's Conclusion on Carbon and Climate

170. Overall, the Secretary of State agrees with the ExA that carbon emissions and impacts have been properly considered and that a satisfactory assessment has been carried out in accordance with paragraph 5.17 of the NPSNN [ER 7.5.12, first indent]. Like the ExA, the Secretary of State considers sufficient mitigation measures are incorporated in the design and construction of the Proposed Development and are secured in the DCO, in line with paragraph 5.19 of the NPSNN.

171. The Secretary of State considers that: over time the net carbon emissions resulting from the Proposed Development's operation will decrease as measures to reduce emissions from vehicle usage are delivered; the magnitude of the increase in carbon emissions resulting from the Proposed Development is predicted to be a maximum of 0.058% of any carbon budget and therefore very small; and there are a range of non-planning policies which will help to reduce carbon emissions over the transport network as a whole over time and help to ensure that carbon reduction commitments are met.

172. The Secretary of State is satisfied that the Proposed Development is compatible with these policies, and that the very small increase in emissions that will result from the Proposed Development can be managed within Government's overall strategy for meeting net zero and the relevant carbon budgets. Like the ExA, the Secretary of State considers sufficient mitigation measures are incorporated in the design and construction of the Proposed Development and secured in the DCO in line with paragraph 5.19 of the NPSNN. The Proposed Development will not materially impact the Government's ability to meet its net zero targets in accordance with paragraph 5.18 of the NPSNN [ER 7.5.12]. The Secretary of State is satisfied that the Proposed

Development complies with the NPSNN and will not lead to a breach of any international obligations that result from the Paris Agreement or Government's own policies and legislation relating to net zero.

173. The Secretary of State is aware that all emissions contribute to climate change. Whilst the Proposed Development will result in an increase in carbon emissions, as set out above, the Secretary of State considers that the Proposed Development needs to be considered in the context of existing and emerging policy and legal requirements to achieve the UK's trajectory towards net zero. The Secretary of State therefore agrees with the ExA that the Proposed Development's effect on climate change would be minor adverse, and therefore not significant and carries limited negative weight against the Proposed Development [ER 7.5.12, fourth indent].

Geology and Soils

174. The Secretary of State notes the Applicant's assessment of Geology and Soils as set out in Chapter 10 of the ES [ER 8.3.3 – ER 8.3.22]. The Secretary of State notes that a number of parties raised concerns relating to geology and soils issues. Of these, the main area of concern was loss of agricultural land, with the potential of land contamination, land instability and effects of disturbing unexploded ordnances (UXOs) also raised [ER 8.4.2].

The loss of Best and Most Versatile ("BMV") agricultural land

175. The Secretary of State notes the impacts on agricultural land as set out at [ER 8.3.21-8.3.22] and that North of the River Thames, grades 1, 2, and 3a land, which is considered to be BMV agricultural land, will be impacted by the Proposed Development, covering approximately 25.6% of the land within the Order Limits. On the south of the River Thames grades 1, 2, and 3a land will be impacted covering approximately 55.2% of the land within the Order Limits [ER 8.3.22].

176. The Secretary of State notes that concerns were raised that food security would be threatened [ER 8.4.3], and that GBC highlighted in its LIR that it was unclear how agricultural land had informed design, land take and decisions about where agricultural land would be re-instated [ER 8.4.4]. The Applicant responded that route optioneering and design development took account of high-quality agricultural land alongside other environmental and design constraints, but it acknowledged that the permanent agricultural land take would have a very large adverse effect which is significant. In terms of soil management, the Applicant highlighted that a soil management plan registered in the Register of Environmental Actions and Commitments ("REAC") would protect the soil resources for reinstatement and re-use [ER 8.4.5]. The ExA noted that the loss of BMV land is not precluded by the NPSNN, and that whilst the NPSNN does not have a specific requirement to take account of food security, there would be a significant adverse and thus negative effect resulting from this [ER 8.5.2].

177. The Secretary of State notes that following a change request relating to land at Blue Bell Hill and Burham [ER 14.5.50], 40ha of agricultural land has been removed from the Order Limits. The ExA concluded that notwithstanding this, the loss of BMV represents a very large adverse effect, both during the construction phase and following reinstatement of temporary land, which is significant [ER 8.5.1]. The ExA considered that the impacts on agricultural land are often a likely consequence of

developments of significant scale [ER 8.4.8], and was satisfied that the Applicant had identified the effects and proposed mitigation measures where possible to minimise impacts [ER 8.4.9], whilst noting that there is no opportunity to reduce the effects in respect of permanent loss [ER 8.4.8].

178. Due to the loss of agricultural land, which is a significant adverse effect, the Secretary of State agrees that this attracts moderate negative weight in the planning balance. [ER 8.4.9].

Land contamination

179. In relation to land contamination issues, the ExA noted several Interested Parties expressed concerns that the Proposed Development would result in soil contamination as a result of disturbance of existing landfill/former petrol station sites. TC in its LIR highlighted its legacy of historical waste disposal activities and stated that there is a high degree of uncertainty regarding the Applicant's assessment of ground condition and considered that historic contamination is picked up too late, with requirement 6 of the DCO only applying when the Authorised Development is carried out [ER 8.4.10]. TC raised concerns that preferred remedial options could prove to be inappropriate and alternative solutions would not have been assessed in the Environmental Statement [ER 8.4.11].

180. The Applicant confirmed that historic contamination and appropriate investigations have been identified as part of the environmental assessments. Requirement 6 of the DCO sets out the process the Applicant would follow if contaminated land were to be encountered, while requirement 4 requires that a second iteration of the Environmental Management Plan is submitted for approval to the Secretary of State, and that plan must reflect the mitigation measures in the REAC and must include plans for the management of contaminated land. Additionally, in line with REAC GS027, the contractor would develop proposals for site-specific remediation in consultation with the relevant local authority prior to implementation [ER 8.4.12]. Where excavated material and soil are to be reused, the Applicant noted that this would be subject to the relevant regulatory controls, under the Environmental Permitting (England and Wales) Regulations 2016. All excavated materials and soils proposed for reuse would be required to meet risk-based acceptability criteria applicable to its intended use to be protective of human health and the environment [ER 8.4.17].

181. The Secretary of State notes that a Statement of Common Ground ("SOCG") between the Applicant and the Environment Agency ("EA") confirmed the EA agreed with the Applicant's view that the Proposed Development would be unlikely to disturb historical contamination at East Tilbury Landfill, and the EA's confirmation that it was generally satisfied with the approach taken by the Applicant and with the level of detail provided in the application on contaminated land and groundwater [ER 8.4.23]. However, a number of matters remained outstanding between the Applicant and TC at the end of Examination [ER 8.4.24].

182. The Secretary of State notes TC had concerns about unforeseen contamination and wanted more investigation of low-risk contamination sources secured as part of the DCO. The ExA were satisfied that requirement 6 of the DCO which makes provision for the process the Applicant would follow if contaminated land were

encountered would be sufficient to address unforeseen contamination and would involve the local authority, the EA and the Secretary of State if and where necessary. The ExA also noted that TC has asked that the wording to REAC GS027 be amended to require the risk assessment (the process that leads to the identification, or not, of unacceptable risks) to be agreed not just the remedial strategy for only those sources that the contractor deems unacceptable, but concluded that the site investigations carried out are appropriate for this stage of development and Requirement 4 requires that a second iteration of the EMP is submitted and approved by the SoST prior to commencement of development [ER 8.4.26]. The Secretary of State has no reason to disagree with this conclusion.

Land stability

183. Land stability was a concern raised by some Interested Parties. TC raised concerns in its LIR that the Stability Report in Appendix 10.2 of the ES did not identify landfill as a manmade geohazard, that a visual inspection of the river frontage had not been undertaken and that further work was required to show that the Proposed Development would not lead to an increase in the erosion or failure of the river frontage and release of landfill waste [ER 8.4.28]. The Applicant's initial response to TC's LIR was that the site walkovers had focused on areas of potential interest in relation to geology, soils and potentially contaminated land and that the erosional face of the River Thames to the existing landfills was pre-existing and would not be adversely impacted by the Proposed Development and the current position would not change as a result of its construction or operation [ER 8.4.29]. TC maintained its concerns about the river frontage within the Order Limits at Goshems Farm Landfill and added that in addition to GS003, secured within the REAC,) it had requested the Applicant to include a further REAC commitment to secure baseline condition and regular monitoring of the river frontage (northern bank within the Order Limits) for deterioration caused by the development [ER 8.4.31]. The closing submissions from the Applicant indicated that REAC GS003 would ensure ongoing proactive management of risk [ER 8.4.32].

184. The ExA considers the Stability Report submitted by the Applicant is compliant with paragraphs 5.116 to 5.119 of the NPSNN, and that the REAC measures have been developed with regard to its initial findings and that REAC GS003 specifically seeks to manage land instability risks [ER 8.4.33]. The ExA nonetheless agreed with TC that the Applicant's Stability Report does not provide explicit clarity that landfill sites are a manmade geohazard. To provide that explicit clarity, the Secretary of State agrees with the ExA's proposed amendment to the REAC GS003 (which specifically seeks to manage instability risks) [ER 8.4.35]. The ExA was satisfied that the NPSNN policy instability requirements had been complied with, and that with the amendment to the REAC GS003, the necessary controls were in place to manage any prospect of land instability [ER 8.5.4]. The ExA also noted that with the amendment to the REAC GS003, the concerns of TC can be addressed and made an additional REAC measure to secure baseline condition and regular monitoring of Goshems Farm Landfill unnecessary [ER 8.4.36 – ER 8.4.37]. The Secretary of State has no reason to disagree with this.

Unexploded Ordnance (“UXO”)

185. TCAG raised concerns about the risk of UXO. This concern was also reflected in other representations that were made and these concerns were reflected by GBC in

its LIR. The Port of London Authority (“PLA”) submitted that a clear strategy was required in relation to UXO in the River Thames, to ensure that any UXO did not become an impediment to PLA dredging the channel, and that PLA would be expected to be involved in any UXO strategy and its view taken into account [ER 8.4.38].

186. The ExA accepts there is some uncertainty around the location of UXO and that the construction of the Proposed Development presents a risk of accidental explosion and/or evacuation while any unearthed UXO is dealt with. However, the ExA noted that as detailed in the Applicant’s ES Appendix 10.10, the assessment concluded that the majority of UXO pose a ‘low risk’ and there are no examples of any ‘high’ or ‘very high’ risks identified. The ExA is satisfied that the Applicant has taken the necessary steps to identify the level of risk and to inform the construction phase response procedures outlined in sections 6.9 and 6.11 of the CoCP [ER 8.4.41]. At the close of Examination, there was still a lack of agreement between the Applicant and PLA with regards to paragraph 99 in its Protective Provisions in relation to the arbitration process. This is discussed at paragraph 610 of this decision letter.

The Secretary of State’s Conclusion on Geology and Soils

187. The Secretary of State recognises that the loss of BMV represents a very large adverse effect, both during the construction phase and following reinstatement of temporary land, which is significant [ER 8.5.1]. In relation to contaminated land, land instability and UXO the Secretary of State is satisfied with the Applicant’s approach, methodology and conclusions and that appropriate mitigation has been included in the REAC to handle the investigation and any necessary remediation [ER 8.5.7, second indent].

188. Overall, the Secretary of State is satisfied that the Applicant’s assessment of impacts to geology and soils has been undertaken in accordance with current guidance and accords with the requirements in the NPSNN and the NPPF [ER 8.5.7, first indent]. The Secretary of State agrees with the ExA that the permanent loss of BMV agricultural land weighs negatively against the Proposed Development, and that this loss should be attributed moderate negative weight in the planning balance [ER 8.5.7, fourth indent], but otherwise the matters of geology and soils should be attributed neutral weight [ER 8.5.7, third indent].

Tunnelling Considerations

189. The Secretary of State notes that there is limited reference to tunnelling considerations in the NPSNN [ER 9.2.1] and that the ExA referred to the NPPF, Local Plan Policies and Local Impact Reports in this section [ER 9.2.6 – 9.2.7].

Limits of deviation, tunnel cover and risk assessment

190. The Secretary of State notes that a number of Interested Parties raised concerns around the vertical Limits of Deviation (“LoD”) under the River Thames proposed by the Applicant. Both PoTLL and the PLA, voiced concern around the inadequacy of the reduction in the cover ratio and absolute cover between the area between the tunnel and the River Thames riverbed both during construction and operation. This included concerns of potential restrictions on dredging of the navigational channel and constraints on the future opportunities for the increase in volume of river traffic. They considered that this conflicted with both the statutory duties of PLA and with the NPSP

and the Port of Tilbury (Expansion) Order 2019 [ER 9.4.3]. TC and GBC also raised concerns around the vertical LoD and the consideration of risks during construction and operation [ER 9.4.4]. The Secretary of State notes that the parties were concerned that the potential catastrophic impacts of a tunnel collapse under the river had not been adequately considered in the ES [ER 9.4.5].

191. In response to these concerns, the Applicant stated that their final approach to ground monitoring arrangements, risk assessment and construction methodology would avoid this scenario but accepted that the risk management approach could be improved to incorporate better focus on construction risks. The PLA suggested amendments to the draft protective provisions in respect of a guaranteed minimum cover of 12.5m plus 0.5m allowance for anchors and to present the Tunnel Depth Report which would also give greater certainty as to the future potential for river traffic increases [ER 9.4.6]. After further discussion, the Applicant and PLA agreed to put forward and support a change request to the Examination submitted by the Applicant to move to a fixed Above Ordnance Datum (“AOD”) rather than reference to Mean High Water Level. This was accepted by the ExA as giving the appropriate level of certainty to the tunnel LoD, consistent with both parties’ interests. This is also reflected in the final SoCG with PLA, their final Principal Areas of Disagreement and in the updated Protective Provisions in the DCO. [ER 9.4.8].

192. The ExA concluded that there has been adequate treatment of alternatives and consideration of good design in the iteration of the tunnel design, its alignment and the LoD and the approach to good design of the portal structures. The tunnel section is therefore compliant with the NPSNN requirements [ER 9.5.3, second indent].

Construction Methodology including Tunnel Boring Machines

193. The ES was drafted on the basis of a Rochdale envelope approach to both the number of tunnel boring machines (“TBM”) and their detailed design but assuming that a slurry-based methodology was likely to be most suitable for the known geology of the main bores. The envelope incorporated the assessed worst-case scenario with the two TBMs mentioned in the ES and that the use of one TBM would lie within the scope of the assessment [ER 9.3.6 and ER 9.4.9].

194. The impact of having two machines compared to one was discussed at ISH5 and the Applicant reiterated the need for flexibility in both number and detailed design of the machines and methodology but reiterated that they would be most likely to be of the slurry family. TC and GBC confirmed that they did not have a preference for the number of machines but sought assurances that the impacts had been adequately assessed and that there would be no additional storage transport or materials handling at the South Portal if two machines were used [ER 9.4.12]. The Secretary of State notes that this was agreed upon by the Applicant and GBC [REP8-130] in the wording in REAC MW009 (the TBM will be serviced from the North Portal) and MW017 (no storage of materials at the south tunnel entrance portal) [ER 9.4.12]. The Secretary of State also notes that the ExA concluded that no issues arose from the tunnel consideration methodology which will affect the planning balance [ER 9.5.3, fourth indent].

Unexploded Ordnance (“UXO”)

195. The Secretary of State notes that a number of parties raised concerns around the Emergency Planning Provisions relating to UXO [ER 9.4.23 – 9.4.24]. TCAG raised concerns regarding the need for advance planning for any events which would require restrictions on travel and/or evacuation. It was also concerned around the lack of engagement from the Applicant with local Emergency Services Steering Group on the Emergency Preparedness Plan in relation to potential risks and mitigations which were entirely foreseeable for a project of the scale and nature of the Proposed Development [ER 9.4.23]. The Secretary of State notes that TC and GBC also raised concerns around the sufficiency of the Control Documents and the Applicant's lack of engagement regarding advance planning for incidents. In response, the Applicant confirmed that it had included provision for community liaison in the CoCP and the final list of terms of reference and participants would be considered again at the detailed design stage [ER 9.4.24]. The ExA concluded that the Control Documents' suite contains provisions to ensure the appropriate management of risk and mitigation measures including monitoring, preparedness and response management alongside good community liaison. The Secretary of State agrees with the ExA's conclusion on this and its conclusion that assuming that the Control Documents operate and there is sufficient capability and capacity to manage them, this does not affect the planning balance [ER 9.5.3, seventh indent].

Other Matters

196. The ExA gave consideration to good design principles and noted that central to the delivery of this and the safe construction and operation of the Proposed Development is the suite of Control Documents [ER 9.4.29].

197. The Secretary of State notes that detailed consideration of the transportation of materials and water management are set out in both Chapter 10 and Chapter 12 of the ES. The ExA concluded that regarding the tunnel specific elements to wastewater and waste arising, there is no conflict with the NPSNN expectations and there are Control Documents which aim to minimise the tunnel specific elements of wastewater and water arisings [ER 9.5.3, fifth indent]. The Secretary of State has no reason to disagree with this conclusion.

198. In respect of the construction and operation of the tunnel section of the Proposed Development, there are specific elements around the control of information, the process to achieve final design and the sign-off of that, the risks of disputes and, in the event of dispute, the appropriateness of the arbitration arrangements [ER 9.4.32]. These are considered below. The Secretary of State notes that the protective provisions and final versions of the Control Documents have the potential to achieve compliance with the aims of the NPSP, but will be subject to the outcome of the detailed design stage [ER 9.5.3, eighth indent].

The Secretary of State's Conclusion on Tunnelling Considerations

199. Tunnelling is a major component of the Proposed Development. The ExA notes there are limited specific policy tests which related directly to the tunnel considerations. The noise control around the ventilation shafts is considered to be a low risk to sensitive receptors and the REAC provides for reasonable means to control the noise from them [ER 21.2.45]. There are no expected likely effects from ventilation shaft

noise and there are not expected to be any effects on this that impact the planning balance [ER 9.5.3, first indent].

200. Overall, the Secretary of State agrees with the ExA's conclusion at [ER 9.5.3] and is content that the position on the protective provisions has been concluded satisfactorily, along with the consideration of the Control Documents and dispute resolution and therefore, agrees with the ExA that the tunnelling component will have no impact on the planning balance [ER 21.2.44 – 21.2.53].

Waste and Materials

201. The Secretary of State notes that the ExA's policy consideration of the NPSNN relating to waste and materials is set out at [ER 10.2.1]. NPSNN It is noted that Appendix 11.6 of Chapter 11 the Applicant's ES summarises the law, national and local policy considerations, including the local plan policies for Kent and Essex County Councils, Dartford, Medway and Brentwood Borough Councils and Thurrock and Havering Councils covering minerals and waste, relevant local waste plans and the London Plan [ER 10.2.3 – 10.2.4]. The Applicant's approach on material assets and waste during construction and operation is set out In Chapter 11 of the ES [ER.10.3.1].

202. The ExA highlighted that several local authorities raised concerns relating to the safeguarding of materials to avoid the risk of excessive demand on local resources given the scale of the Proposed Development and noting that the need to manage the use of available local disposal sites to avoid excessive capacity loss would have implications for waste handling, air quality and traffic forecasting [ER 10.4.1]. The Secretary of State notes that these issues were discussed by KCC, ECC, TC and LBH, and they concluded that subject to securing the use of previously extracted materials, the level of impact on safeguarded materials such as sand and gravel would not be significant [ER 10.3.16]. REAC MW001 has been set to limit the impact on the demand for aggregated resources from primary and secondary sources for the Proposed Development with a preference for recycling materials and under REAC MW002 for those to be from the local area. The assessment of the impact of the Proposed Development on material sources in the local area is assessed as not significant [ER 10.3.17]. The approach to the Proposed Development is set out in the 7.4 Design Report, with the elements of environment and landscape particularly relevant to material assets and waste. The use of waste arisings to construct features of ongoing value in terms of mitigating noise, air quality, landscape and visual effects and for the creation of natural environment mitigation and compensation and in the formation of permanent public open space are noted by the Secretary of State. Also noted is the effect in terms of reducing the number and distance of waste haulage traffic movements and the need for off-site use or disposal [ER 10.3.20]. The Secretary of State is satisfied that the assurance and mitigation measures proposed regarding material assets and waste are sufficient and will not result in a significant level of impact.

203. Both the POTLL and PLA emphasised their desire of the greater use of the river for the transportation of materials. The Secretary of State notes that the Applicant set out that it was unable to agree to more targets until detailed design stage and further notes this was not agreed upon at the end of the Examination [ER 10.4.6 and ER 10.5.1].

204. The Secretary of State notes that that both KCC and GBC raised concerns on the level of handling of plant and materials at the south portal. GBC proposed strengthening the wording of the REAC elements MW009 on servicing the TBMs at the north portal and MW017 on limiting the type and volume of plant and materials stored at the south portal. It considered that the design of the construction compounds at each portal was appropriate given this distribution. However, the Secretary of State notes that in the final SoCG, that adjustments to the REAC wording had been made but that GBC were not content with the final version [ER 10.4.8]. The ExA, however, concluded that the REAC elements and Control Documents represent an appropriate balance of interests between the parties, their statutory duties and the feasibility of the construction of the Proposed Development at the outline design stage [ER 10.5.1]. The Secretary of State has no reason to disagree with this.

205. The Secretary of State notes that at the close of Examination, there were no substantive matters outstanding in relation to waste or minerals from either of the Waste Disposal Authorities. KCC expressed that it was content with the estimates of excavation, the reuse of the chalk, the exit of most tunnelling materials from the North Portal and the planned transport strategy. KCC also noted that the approach to waste and materials was consistent with relevant national policy and with their Waste and Local Plans. ECC confirmed there were no outstanding concerns remaining in their final SoCG [ER 10.4.7]. She agrees with the ExA's conclusion at [ER 10.5.1], in particular that the Applicant has complied with all the applicable policies in the NPSNN, the Energy NPS suite and the NPPF, including any drafts and/or updates to these [ER 10.5.1], first indent]. The ExA concluded that there were also no conflicts with LIRs, local plans, waste plans or the London plan, [ER 10.5.1, third indent]. The Secretary of State has no reason to disagree with this conclusion. She is also satisfied that any waste will be managed properly and can be managed appropriately by the proposed facilities.

The Secretary of State's Conclusion on Waste and Materials

206. The ExA concluded that due to no impacts being assessed as significant, waste and materials therefore do not affect the planning balance for the Proposed Development [ER 10.5.1, sixth indent]. The Secretary of State agrees with this conclusion.

Noise and Vibration

207. The Applicant's assessment of noise and vibration impacts are primarily contained with ES Chapter 12 (noise and vibration) [ER 11.3.1]. Impacts on local people and amenities, both during construction and operation of the Proposed Development are presented in ES Chapter 13 (population and human health) [ER 11.3.2]. The Community Impact Report provides a ward-based summary of potential effects, including noise, of the Proposed Development on local communities [ER 11.3.3].

208. The Secretary of State notes that there was little, if any, challenge to the methodology used by the Applicant to assess noise and vibration in the ES and the issues arising during the Examination primarily focused on the noise and vibration impact of the Proposed Development on the following [ER 11.3.26]:

- The Whitecroft Care Home.
- Franks Farm.
- the Gammon Fields Way traveller site.
- Residential dwellings in the administrative areas of GBC, LBH, TC and MC.
- Low noise surfacing.

Whitecroft Care Home

209. The Secretary of State notes that the Applicant's noise assessment in Chapter 12 of the ES found that there would be minor beneficial impacts below the Significant Observed Adverse Effect Level ("SOAEL") on Whitecroft Care Home during the operational phase in accordance with DMRB LA 111. During the construction phase, it would experience a moderate or greater impact during the daytime and nighttime periods. However, with measures secured in the REAC (commitment NV007 of ES Appendix 2.2: CoCP), the Applicant concluded that construction noise impacts would not constitute a significant effect [ER 11.3.29].

210. TC noted significant daytime construction impacts at Whitecroft, where baseline noise levels are currently 55dB, whereas predicted construction noise levels would be over 70dB. TC stated that the impact would be significant and that specific mitigation measures are required given the sensitivity of the receptor the impact on residents is likely to be particularly significant [ER 11.3.30]. The owners/operators of Whitecroft, argued that the construction and subsequent operation of the Proposed Development would mean it is likely that Whitecroft would have no realistic future as a care home catering for vulnerable, elderly people [ER 11.3.31]. Following discussion during the Examination [ER 11.3.32 – 11.3.38] the owners/operators agreed that voluntary acquisition by the Applicant of the Whitecroft Care Home site achieves the outcome they seek [ER 11.3.37] and the Applicant confirmed that it was in active negotiations with the owners of Whitecroft regarding the voluntary acquisition, and this option would allow Whitecroft to relocate away from any potential impacts of construction [ER 11.3.38].

211. The ExA considered that there was a realistic prospect of the care home being unviable during construction given the proximity and scale of the road, the complete surrounding of the property by works, and the sensitivity of its residents. The ExA acknowledged the Applicant had made a concerted effort to address these concerns, and that discussions between the Whitecroft owners and the Applicant were continuing regarding a voluntary acquisition agreement, which would facilitate the closure of the care home and relocation of residents, either during the relevant parts of the construction phase or permanently. At the close of the Examination, a formal agreement had not been concluded and the ExA recommended that the Secretary of State satisfy themselves that such an agreement had been concluded [ER 11.3.81 – 11.3.82].

212. The Secretary of State received a Post-Examination representation, dated 28 March 2024, on behalf of Kathryn Homes Ltd., Runwood Homes Ltd., and Runwood Properties Ltd., who collectively own and operate Whitecroft Care Home. The owners restated their position made during the Examination that the Whitecroft would likely have no realistic future as a care home if the Proposed Development is granted consent. Furthermore, it was restated that the owners were open to a voluntary

acquisition, however, no agreement had been reached with the Applicant. The owners therefore set out two options for compulsory acquisition that could be secured via provisions in the DCO, one of which the Applicant agrees could be included if considered necessary (Option (a) in the owner's response). This would involve the addition of a new paragraph (6) in article 30 (modification of Part 1 of the 1965 Act) of the DCO, so as to enable its owner to require a purchase of identified plots if any part of the authorised development is begun. The Secretary of State consulted on this issue, as part of the consultation letters of the 28 March, 19 April 10 May, 12 November and 28 November 2024, however, no voluntary acquisition agreement could be reached between the two parties. Therefore, the Secretary of State agrees that it is necessary to make the changes to the DCO identified by the Applicant and accepted by the owners.

Franks Farm

213. The Secretary of State notes the owner of Franks Farm, argued that the baseline noise levels at Franks Farm are higher than those reported by the Applicant and that there would be likely be a significant adverse impact during the construction phase without mitigation, and as a result, that a noise barrier should be erected alongside the property [ER 11.3.39].

214. The Applicant's stated position was that it did not consider that a noise barrier in this location would prove to be cost effective or proportionate and it highlighted that there is predicted to be a moderate reduction in noise due to the provision of low noise surfacing and the earthworks provided by the additional lane for the M25 [ER 11.3.40]. At ISH8, the owner requested the Applicant to supply the calculations for determining that the provision of a noise barrier would not provide value for money. The Applicant provided the further information, including calculations, which explained why it had opted not to provide acoustic barriers alongside Franks Farm [ER 11.3.42]. Subsequently, the owners requested several amendments to the SACR. The Applicant provided further information making it clear that it believed the existing commitments in the SACR, notably NV007 and NV009, would secure the necessary mitigation required to reduce noise levels to SOAEL, as well as monitoring [ER 11.3.43].

215. The Secretary of State notes the ExA's conclusion, and that the reasoning provided by the Applicant for not providing noise barriers in this location was adequately explained [ER 11.3.79] and is satisfied with the mitigation secured through the DCO. The ExA further noted that the Noise Insulation Regulations 1975 (as amended in 1988) will apply to local residents at qualifying properties who are subject to additional traffic noise at or above a specified level if the noise arises directly from the use of a new road or one where an additional carriageway has been constructed [ER11.3.80]

Gammon Fields Way Traveller Site

216. The Secretary of State notes TC argued that the Applicant's assessment did not cover all the receptors that would be potentially affected, with particular reference to the Gammon Fields Way traveller site. The Applicant responded to these concerns with further information regarding its assessment and a technical note explaining how noise was assessed for all travellers sites [ER 11.3.44], which explained that the relocated Gammon Fields Way, and other traveller sites, were all appropriately

assessed in ES Chapter 12. The Applicant's technical note found that there are predicted to be no significant effects from construction noise at all traveller sites, and three of the traveller sites would experience a significant beneficial effect in the operational stage [ER 11.3.45]. The Applicant noted that in respect of Gammon Fields Way, the design of the site was developed in collaboration with TC and would be secured by various Design Principles and Control Documents. In terms of additional mitigation requested by TC, the Applicant considered the option of barriers, but notwithstanding a 10dB reduction in road noise at the relocated site found that these would not materially change the effects reported in the ES [ER 11.3.47]. This finding was agreed by TC, and the final SoCG between TC and the Applicant records the final position in relation to the Gammon Fields Way travellers site [ER 11.3.48].

217. The Applicant provided further information regarding the traveller site at the end of Lower Crescent in Linford, which is predicted to experience a significant adverse change in road traffic noise level during the daytime and night-time as a result of the Proposed Development. The Applicant confirmed that adverse impacts at this location would be mitigated as far as reasonably possible through low noise road surfacing, and a 4m false cutting adjacent to the road's alignment [ER 11.3.46].

218. The ExA concluded that the Applicant's approach to low noise surfacing was acceptable, and in accordance with other consented road schemes [ER 11.3.79]. The Secretary of State is content that TC's concerns have been adequately addressed.

Local Receptors

Receptors in Gravesham

219. GBC argued in their LIR that the siting of the Proposed Development would have significantly detrimental impacts on Gravesham residents, including from noise. The LIR detailed that several locations are predicted to experience a significant adverse effect during the construction phase [ER 11.3.49]. In terms of operational noise, GBC highlighted that [ER 11.3.50]:

- A significant proportion of the dwellings in Riverview Park and on Thong Lane would experience a moderate or major adverse noise change in the opening and future assessment years.
- St. Aidan's church in Gravesend would experience a moderate or greater adverse noise change in the opening year.
- Four dwellings on Henhurst Road, south of the M2, would experience either a moderate or major adverse effect, due to an increase in HGV traffic.

220. GBC argued that the above impacts could be mitigated by acoustic barriers and requested that the Applicant consider them for the Riverview Park and Thong Lane area. Shorne Parish Council ("SPC") questioned the accuracy of the Applicant's baseline noise assessment and the forecast levels of operational noise and argued that dwellings around Chalk Park would suffer adverse effects. It supported GBC's call for the installation of noise barriers south of the River Thames [ER 11.3.51]. In relation to the operational impacts on Henhurst Road, the Applicant acknowledged that there is predicted to be an increase in traffic flow but highlighted that the approach to mitigation at this location would be via a financial contribution secured by Unilateral

Undertaking, which would provide for KCC to implement HGV restrictions [ER 11.3.52].

Receptors in Thurrock

221. TC highlighted in their LIR that receptors in close proximity to the M25 and A13 are likely to be subject to significant levels of noise. TC questioned why acoustic barriers were not included to mitigate the operational noise impacts at a number of specific locations and why no specific mitigation measures or compensation was proposed for Nos 1 and 2 Brook Farm Cottages on Brentwood Road, where the impact would be above the SOAEL [ER 11.3.53].

222. In response, the Applicant confirmed that the REAC secured commitment NV002 to prepare Noise and Vibration Management Plans for each part of the construction works. Commitment NV004 states that, where appropriate, consents would be obtained from the relevant local authorities under section 61 of the Control of Pollution Act 1974 for the proposed construction works, and that day and night-time noise and vibration monitoring would be undertaken at locations identified in consultation with relevant local authorities to ensure that the mitigation measures suggested are working effectively (REAC commitment NV008) [ER 11.3.54].

223. The Applicant also set out that acoustic barrier options were considered for Linford and Chadwell St. Mary, but following representations from TC the Applicant revisited its initial assessment and assessed that the barriers would not provide a significant reduction in noise, and also highlighted the significant landscape and cultural heritage impacts of barriers at these locations [ER 11.3.55].

Receptors in Medway

224. In its LIR, MC highlighted adverse noise impacts at various locations resulting from construction and operation and argued that an appropriate noise insulation assessment for Cuxton and Halling ward must be conducted before construction starts [ER 11.3.56].

225. The Applicant responded that qualification for noise insulation is applicable to dwellings and other buildings for residential purposes located within 300m of a new or altered highway, as specified within Regulation 7 of the Noise Insulation Regulations 1975. According to the Applicant, the receptors identified by MC in Cuxton and Halling ward are more than 300m away from any new or altered highway, and as such would not qualify for noise insulation [ER 11.3.57]. The impacts and significant effects reported in ES Chapter 12 on the wider road network identified in Cuxton and Halling ward are temporary in nature, only occurring for the duration of the works in that area and would be managed through measures in the outline Traffic Management Plan for Construction [ER 11.3.58].

Receptors in Havering

226. LBH argued that there should be specific mitigation for receptors along the Ockendon Road diversion route, which could include HGV restrictions, speed reduction measures, road resurfacing prior to construction with low noise surfacing, community engagement and noise insulation [ER 11.3.59]. In response, the Applicant noted that construction traffic impacts on the wider road network are temporary in

nature for the duration of the works. In terms of the Ockendon Road diversion the Applicant argued that the most effective way to reduce the impact of traffic noise is to reduce the duration of the diversion and updated the SACR to include a commitment to cap the closure of the Ockendon Road bridge at 10 months [ER 11.3.61].

227. LBH also requested manned vibration monitoring at receptors close to the M25 compound on the first day of work linked to piling of a retaining wall, to determine whether any impact is greater than predicted. It also requested that the whole M25 compound have solid hoarding of a minimum height of 2.4 metres [ER 11.3.60]. The Applicant highlighted REAC commitment NV017 that specifically covers the issue of vibration from piling and the mechanisms in place to control this. These requirements would be consulted on, and where appropriate included within the scope of any section 61 Control of Pollution Act 1974 applications made under NV004 to LBH [ER 11.3.62]

228. The ExA also noted the concern raised by Leigh Hughes about the impact on her property in relation to the elevated levels of noise from 24 hour working and vibration, and that it may not be capable of withstanding vibration from construction. The Applicant responded to those concerns by pointing out that night-time working would be limited [ER 11.3.63] and while there would be some disturbance to her property the Applicant was satisfied that disturbances had been mitigated as far as possible [ER 11.3.64].

Conclusions on the impact on local receptors

229. The Secretary of State notes that the ExA carried out site inspections to the relevant receptors in Gravesham, Thurrock, Medway and LBH and concluded that whilst some receptors will be close to the construction and operational noise and vibrations impacts, siting and design decisions by the Applicant along with proposed mitigation measures are well justified and appropriate [ER 11.3.77]. The ExA concluded that although temporary significant effects are identified during the construction phase in relation to construction traffic, road closures and vibration, it was satisfied that the Applicant has done everything reasonably practical to mitigate and minimise adverse effects on sensitive receptors through a combination of embedded and essential mitigation, as well as good practice measures [ER 11.3.78]. The ExA was also satisfied with the Applicant's reasons for not proposing noise barriers at particular locations [ER 11.3.79].

230. The Secretary of State agrees with the ExA's conclusions and like the ExA is mindful that the Noise Insulation Regulations 1975 would apply to local residents at qualifying properties who are subject to additional traffic noise at or above a specified level, if the noise arises directly from the use of a new road, or one where an additional carriageway has been constructed [ER 11.3.80].

Low Noise Surfacing

231. Several interested parties highlighted that low noise surfaces deteriorate over time, and any repairs need to be in the same materials. It was further argued that there is insufficient evidence to demonstrate that such surfacing products can achieve the required noise reductions, especially in the medium to long term [ER 11.3.68]. The Applicant highlighted that its noise assessment and mitigation measures are in accordance with DMRB LA 111 [ER 11.3.70]. It set out that the provision of low noise

surfacing is a key element of noise mitigation in all road schemes presented within the UK [ER 11.3.71]. To ensure the renewal of the surfacing, the Applicant highlighted commitment NV013 in the REAC that addresses this [ER 11.3.72].

232. The ExA concluded that the Applicant's approach to low noise surfacing as mitigation is acceptable and is in accordance with other consented road schemes [ER 11.3.79] The Secretary of State has no reason to disagree.

The Secretary of State's Conclusion on Noise and Vibration

233. The ExA concluded that that noise and vibration issues were fully explored during the Examination, and the Applicant provided substantive responses to the issues raised. The ExA therefore considered it was adequately assessed, meeting the requirements specified in the NPSNN [ER 11.3.74]. Furthermore, consideration was given to the statutory requirements for noise, including the relevant sections of the Noise Policy Statement for England, the NPPF and the PPG on noise and local plans, as set out by paragraph 5.193 of the NPSNN [ER 11.3.73]. The Secretary of State agrees with the ExA's conclusions at [ER 11.4.1] and noting, in respect of Whitecroft Care Home, the addition made of article 30(6) (modification of Part 1 of the 1965 Act) of the DCO so as to enable its owner to require a purchase of identified plots if any part of the authorised development is begun, agrees with the ExA that noise and vibration effects are neutral and do not weigh for or against the Proposed Development.

Road Drainage, Water Environment and Flooding

234. The Secretary of State notes the ExA's consideration of this matter as set out in Chapter 12 of the Report. The Applicant's assessment of the impacts of the Proposed Development relating to road drainage, water environment and flood are set out in Chapter 14 (road drainage and the water environment) of the ES [ER 12.3.1].

235. LIRs were received from nine local authorities which highlighted road drainage, water environment and flooding issues [ER 12.4.1]. The EA highlighted concerns regarding flood risk, the Water Framework Directive ("WFD") culverting of the Tilbury Main, alignment between the environmental permits and the draft Order, the protective provisions and the requirements in the draft Order [ER 12.4.2].

236. The ExA identified and examined the following main issues: [ER 12.4.4]

- The Flood Risk Assessment ("FRA")
- Surface water effects
- Ground water effects.
- The River Thames and other flood storage effects
- Watercourse and attenuation basin issues
- Water supply and wastewater issues
- Agricultural land water effects
- The Water Framework Directive ("WFD").

The Flood Risk Assessment

237. The Secretary of State notes the Applicant's FRA, as required by paragraph 5.98 of the NPSNN [ER 12.4.5]. The Applicant developed an FRA for both the construction and operational phases of the Proposed Development [ER 12.3.5]. The Applicant applied the Sequential Test and Exception Test in the FRA, as although the Proposed Development would lie primarily in Flood Zone 1, parts would affect land in Flood Zones 2, 3a and 3b. Where the Exception Test was necessary to be considered, the Applicant suggested that there were wider sustainability benefits, and it would be safe over its lifetime without increasing flood risk elsewhere [ER 12.3.6].

238. The Secretary of State notes that the EA did not highlight any concerns on flood risk grounds, and whilst a number of Interested Parties initially raised issues with the assessment, at the close of the Examination only Shorne Parish Council ("SPC") remained concerned about the level of assessment [ER 12.4.5]. The ExA noted that the concerns of Interested Parties related to whether the drainage system could cope with extreme rainfall conditions without 'overspills', and the possible flood risk from Great Clane Marsh to nearby houses on Lower Higham Road. The Applicant explained it relied upon proposed discharge consent rates from the proposed lagoons which would be designed at the detailed design phase in line with REAC commitments RDWE001 and RDWE006. Southern Water ("SW") was generally in agreement with the Applicant, but that agreement was conditional on further independent arrangement with the Applicant [ER 12.4.10]. SW confirmed an agreement had been reached on 20 March 2024, and withdrew its objections to the Proposed Development.

239. The ExA considered that the Applicant has followed industry design guidelines with respect to the design standard of the FRA [ER 12.4.11]. The Applicant provided adequate sequential and exception tests, and confirmed that the Proposed Development would not increase the flood risk in other locations provided the mitigation set out in the Design Principles and REAC documents are delivered in consultation with drainage authorities, Lead Local Flood Authorities ("LLFAs") and the EA. The ExA were satisfied with this approach [ER 12.4.15]. With regard to the delay in commencing construction, the ExA were satisfied that the FRA adequately addresses this [ER 12.4.14].

240. The Secretary of State agrees with the ExA's conclusions and is satisfied that the Applicant has complied with paragraphs 5.98 – 5.99 of the NPSNN, with respect to their FRA.

Surface Water Effects

241. The Secretary of State notes that several Interested Parties raised concerns in relation to surface water discharge arrangements, mainly focussing on issues pertaining to capacity and the potential to increase flood flows [ER 12.4.17].

242. Paragraph 5.113 of the NPSNN sets out that surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect. Paragraph 5.114 sets out that it may be necessary to provide surface water

storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site.

243. TCAG, in its closing representation, remained of the view that the Proposed Development would increase flood risk. SPC raised concerns regarding the adequacy of the proposed drainage systems and surface water routing, with particular concern about the discharge routes of exceedance flows, including possible contamination of existing watercourses and groundwater areas. Anglian Water Services (“AWS”) brought forward similar queries, albeit an agreed position was reached subject to the Applicant continuing to consult with AWS as the detailed design progresses. [ER 12.4.18]. At the close of the Examination, AWS confirmed that it had no outstanding issues, provided there was a “*submission of any Discharge of Requirements or any applications under the Water Industry Act 1991.*” This is secured by requirement 8 of the DCO [ER 12.4.23].

244. The Applicant responded to the concerns raised, stating that any increased flood risk would be negligible due to the constrained size of local catchments. The Applicant also pointed to its FRA which defined the surface water flood risk, the Proposed Development and the risk management strategy at a number of locations and the mitigation measures to be developed during the detailed design phase. There was no substantive challenge to the Applicant’s response to these matters [ER 12.4.20].

245. The SoCG with the EA confirms that further environmental permits will be required under its authority to discharge consent and are to be submitted during the detailed design phase [ER 12.4.21]. KCC and the MC noted concerns in relation to surface water discharge into the Thames Estuary and Marshes Ramsar site. The Applicant pointed out that any discharges would be actively controlled by an EA discharge permit during construction and operation phases to ensure the water quality and volume remains within a level which would not damage the designated sites and the wider marine environment [ER 12.4.22].

246. The ExA relied on the Applicant’s commitments contained within the FRA and REAC commitment RDWE034 that requires overland flow paths to manage exceedance flows from infiltration basins to be identified during the detailed design stage. It was additionally noted by the ExA that the drainage systems would be designed to the appropriate DMRB standard. On this basis and having regard to commitments contained in the FRA and REAC, the ExA was satisfied that any surface water effects would be adequately mitigated [ER 12.4.24]. In terms of contamination, the ExA was satisfied that REAC commitment RDWE033 would ensure that surface water from the southern portal would be treated to the required standard in accordance with the discharge consent permit to be granted by the EA to protect the Ramsar site [ER 12.4.25].

247. The Secretary of State notes that the ExA considered that the Applicant had correctly identified and assessed the issues and provided sufficient information in the Control Documents to guide the solutions that are available. She agrees with the ExA’s conclusion, that the Applicant has demonstrated that policy compliant performance would be secured through the detailed design process [ER 12.4.26].

Ground Water Effects

248. The Secretary of State notes the objections raised by Northumbrian Water Limited (operating as Essex and Suffolk Water) (“NWL”) about the security and contamination of its groundwater source at the Linford Well [ER 12.4.27], and SW raised objections that the Proposed Development would cause serious detriment to the carrying out of its statutory undertaking in the absence of suitable protective provisions [ER 12.4.30]. Both parties were in negotiation with the Applicant, and whilst agreement was not concluded prior to the conclusion of the Examination [ER 12.4.29 and 12.4.30]. On the 18 March 2024, NWL confirmed that an agreement with the Applicant had been agreed, and that it withdrew its representations. SW confirmed similarly on 20 March 2024, that it withdrew its objection to the Proposed Development.

249. The ExA acknowledged that south of the River Thames, the Chalk groundwater-bearing stratum is an important aquifer due to significant abstraction for public water supplies. North of the River Thames, the ExA noted that the Chalk aquifer is covered by superficial deposits and/or other bedrock. The ExA was satisfied that the Applicant’s modelling of the works, and the mitigation proposed as part of the works, REACGS021, GS022, GS029, RDWE002 and RDWE032, demonstrate that the risk of contamination is not significant on the aquifers north and south of the river, both inside and outside the Order Limits [ER 12.4.40]. In addition, the Applicant stated that appropriate mitigation has been detailed within the drainage design to ensure effects are minimised [ER 12.4.32].

250. SW, GBC and SPC all highlighted the potential effects of dewatering on both the environmental and aquifer interests in the area. The Applicant responded by highlighting the Hydrogeological Risk Assessment, which concluded that the residual impacts of the Proposed Development on groundwater would not be significant [ER 12.4.31]. The Applicant added that the Proposed Development would not intercept the water table in the Chalk aquifer within the capture zones of SW groundwater abstractions and therefore no significant dewatering impacts, either temporary or permanent, are anticipated. The Applicant further highlighted that the REAC commitment HR008 requires surveillance of groundwater levels for the duration of the construction period. Furthermore, drainage discharges to ground have been subject to water quality modelling assessments that demonstrate no risks of pollution of underlying groundwater resources. Notwithstanding this, appropriate mitigation has been detailed within the drainage design to ensure effects are minimised [ER 12.4.32].

251. In relation to saline intrusion into groundwater regimes, due to dewatering, the EA and the Applicant drew the hydrogeological risk assessment in the ES to the attention of the ExA. The groundwater modelling in ES Appendix 14.5, across all proposed works including tunnelling and highway discharge, suggested that it made no difference if there was groundwater interaction with surface waterbodies, providing the secured mitigation was implemented; effects would be limited to temporary groundwater level drawdown with negligible risks of saline intrusion. The EA agreed with the Applicant’s conclusion that saline intrusion has been discounted as a potential effect [ER 12.4.34].

252. The EA confirmed that a number of groundwater abstraction licences would be required but retained no outstanding objections at the end of the Examination subject to requests in relation to monitoring [ER 12.4.35]. As confirmed in the final SoCG the Applicant accepted the EA’s requests in relation to groundwater and there was a

recognition from both parties that further discussions are likely to take place during the detailed design stage [ER 12.4.36].

253. The Secretary of State notes that the EA as the statutory authority in relation to groundwater protection raised no objection in relation to groundwater matters [ER 12.4.41] and agreed with the Applicant in relation to methodology and baseline, that the Proposed Development should not affect groundwater quality and that proposed cuttings and embankments would not impact groundwater [ER 12.4.39].

254. The Secretary of State agrees with the ExA's conclusion [ER 12.4.41 - 12.4.42], that due to the Environmental Permitting (England and Wales) Regulations 2016 not being disappplied under the DCO, and subject to the REAC commitments relating to groundwater, there would be no adverse effects on the groundwater resulting from the Proposed Development.

The River Thames and other flood storage effects

255. The Secretary of State notes that several Interested Parties raised concerns in relation to the proposed replacement habitat and land, in particular the proposals to form wetlands, floodplain reduction, effects on flood defences and replacement flood storage areas. In particular, SPC highlighted the need to retain the floodplain and defences [ER 12.4.43].

256. Particular note is given to relevant representations provided by the Cole Family, who were concerned about the flood compensation area around Low Street reservoir and did not think it would be successful [ER 12.4.49]. The Applicant confirmed that the flood compensation area around Low Street reservoir was to offset the impact of the Proposed Development on the existing floodplain, and the final area would be determined at the detailed design stage. It was noted that commitment RDWE037 in the REAC secured the requirement for the Applicant to discuss this with the landowner ahead of construction and would aim to minimise the impact on the land as far as reasonably practicable [ER 12.4.50]. The ExA were content that the REAC commitment outlined by the Applicant was sound [ER 12.4.56] and the Secretary of State has no reason to disagree.

257. The Secretary of State notes that the Marine Management Organisation ("MMO") raised concerns regarding the Coalhouse Point water inlet with self-regulating valve, but that this matter is now agreed between the two parties [ER 12.4.52] and the ExA were satisfied that a new agreed Condition 19 for detailed design of the water inlet in the draft Deemed Marine Licence addressed the concerns raised by the MMO [ER 12.4.57].

258. The Secretary of State notes the matter raised about new legislation to modernise the Reservoirs Act 1975 [ER 12.4.48] and that the ExA highlighted that any new legislation enacted before a decision is made on this Application will need to be considered [ER 12.4.55]. The Secretary of State is content that no change to this legislation has been made that would impact her consideration of this matter.

Watercourse and attenuation basin issues

Watercourse Works

259. The Secretary of State notes that during the Examination several questions were raised by the ExA to test the acceptability of the modelling approach and discharge arrangements. In the SoCG between the Applicant and the EA, the Applicant's responses were appraised by the EA, who deemed the approach to be acceptable [ER 12.4.61].

260. SPC raised concerns during the Examination about the use of watercourses for temporary and permanent discharges from the Proposed Development [ER 12.4.59], as well as issues related to water flow routes and potential contaminated run-off entering marsh land forming part of the North Kent Marshes Special Protection Area ("SPA") [ER 12.4.60].

261. Following the ExA's consideration of this matter, various provisions in the draft DCO required the Applicant to seek the consent of the owner of any watercourse, public sewer or drain before discharging any water (article 19(3) (Powers in relation to relevant navigations or watercourses)) and to submit to the drainage authority plans of the specified work (article 20 (Discharge of water)) [ER 12.4.81-12.4.82], and Interested Parties considered that a drainage authority may be in a better place to advise on the suitability of each works or a discharge than a riparian owner, particularly with regard to an ordinary watercourse [ER 12.4.82]. The ExA recommended an amendment to the REAC commitment RDWE061, which would allow the drainage authority to be consulted [ER 12.4.83 and ER 23.6.19]. The Secretary of State agrees with this amendment and through the DCO has required the Applicant to include it.

Interaction with LLFAs and IDBs

262. The Secretary of State notes the various concerns raised around provisions in the DCO and REAC as set out in [ER 12.4.62 - 12.4.65] and that a number of matters were resolved by the close of Examination on the basis that issues around the drainage strategy and temporary measures would be addressed at the detailed design stage, as secured in the REAC commitment RDWE006 following consultation by the Secretary of State with the relevant planning authorities [ER 12.4.66].

263. TC also raised concerns about the disapplication of the Land Drainage Act 1991 enforcement powers, as well as the timescales under article 19 of the DCO. The Applicant did not accept these timescales were inappropriate [ER 12.4.64]. With respect to the disapplication of consent requirements, the ExA agreed with the Applicant's comment within the SoCG between the Applicant and TC that the purpose of the PA2008 is to streamline consents, and that whilst TC's concern for third parties is noted, the Applicant's intention is to provide the time and resources to resolve obstructions. In this regard, the ExA concluded the disapplication of section 23 of the Land Drainage Act 1991 is appropriate and did not suggest any changes to the DCO in this regard. The ExA further set out that LLFAs have the ability to utilise other sections of that Act that have not been disappplied, should there be concerns [ER 12.4.85]. The Secretary of State is minded to agree with the ExA that the disapplication of the Land Drainage Act 1991 powers on watercourses is reasonable [ER 12.5.2]. The Secretary of State also agrees with the ExA's proposed amendment to the DCO to secure consultation with the drainage authority to minimise detrimental effects.

Thames and Medway Canal

264. SPC raised concerns regarding the potential for construction traffic to damage the Thames and Medway Canal bed and banks. The Applicant responded that potential construction effects on watercourses would be dealt with during the detailed design stage, through REAC commitments RDWE006 and RDWE008 [ER 12.4.72]. The ExA were content that the issues raised will be dealt with during the detailed design stage and are appropriately secured [ER 12.4.87] and the Secretary of State has no reason to disagree.

Attenuation and Infiltration Ponds

265. Further issues relating to regulation basins are reflective of the issues in relation to drainage authority consents. The ExA noted that the Applicant promotes the adequacy of the design of regulation basins based on the REAC commitments RDWE034 and RDWE035 [ER 12.4.88].

266. The Secretary of State notes the objection raised by LBH, about discharge rates into existing watercourses [ER 12.4.77] and about appropriate discharge arrangements, in particular the Applicant's reference to 'recent technical innovations'. [ER 12.4.80]. The Applicant considered that the proposals are in accordance with local planning policy requirements [ER 12.4.80]. The ExA concluded that as the consideration is of a technical nature, and has consequences for watercourses, sewers and drains, the drainage authority should be consulted in addition to the planning authority, as set out in the REAC commitment RDWE035 [ER 12.4.89]. The Secretary of State agrees with this approach.

Water supply and wastewater issues

267. The Secretary of State notes that at the close of the Examination, all matters were agreed between the Applicant and two parties: Thames Water and Anglian Water, although some were subject to additional agreements outside the DCO [ER 12.4.91]. As noted at paragraph 248 of this Decision Letter, the Applicant has now reached an agreement with SW and NWL, resolving the issues raised at the Examination with respect to the supply of water required for the tunnelling operation [ER 12.4.99], as well as the servicing of the compounds [ER 12.4.97]

268. The Secretary of State notes the submission from Lawson Planning Partnership [REP9A-135] in relation to the water treatment plant at Franks Farm, with a request that the operation remains functioning throughout the construction period. The Applicant was not able to respond to this issue at the Examination given the late stage this issue was raised [ER 12.4.92]. The ExA however considered that this issue can be resolved through the SACR013 [ER 12.4.98]. The Secretary of State agrees.

269. The ExA noted but placed limited weight on the Applicant's conclusion of no likely significant effects in relation to wastewater, because of the limited number of buildings proposed and the commitment to meet the requirements of any non-main sewerage systems [ER 12.4.97]. The Secretary of State notes and agrees with this conclusion.

270. The ExA noted that the dominating issue was the ability of Linford Well to meet the water needs of the tunnel boring machine or machines. The ExA asked about the re-phasing of the potential start date for the Proposed Development and the acknowledgement during the Examination by the Applicant that one or two tunnel boring machines may be used. In response the Applicant stated that it was considered

that tunnelling arrangements would be completed before an agreement with NWL on the water supply for this was concluded regardless of whether one or two tunnel boring machines were used and confirmed that an extension to the agreement or an alternative source would be sought if found to be necessary [ER 12.4.96]. The ExA noted that a formal agreement on the water supply issue to the Linford Well with NWL was not in place, however, this has since been agreed via a side agreement. The Secretary of State is satisfied that the issue regarding water supply has been resolved.

Agricultural land water effects

271. The Rochester Bridge Trust raised the concern about the issue of the Proposed Development impacting adjoining land outside of the Order Limits, given that the Trust felt it already operated in an area of difficult drainage, and it did not wish the Proposed Development to compound this difficulty [ER 12.4.102]. The ExA considered that the issue raised by the Rochester Bridge Trust has been addressed by the Applicant through REAC commitment RDWE033 (discharge from the southern portal) and the need to gain environmental discharge permits from the EA [ER 12.4.111]. The Secretary of State has no reason to disagree.

272. The Secretary of State notes that several relevant representations were made during the Examination related to agricultural land and flooding. The BTF Partnership, on behalf of Orsett Fen Right Holders' Representation stated that it was concerned about the re-wetting of the land, with possible implications for changes to the potential flood zone in the surrounding farmland [ER 12.4.100]. The ExA considered that this issue is adequately addressed by the Applicant with the REAC commitment RDWE035 (operational drainage – retention ponds), which commits the Applicant to reduce discharge rates by 50% on existing retention ponds alongside attenuating new flows back towards greenfield runoff rates. The ExA further considered that the hydraulic modelling produced by the Applicant suggests there would be no adverse effects or other consequences in relation to discharge rates [ER 12.4.111]. The Secretary of State agrees with this conclusion.

273. The issue of agricultural land and flooding also featured in the SoCG between the Applicant and the Cole Family, who were also concerned that the impact of the Proposed Development could result in making the rest of the Fen un-farmable [ER 12.4.100]. The Applicant set out that the re-wetting was essential mitigation at the Coalhouse Fort area, and was to provide high quality water vole habitat, in addition to floodplain compensation. Although the intention is to increase groundwater levels in the area, that area is controlled by hydraulic control structures (secured by the REAC commitment RDWE050), preventing the ditches and waterbodies overspilling onto surrounding land. The Applicant additionally stated that the underlying geology is of very low permeability and the created water features would be very shallow. As such there is a low risk of groundwater ingress to impact them and change the current regime and therefore low potential to impact the adjacent farmland [ER 12.4.104]. The Secretary of State agrees.

274. The Cole Family also retained concerns at the close of the Examination regarding the impact of the construction and operation of the Proposed Development on the Low Street irrigation reservoir and proposals for the reservoir's reconfiguration. The Applicant highlighted that the detailed design phase would resolve the concerns, and highlighted REAC commitment RDWE054, which requires contractors to consider

reducing potential draining or barrier effects during the detailed design stage [ER 12.4.105 - 12.4.106]. The ExA noted, with regard to the Low Street Reservoir, the steps to be considered at the detailed design stage, and notes that it is secured with REAC commitment RDWE015 [ER 12.4.113]. The Secretary of State is satisfied with this conclusion.

275. Similar concerns were raised by Gateley Legal on behalf of the Mee Family, although at the close of the Examination, Mr Mee's statement set out that the Applicant were reducing their concerns by the offer of a side agreement, which was not in place at the time [ER 12.4.105]. The Secretary of State consulted on this issue in the letters dated 28 March 2024, 10 May, 12 November and 28 November 2024. Both the Applicant and the Mee Family expected a side agreement to be reached prior to the conclusion of the decision stage, however, the Secretary of State has received no further information on whether agreement has been reached and the side agreement is now in place. Therefore, the Secretary of State agrees with the ExA's conclusion that the compulsory acquisition and temporary possession of land and rights is justified, and it is not necessary for a side agreement to be concluded before the granting of development consent [ER E9-30]. However, the Secretary of State expects the Applicant to ensure the agreement is concluded, so as to ensure the remaining farm continues to be highly productive.

276. The Coalhouse Fort area was raised by several Interested Parties, including the Kent Wildlife Trust, RSPB and TC, in relation to water availability, quality and quantity. The Applicant provided a Technical Note which confirmed that the implementation of a water inlet structure to allow conveyance of water from the River Thames represented a feasible solution to achieve the predicted water demand requirements for the proposed mitigation. Other options such as using the existing arrangement at Coalhouse Fort would be considered during the detailed design stage. The Note also confirmed that the final solution for this mitigation will be, subject to consultation with NE, the EA, and TC [ER 12.4.109].

277. In relation to concerns raised about the ability to farm in the Coalhouse Fort area following the construction of the Proposed Development, the ExA noted the conclusion that there would be no adverse impacts on the offsite flood risk (paragraph 4.1.7 of the FRA). The ExA appreciated that there is a substitution effect where the river enters the ditch system through a new structure near to the existing inlet at Coalhouse Fort. The fact that there are no proposed changes to the River Thames flood banks suggested to the ExA that the hydraulic system will be similar. Therefore, the ExA concurs with the Applicant that the hydrological and salinity levels will be the same as prior to the Proposed Development and will not affect adjacent agricultural land [ER 12.4.112]. More generally, the Secretary of State notes that the ExA is content that the Applicant has shown that it has attempted to minimise the effect on existing and retained agricultural land by managing discharges into the existing watercourse systems. The Applicant has committed in the REAC to provide further mitigation, albeit the final detail is being left to the detailed design stage. The ExA considered that the Applicant had sought to minimise those impacts in accordance with paragraph 5.168 of the NPSNN [ER 12.4.114] and the Secretary of State agrees with the ExA that the proposing regimes should not be detrimental to adjacent farmland provided the mitigation measures secured by the REAC are employed [ER 12.5.3].

The Water Framework Directive ("WFD")

278. The Applicant carried out a WFD assessment to consider whether the Proposed Development could impact current and future targets of the WFD and change the WFD status of water bodies. The assessment considered water bodies such as the Thames Middle, Mardyke, Tilbury Main, and several groundwater bodies, as well as nationally designated protected areas, including the Thames Estuary and Marshes Ramsar site [ER 12.3.38].

279. While WFD was not a major issue in the LIRs, both KCC and LBH expressed support for the removal of existing culverting and alternatives to alterations to watercourses [ER 12.4.115]. The matter of culverting watercourses was raised regularly with KCC supporting the EA's concerns and requirements and TC highlighted that according to the FRA – Part 10 there would be a net increase in length of watercourse channel and a net increase length of watercourse in culvert. It also highlighted that the Applicant had not provided answers to questions previously raised regarding the number of culverts [ER 12.4.118].

280. The Applicant in its FRA refers to ten culverts ranging from 11m to 178m, amounting to a total distance of 650m. In ISH9, the Applicant noted that there were eleven culverts to be placed. In considering the descriptions of each Work Number in the DCO, there are 21 Work Numbers which reference in excess of 2,900m of culverting [ER 12.4.119].

281. The Secretary of State notes that at the close of the Examination, that in relation to the WFD the EA specifically stated that the culvert proposals within the Proposed Development will result in the loss of habitat which will require a derogation under regulation 19 of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The outstanding EA objection is in relation to the culverting proposals within the Proposed Development, which it contends breaches the WFD. Other water environment stakeholders, including KCC as the LLFA, support this view. The Applicant has relied on its original assessment and has not deemed it crucial to seek the necessary derogations as it considers there is no breach of the WFD [ER 12.4.123].

282. The EA did not agree with the proposed culverting of watercourses, setting out its internal policy³ against culverting of any watercourse because of the adverse ecological, flood risk, geomorphological, human safety, and aesthetic impacts, bearing on WFD compliance. The EA also highlighted in its relevant representation that matters not positively addressed would need to be subject of a WFD derogation. The issue remained outstanding in the Final SoCG, albeit the Applicant's WFD analysis methodology was an agreed matter. The difficulty on this issue in design terms was that the extent of watercourses remaining a concern to the EA was due to the culverting locations not being on designated main river watercourses, and so were not within the EA's statutory remit. The EA continued to raise the issue of the need for the Secretary of State to be requested to provide a derogation allowing WFD deterioration of a watercourse [ER 12.4.116].

³ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010060/TR010060-002411-Environment%20Agency%20-%20Any%20further%20information%20requested%20by%20ExA%201.pdf>

283. The ExA tested throughout the Examination the approach to culverting and the WFD implications of the proposed design approach. The ExA asked primarily about the Tilbury Main watercourse but also probed into mitigation measures to discover what could be changed to allow the EA to remove the culverting objection. The EA in its response acknowledged that the length of culvert proposed for Tilbury Main watercourse has reduced, but that culverting is still not acceptable and would “result in loss of WFD habitat”. The Applicant confirmed that avoiding the need to culvert was its first priority where this may result in long watercourse diversions; the preference was to install a culvert design to maintain existing channel gradients, flow regime to avoid transferring flows between catchments [ER 12.4.120].

284. The EA responded that with regard to the Tilbury Main watercourse, culverting is not acceptable and raised concern about the loss of WFD habitat. Although the EA accepted that this was the least damaging option and were pleased that this had been reduced from the original proposal of an 83m culvert, [REP9A-006] it remained of the view that a derogation was necessary [ER 12.4.122]. Having considered the evidence presented by several Interested Parties and the Applicant, the ExA concluded that with the exception of Tilbury Main, that the proposed extent of culverting is not on EA regulated main river designated watercourses, and found that there is at least in principle a breach of the WFD caused by non-main river or ordinary watercourse culverting, and that paragraph 5.226 of the NPSNN applies to these circumstances [ER 12.4.124].

285. The ExA considered the regulation 19 derogation assessment, which defines the requirements to be met in circumstances where a derogation in respect of a breach of the WFD is to be provided. With reference to the ordinary watercourse culvert designs available to the Examination, the ExA could not assure itself that all conditions in paragraph (3) to (5) of Regulation 19 can be met [ER 12.4.125], for the reasons set out at ER 12.4.126-12.4.129. The ExA concluded, therefore, that without further design development by the Applicant, to demonstrate WFD compliance on all proposed designs to manage ordinary watercourses crossing the LTC alignment, there could be a breach and that the necessary tests to support a derogation may also not be met [ER 12.4.129 and 12.4.130].

286. The Secretary of State notes the ExA’s suggestion that this matter is best dealt with by a new commitment in the REAC to secure the preparation and submission of a WFD Compliance Watercourses Plan to the satisfaction of the Secretary of State, following consultation with the EA. The plan would record the detailed ordinary watercourse design measures necessary to either avoid the need for, or to secure a derogation, and would be prepared in consultation with the EA, the relevant LLFA and the relevant drainage authority for non-main watercourses. The ExA considered this measure is necessary to avoid a breach of paragraph 5.226 of the NPSNN and (where feasible) avoid the need for a derogation or even the refusal of a derogation in circumstances where the conditions were not capable of being met, and its absence would weigh against the Proposed Development in the planning balance [ER 12.4.131 – 12.4.130]. As this commitment had not been discussed with the Applicant, the EA or the LLFAs during the Examination for the reasons set out in ER 12.4.133, the ExA suggested the Secretary of State may wish to engage with Interested Parties before determining the DCO application [ER 12.4.133].

287. The Secretary of State sought views from the Applicant, the EA and the relevant LLFAs on 28 March 2024 on a proposed requirement to ensure the Proposed Development will be compliant with the requirements of the WFD. The Secretary of State further consulted on this issue in its second consultation letter, dated 19 April 2024, inviting LLFAs to further comment on the EA and Applicant's response to the first consultation letter.

288. The Applicant set out in its response, dated 11 April 2024, that it did not consider the additional requirement to be necessary, as it would duplicate controls already included in the DCO via the protective provisions for the protection of drainage authorities and the EA, which have been agreed by those bodies. It set out that with regard to the compliance of the Proposed Development with the WFD the EA was satisfied with this at the close of the Examination and directed the Secretary of State to [REP9A-006]. Without prejudice to this position, the Applicant did propose amendments to the wording of the proposed requirement.

289. The EA's response, dated 9 April 2024, supported the Applicant's view in relation to the West Tilbury Main River culverting, considering it would have sufficient oversight of this site at the detailed design stage. However, it re-stated its position that it is for the LLFA to comment on ordinary watercourses.

290. TC, in its late consultation response dated 23 April 2024, recognised the responsibility of the EA for water quality and the WFD. It supported the comments made in the EA's consultation response regarding West Tilbury Main River within Thurrock and noted that the EA were satisfied that the DCO secures good practice culvert design via commitments contained within the CoCP. As the EA consider it has sufficient oversight of the design of the West Tilbury main culvert during the detailed design phase (if the Secretary of State allows it), TC indicated it was content to raise no further comments.

291. LBH, in its response dated 11 April and 2 May 2024, acknowledged that the EA were the body responsible for water quality and the WFD, and recognised the EA's position that the DCO provides good practice culvert design, via the commitments contained within the CoCP. LBH noted the Applicant's amended wording of the requirement but indicated support for the original wording put forward by the Secretary of State.

292. KCC, in its final response dated 2 May 2024, noted that issues primarily relate to the West Tilbury Main River culvert, and therefore deferred to LLFAs north of the River Thames for comments. However, KCC noted the Applicant's position that it did not consider the additional requirement necessary and were mindful to agree given the Protective Provisions and processes that are already in place/have been proposed. It argued that the EA's position also supports this.

293. Following the two consultations set out by the Secretary of State on this issue, the Secretary of State is minded to include the requirement within the DCO to ensure that, as suggested by the ExA, a serious policy and legislative breach is avoided [ER 12.4.133]. The Secretary of State has incorporated some of the amendments suggested by the Applicant in its response to the first consultation on this issue. The Secretary of State notes the provision in the CoCP, which relates to the design of the culverts and the Protective Provisions highlighted by the Applicant in their letter of 11

April 2024 in relation to culverting, but does not consider that the requirement proposed in the Secretary of State's letter of 28 March duplicates these as suggested by the Applicant. Whilst the Secretary of State notes that these provisions do not prevent the relevant bodies commenting in relation to WFD compliance, there is no specific reference to the WFD. Given the ExA's view that WFD compliance could not be concluded and the request from LBH for inclusion of the requirement, the Secretary of State is minded to retain it. However, she has accepted the Applicant's amendments to this provision as set out in their letter of 11 April 2024. Further, whilst the Secretary of State notes that the ExA recommended that such a provision be included in the REAC [ER 12.4.131], the Secretary of State considers it more appropriate to include this as a requirement given the need for compliance with WFD matters.

The Secretary of State's Conclusion on Road Drainage, Water Environment and Flooding Matters

294. The Secretary of State agrees with the ExA's conclusions at [ER 12.5] and is satisfied that the Applicant has complied with paragraphs 5.98 - 5.99 of the NPSNN, with respect to their FRA. Furthermore, the Secretary of State is satisfied that the Applicant has adequately addressed the matters of surface water, flood storage, and watercourse and attenuation basin issues, and that commitments have been secured within the REAC to ensure this.

295. With particular regard to the agricultural land water effects, the Secretary of State agrees with the ExA that the Applicant has sought to minimise the impact to agricultural land, in accordance with paragraph 5.168 of the NPSNN [ER 12.4.114].

296. With regards to ground water and water supply issues, the Secretary of State notes the agreements put in place with NWL and SW post-Examination, and she is satisfied the outstanding issues in this area have been resolved. Following consultation on the issue of the WFD with the Applicant and LLFAs, the Secretary of State is satisfied that the requirement drafted and secured within the DCO ensures compliance on this issue. The ExA had attributed moderate negative weight to this due to WFD having unresolved issues at the end of the Examination [ER 21.2.69], however, following their resolution, the Secretary of State attributes neutral weight to Road Drainage, Water Environment and Flooding in the Planning Balance.

Air Quality

297. The Secretary of State notes that the Applicant's assessment of likely significant air quality effects is outlined in Chapter 5 of the ES [APP-143] and is based on the documents outlined in [ER 13.3.2]. The Applicant concluded that there are no likely significant adverse effects during the construction and operation of the Proposed Development on air quality [ER 13.3.9 – ER 13.3.24].

298. The Secretary of State notes that during the Examination the ExA considered a number of Air Quality matters including [ER 13.4.3]:

- Lack of Specific Modelling of PM_{2.5}
- Implications for the assessment of new Fine Particular Matter legislation/new Environmental Plan/new Air Quality Strategy for England

- Implications for assessment of the delayed phase out of the sale of new petrol/diesel cars
- Air quality monitoring

Lack of PM_{2.5} Specific Modelling

299. Following concerns raised by a number of parties, the ExA sought further explanation and clarification from the Applicant on the approach to assessing PM_{2.5} through the results of PM₁₀ [ER 13.4.11]. The Applicant responded that given that the low risk of exceedances of legal thresholds, by combining the modelled road traffic PM₁₀ concentration with background PM_{2.5} concentrations, this will overpredict PM_{2.5} concentrations given that the road component PM₁₀ includes PM_{2.5} as well as larger particles [ER 13.4.12]. In addition, the Applicant confirmed that the Proposed Development would not result in legal exceedances of PM_{2.5} with or without the Proposed Development in both the construction and operational scenarios [ER 13.4.13]. The Applicant supplemented the ES with an Air Quality Quantitative Health Impact Assessment ("AQQHIA"). This assessment quantified health effects associated with the absolute change in air pollutant concentrations (regardless of whether the total concentration is above or below a set threshold) [ER 13.4.14] and demonstrated that there was no evidence of a measurable adverse or beneficial effect on population health as a result of air quality impacts associated with the Proposed Development [ER13.4.16].

300. The ExA was satisfied that the Applicant has employed a robust methodology for modelling air quality impacts on human receptors and compliance with Air Quality Directive ("AQD") limits. The Applicant's use of DMRB LA 105, where the magnitude of change in pollutant concentrations is evaluated based on the number of receptors experiencing the change satisfied the requirement to assess the significance of air quality impacts in the NPSNN, in line with the EIA, and was considered by the ExA to be an acceptable approach in determining significance. On this basis, the ExA accepted the finding of no significant effects [ER 13.4.18].

301. With regard to concerns raised that the WHO air quality guidelines are a more appropriate measure to determine the impact of air quality on health, the ExA highlighted that these are not legally binding and are designed to offer guidance on reducing health impacts of air pollution which world governments can use to inform their air quality policy. The ExA was satisfied with the Applicant's use of DMRB LA 105, which provides a framework for determining whether there is a significant air quality effect on human receptors and is consistent with other highway schemes [ER 13.4.19]. The provision of the AQQHIA was noted by the ExA to provide additional confidence, given it considered the change in pollutant concentrations below legal thresholds, has no screening out of imperceptible changes, and considers the relevant population exposed within the air quality study area (rather than worst-case receptors solely). The Secretary of State agrees with the ExA's conclusion and is content with the Applicant's approach to assessing this.

Implications of New Fine Particulate Matter Legislation (New Environmental Improvement Plan / New Air Quality Strategy for England)

302. The Secretary of State notes that after the submission of the DCO [ER 13.4.21 - 13.4.22], new UK targets for PM_{2.5} were announced in a Ministerial Statement in

December 2022 and the Environmental Improvement Plan, published in January 2023 required the Secretary of State to set a long-term target for air quality, and a target for the annual average concentrations of PM_{2.5} in the air; the latter was done through the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (the 2023 Regulations). It is noted that the new legal target for PM_{2.5} annual average concentrations is set at 10 µg/m³ to be reached by 31 December 2040, with the interim target set at 12 µg/m³ to be reached by 31 January 2028.

303. The ExA asked the Applicant if it would update the Air Quality assessment in light of the 2023 Regulations and the Environmental Improvement Plan interim targets [ER 13.2.23]. The Applicant responded that there was no guidance from DEFRA on how the 2028 and 2040 targets would be determined, and that the 2028 target was not legally binding. This was only to be monitored at set sites identified by the Secretary of State for the Environment, Food and Rural Affairs for that purpose, such as the Defra Automatic Urban Rural Network (“AURN”) monitoring network [ER 13.4.24]. The Secretary of State notes that the Applicant analysed the air quality monitoring data from AURN Network and outlined that in 2022, the interim 2028 target was achieved across the entire AURN monitoring network in England and only six monitoring stations exceeded the now 2040 legal target by 2 µg/m³. The Applicant outlined that given PM_{2.5} concentrations are expected to decline in response to ongoing actions undertaken by the UK Government and local authorities to reduce emissions and so it considered it unlikely the Proposed Development would impact on achieving the new PM_{2.5} targets [ER 13.4.25].

304. With regard to the replacement of AQS2007 by AQSE2023 in England, which has the effect of removing the 25 µg/m objective and replacing it with 20 µg/m [ER 13.4.22], the Applicant identified one receptor that would exceed the AQSE2023 objective in the Do-Something scenario, with an increase in PM_{2.5} at this location of 1.3 µg/m. This increase would put the receptor into the small magnitude of change bracket (i.e. >0.4 µg/m but <2). The Applicant concluded that whilst there is no safe limit for this pollutant, the findings of the overall assessment with regards to significance of change in PM_{2.5} concentrations remained unchanged in light of the new legislation [ER 13.4.26]. The ExA concluded that Applicant’s Air Quality assessment in Chapter 5 of ES and the conclusion of no significant effects is unaltered by the introduction of the new legislation, policy and limits on PM_{2.5} [ER 13.4.28]. The Secretary of State agrees.

Implications for assessment of the delayed phase out of the sale of new petrol/diesel cars

305. The Secretary of State is aware that GBC specifically asked [REP5-096] during the Examination if the Government’s decision to delay phasing out of the sale of new petrol and diesel vehicles from 2030 to 2035 would have an impact on the Proposed Development’s air quality modelling results from the perspective of estimating the proportion of the vehicle fleet that will be electric [ER 13.4.29].

306. The Applicant stated that the decision would have no significant implications for air quality modelling and assessment of likely significant effects on human health and does not require any additional monitoring or mitigation [ER 13.4.30]. Its air quality assessment and assessment of road user carbon emissions associated with the forecasts of future vehicle fleet are based on the assumptions within the Defra issued

Emissions Factors Toolkit Version 11, which does not take account of the government's previous policy of ending the sale of petrol and diesel cars by 2030 and therefore the air quality assessment presented in ES Chapter 5 is not impacted by the policy change [REP6-109]. The Secretary of State is aware that the transparency of the Applicant with regard to the impact of the ban on the sale of petrol and diesel cars was questioned by TCAG [REP8-191, ER 13.4.31].

307. Despite the concerns raised by GBC and TCAG, the Secretary of State is aware that both TC and LBH were noted by the ExA to be content with the Applicant's position that there would be no significant impacts on air quality [ER 13.4.32 - 13.4.33]. The ExA was satisfied that the air quality assessment would not be affected by the delay in phasing out of petrol and diesel cars. The acceptance of the Applicant's position by TC and LBH provide further reassurance notwithstanding TCAG remaining doubtful of the Applicant's modelling [ER 13.4.34]. The Secretary of State sees no reason to disagree with the conclusions drawn by the ExA.

Air Quality Monitoring

308. The Secretary of State notes that the lack of proposed post operation monitoring of air quality receptors was challenged by several Interested Parties [ER 13.4.35]. Through the Examination, the Applicant maintained their position that no additional monitoring was justified, as no significant effects were identified. Given the relatively small changes in pollutants on the network as a result of the Proposed Development, it was not possible to robustly separate the impact of the Proposed Development from other influences [ER 13.4.45]. This matter was not agreed at the end of Examination with several local authorities, [ER 13.4.43] however, the Applicant included a new commitment in their SACR to hand over the existing pre-construction baseline air quality and noise monitors to relevant local authorities so they could carry out their own long-term monitoring at their own expense [ER 13.4.46]. The ExA considered that paragraph 5.10 of the NPSNN only requires mitigation where there is a breach of air quality thresholds and the Applicant's position that monitoring and mitigation for the operational stage is not necessary is a supportable one. While it is recognised that the Proposed Development has the potential to result in adverse air quality for some human health receptors, it would be at levels well below the current AQSE2023, and the ExA was persuaded by the Applicant's view that no further mitigation measures or monitoring was required. The Applicant's agreement to leaving the monitoring equipment in place if the local authorities wished to adopt it is considered by the ExA to be a reasonable outcome, but it noted there is no justification for financial contributions to facilitate ongoing monitoring by those authorities [ER 13.4.49]. The Secretary of State also agrees.

309. With regard to construction, the Secretary of State is satisfied that measures to mitigate construction impacts on air quality such as dust suppression and implementation of minimum emission standards to reduce emissions from vehicles and construction machinery, are included in the REAC which is secured by requirement 4 of the DCO [ER 13.4.47].

Secretary of State's Conclusion on Air Quality

310. In conclusion, like the ExA, the Secretary of State is satisfied that the Applicant has, in accordance with NPSNN paragraphs 5.6-5.9 identified, assessed and

addressed the air quality impacts of the Proposed Development [ER 13.5.1]. The ExA is satisfied with the air quality assessment undertaken by the Applicant, which has concluded that there are no outstanding air quality issues, and that the Proposed Development does not lead to a significant air quality effect when considering human health and compliance risk, and it is not expected to affect the UK's ability to comply with the AQD limit values in the shortest possible timescales [ER 13.5.2 – 13.5.3 and 13.5.5]. The ExA is also content that the modelling and judgement of effects accords with relevant guidance and is not affected by the delay in ban on the sale of new petrol and diesel vehicles [ER 13.5.6].

311. The ExA also found that the overall aim of reducing target levels (with regards to particulates) and delivering improvements to air quality an important and relevant consideration [13.5.4].

312. Overall, the ExA does not consider the matter of air quality to be an impediment to the granting of the DCO as the effects neither weigh for or against the making of the Order [ER 13.5.5]. The Secretary of State sees no reason to disagree with this conclusion.

Biodiversity

313. The Secretary of State is aware that the Applicant considered a range of impacts to ecological receptors including: four European sites, twelve statutory designated sites south of the River Thames, nine statutory designated sites to the north of the River Thames [ER 14.3.2] as well as country parks, ancient woodlands, ancient semi-natural woodland, Local Wildlife Sites and Sites of Importance for Nature Conservation, and habitats and species of importance including ancient woodland, veteran trees, great crested newts, bats, dormice, barn owls, water voles, and invertebrate assemblages of national value [ER 14.3.3].

314. The Applicant's assessment of the effects of construction and operation on terrestrial biodiversity as a result of the Proposed Development is set out in the updated ES Chapter 8 and ES Addendum (version 10). The significant residual construction and operational effects of the Proposed Development on terrestrial ecology taking into consideration mitigation measures are summarised in Table 8.39 of ES Chapter 8. The ExA sets out the residual likely significant effects during construction in Table 22 [ER 14.3.10], and during operation in Table 23 [ER 14.3.15]

315. The Secretary of State agrees with the ExA that the Applicant's biodiversity assessment provides sufficient information to enable the effects of the Proposed Development on biodiversity and ecological receptors to be understood and accords with the EIA Regulations and the requirements of paragraph 5.22 of the NPSNN [ER 14.6.1].

316. The Secretary of State notes that the main issues arising during the Examination included [ER 14.5.2]:

- ancient woodland and veteran trees.
- nitrogen deposition.
- SSSIs.

- green bridges.

Ancient Woodland and Veteran Trees

317. The Secretary of State notes the discussions had during the Examination in regard to impact on Ancient Woodland and veteran trees. The Applicant concludes that the Proposed Development is predicted to have significant adverse effects during the construction phase, due to the loss of 7.36ha of ancient woodland and ten veteran trees [ER 14.5.4] and accepted that this could not be mitigated. The Applicant's position is that wherever possible the loss of veteran trees and ancient woodland should be avoided and that it has, through the design of the Proposed Development, revised its construction and utility diversion requirements to minimise the potential for loss of ancient woodland [ER 14.5.40].

318. A further predicted significant effect over the operational phase is also identified due to the effect of nitrogen deposition [ER 14.5.4] which is considered further in the Nitrogen Deposition section below.

319. The Secretary of State notes that the principle of the loss of ancient woodland was not supported or endorsed by Natural England ("NE") [ER 14.5.10].

320. The Secretary of State acknowledges the concerns raised by various Interested Parties regarding the proposed alignment of the route of the Proposed Development and the impact this would have on ancient woodland and veteran trees. These representations included the representation from TC, which noted that the Applicant's original preferred route in 2017 did not affect the ancient woodland within Rainbow Shaw Wood, and that in taking the subsequent decision to realign the route of the Proposed Development to avoid changes to the alignment of overhead power cables and pylons, the Applicant had failed to address the objectives established by national policy by deciding to affect the ancient woodland rather than avoid it [ER 14.5.30]. The Kent Downs Area of Outstanding Natural Beauty Unit ("The KDAONB Unit") also expressed concern that the areas of ancient woodland that would be lost due to the Proposed Development appeared to exceed the area required for relocation of utilities in the vicinity of the A2/M2 corridor [ER 14.5.31].

321. The Secretary of State notes the consideration given by the ExA to the issue of the route selection and why the Applicant did not choose a route that would allow ancient woodland to remain untouched [ER 14.5.23 and ER 14.5.34] and the Applicant's reasons for not deciding not to re-align, re-design or substitute land use or construction techniques to avoid loss of these types of areas [ER 14.5.25-29 and ER 14.5.35]. These reasons included the constraints of the highway alignment [ER 14.5.24 and ER 14.5.26] and the difficulties which would be encountered in installing diverted underground gas utilities beneath the strategic road network and utility diversions, including an overhead powerline and three gas pipelines [ER 14.5.25-26]. The Secretary of State's conclusion in relation to the route selection and alternatives is set out in paragraph 49 of this Decision Letter.

322. Like the ExA, the Secretary of State notes the Applicant's approach that, where possible, the loss of ancient woodland and veteran trees should be avoided [ER 14.5.6] and considered the impacts on all sites of environmental or ecological importance during the evolution of its design [ER 14.5.35]. The Secretary of State is satisfied that the Applicant set out the reasons for the loss of ancient woodland and

veteran trees, and that the Applicant's optioneering exercise and subsequent changes prior to and during the Examination took account of the locations of ancient woodland and veteran trees, such that the mitigation hierarchy was followed in terms of avoidance, mitigation and compensation [ER 14.5.41]. Further, she agrees with the ExA that the Applicant has through the design of the Proposed Development, revised its construction and utility diversion requirements to minimise the potential for loss of ancient woodland and veteran trees [ER 15.5.40].

323. The Secretary of State notes that the Applicant does not dispute that the Proposed Development would result in the loss of irreplaceable habitats including 7.36ha ancient woodland and the loss of 10 aged or veteran trees. The ExA was satisfied that the Applicant had set out the reasons for this loss [ER 14.5.4 and ER 14.6.4]. The Applicant agreed that the loss of ancient woodland cannot be mitigated [ER 14.5.7 and 14.5.40]. Further, the Secretary of State notes that the Applicant's position is that the compensation proposed for the ancient woodland offsets this loss [ER 14.5.4].

324. The Secretary of State notes that the Applicant proposes to provide compensation for the loss of ancient woodland at Hole Farm and is content that the long-term management of this site including monitoring and maintenance requirements would be secured in the oLEMP [ER 14.5.9 and ER 14.5.44]. Further compensation is also proposed in the form of salvaging and re-using ancient woodland soils, stools and deadwood in relation to the Applicant's overarching objective in terms of ancient woodland compensation so as to create new areas of high-quality woodland habitat which would join up to existing retained woodland habitats. Whilst it is noted that there is limited published evidence of the value of translocation of ancient woodland soil [ER 14.5.20], the Secretary of State recognises the position of NE who accepted that while the evidence in favour of soil translocation is limited, the evidence base is growing in favour of such work and that it would therefore wish to see it carried out wherever possible since without it the materials within such soils would be lost [ER 14.5.22].

325. The Secretary of State acknowledges the landscape scale approach towards habitat creation adopted by the Applicant, in response to advice received from DEFRA and discussions with NE, but notes that the latter did not comment specifically on the benefits of such an approach when used to compensate for the loss of ancient woodland and veteran trees [ER 14.5.15 – ER 14.5.16].

326. Like the ExA, the Secretary of State relies on NE's support for this landscape scale approach to identifying the proposed compensation areas, with the aim of enhancing resilience of affected sites and strengthening the ecological connectivity between them [ER 14.5.15].

327. The Secretary of State notes that the Proposed Development will result in the loss of 10 veteran trees [ER 14.5.40] and that concerns were raised regarding the adequacy of mitigation proposals in relation to their loss [ER 14.5.38]. The Secretary of State acknowledges the Applicant's position that the loss of veteran trees should be avoided wherever possible [ER 14.5.40] and is satisfied that the Applicant's optioneering exercise took into account for the locations of veteran trees [ER 14.5.41] and that the REAC contains a commitment to retain trees wherever possible through detailed design and during construction [ER 14.5.29].

Ancient Woodland and Veteran Trees Conclusion

328. The Secretary of State is mindful of the requirements of paragraph 5.32 of the NPSNN, which recognises that ancient woodland and veteran trees are irreplaceable habitat, and that consent should not be granted for any development that would result in the loss or deterioration of irreplaceable habitats unless the national need for and benefits of the development, in that location, clearly outweigh the loss [ER 14.2.4]. Further, she recognises that in some locations where the loss of this irreplaceable habitat is due to utility diversions and the needs of the Statutory Undertaker that NPS EN-1 paragraph 5.3.14 is applicable and compliance likewise, requires that the loss is weighed against the national need for and benefits of the Proposed Development [ER 14.6.4].

329. The ExA concluded that the national need for and benefits arising from the Proposed Development at the individual locations of loss or harm clearly outweigh the losses that will be caused. In reaching this conclusion, the ExA took into account the fact there is no reasonable alternative alignment that could avoid the predicted loss or harm and the tight constraints of the route selection process. The ExA were also satisfied that the Applicant has set out its reasons for the predicted losses, has taken substantial steps to minimise losses, which have been controlled to the minimum achievable extent in relation to an alignment of this scale and location and that where losses are unavoidable, substantial compensation is provided and secured [ER 21.4.4]. The Secretary of State agrees.

Nitrogen Deposition

330. Chapter 8 of the ES sets out the Applicant's ecological assessment of the effects of nitrogen deposition on biodiversity arising from the Proposed Development, which was undertaken in accordance with DMRB standards [ER 14.5.47]. This identified that 29 designated sites, including four SSSI, 22 ancient woodlands, two Local Wildlife Sites and one Site of Importance for Nature Conservation would experience significant adverse effects on their integrity due to the increase of nitrogen deposition during the operation of the Proposed Development and this would have the potential to result in degradation of habitat condition [ER 14.5.48]. The Applicant acknowledged in its closing statement that its methodology in formulating proposals for compensation land for nitrogen deposition had been developed after extensive engagement with NE, which had supported the proposals as set out in its agreed SoCG [ER 14.5.83]. Like the ExA, the Secretary of State is content that the Applicant has identified the significant and not so significant biodiversity adverse effects that would arise during the operational stage of the Proposed Development and, as required by the EIA Regulations and in line with the requirements of paragraph 5.22 of the NPSNN, that these have been adequately assessed by the Applicant [ER 14.5.89 and ER 14.6.1].

331. The Secretary of State notes that the Applicant proposes to provide eight sites for compensatory habitat planting to compensate for the effects of nitrogen deposition on designated habitats. These sites would equate to an area of approximately 246ha. These sites are Hole Farm East; Buckingham Hill; Hoford Road; Henhurst Hill; Fenn Wood; Court Wood site; Blue Bell Hill; and Burham [ER 14.5.49]. Although the Applicant proposed a reduction of 40ha of compensatory habitat to the land at Blue Bell Hill and Burham in a change request in August 2023 to reduce the impact on a farm business at Blue Bell Hill [ER 14.5.50 and CR1-001, paragraph 5.1.1], the

Secretary of State notes that the Applicant considered that the reduced area remained appropriate and proportionate to offset the Proposed Development's significant effects on designated sites and habitats as a result of increased nitrogen deposition [ER 14.5.82].

332. The Secretary of State notes that at the end of Examination, the main issues outstanding between the Applicant and several Interested Parties relating to nitrogen deposition included [ER 14.5.88].:

- impact of nitrogen deposition on the local community and the environment.
- the appropriateness of the analysis, robustness of assessment and results.
- justification for the need to acquire nitrogen compensation sites; and
- the appropriateness of the compensation sites chosen.

333. The Secretary of State notes the clarification sought from the Applicant by the ExA regarding the criteria used for the selection of sites proposed for nitrogen deposition compensation and how it had determined the size of these area [ER 14.5.65], together with the approach adopted by the Applicant to determine the scale of compensation which was developed in consultation with NE with defined objectives for the scale of habitat creation to be comparable with the area of significantly affected habitat [ER 14.5.66]. The Applicant explained that its compensatory strategy had focused on compensation being placed in identified areas of the ecological network to make the overall ecological network more resilient as a whole. It was considered that greater resilience in the network as a whole would subsequently improve the resilience of each individual affected site because the overall network that supports these sites would have greater resilience [ER 14.5.67].

334. The Secretary of State acknowledges the concerns raised by KCC and the Kent Downs Area of Outstanding Natural Beauty Unit ("KDAONB Unit") who considered that there was a disparity between the areas where impacts would occur and where compensation has been proposed [ER 14.5.68]. The KDAONB Unit further set out that with the majority of compensation being proposed north of the River Thames there would be a significant ecological severance and that this was a matter which had not been satisfactorily addressed by the Applicant [ER 14.5.69]. The Secretary of State notes the Applicant's response, which compared to locations south of the River Thames, there were areas north of the River Thames where woodland is sparser, making it necessary for the Applicant to adopt greater areas of space in order to meet its connectivity objectives [ER 14.5.71]. In addition, the Applicant explained that within its search criteria there was a preference to avoid Compulsory Acquisition of land, if possible, with sites owned by the Applicant or offered by local authorities without compulsion preferred [ER 14.5.72]. Placing reliance on the agreement reached with NE regarding the site selection process [ER 14.5.83], the ExA concluded that the Applicant's approach of selecting compensation sites which would deliver the wider benefits of a landscape scale approach, build resilience by reducing fragmentation and build linkages between sites, adopting a mosaic habitat to allow integration with adjacent habitats and generally contributing to green infrastructure, is sound [ER 14.5.92]. The Secretary of State agrees.

335. The Secretary of State notes the concerns raised by some parties that the nitrogen deposition compensation sites proposed by the Applicant could be located

some distance from the areas of harm and regarding the extent of these sites. However, the Secretary of State agrees with the ExA that the Applicant's proposed use of the land that it owns first, such as at Hole Farm is appropriate, because there would be multiple benefits, as well as the nitrogen deposition compensation, including ancient woodland compensation, replacement for special category land, partnership working as a community woodland and the ability to install advance planting and that Compulsory Acquisition should be a last resort [ER 14.5.91 and ER 14.6.1]. The Secretary of State considers the justification for the need to acquire compensation sites for nitrogen deposition and the difference in opinion between affected parties and the Applicant over the extent and location in the Compulsory Acquisition and Related Matters section below.

336. The Applicant's proposals for the design and management of the proposed woodlands that are to be created to compensate for the potential impacts of nitrogen deposition are described in the oLEMP [ER 14.5.53]. The Secretary of State notes that the ExA gave weight to the role that the Multi-disciplinary Workshop and National Highways Design Review Panel would play in design development [ER 14.5.94]. The ExA was satisfied that the Applicant's commitment to their management in perpetuity is secured in the oLEMP, and that although the detailed design of the compensation sites are not yet finalised, the design and management would be developed with input through the LEMP Advisory Group which is satisfactorily secured in the oLEMP [ER 14.5.93]. Further, the ExA was content that with the inclusion of the recommended changes to some of the Control Documents, there would be appropriate controls through the LEMP, which would reflect the Design Principles document, and through mitigation measures set out in the REAC, based on the Environmental Masterplan [ER 14.5.94]. The Secretary of State notes that some Local Authorities including TC, would prefer to have an approval role on the LEMP and that the ExA was satisfied the consultation role is appropriate and that approval should be via the Secretary of State. Noting that Local Authorities will still be consulted, the Secretary of State is content with this approach for the Proposed Development and that the consultation role is appropriate [ER 14.5.94].

Sites of Special Scientific Interest ("SSSIs")

337. Chapter 8 of the ES sets out that there are thirteen SSSIs which fall within the Proposed Development's zone of influence where SSSIs could potentially be affected by the construction and/or operational phases, and a further five SSSIs which fall within or adjacent to the Order limits [ER 14.5.99]. Of these SSSIs, the Secretary of State notes that nine are assessed to have no adverse effects as a result of the Proposed Development [ER 14.5.100]. and that for the remaining nine SSSIs, significant adverse effects are predicted for four and not significant effects for five. These effects are associated with an increase in nitrogen deposition which has the potential to result in degradation of habitat condition [ER 14.5.103]. The Secretary of State further notes that SSSIs for which the special features would be adversely affected in terms of construction stage would be in part by removal of ancient woodland and those adversely affected at the operational phase result from nitrogen deposition [ER 14.5.96] both of which are addressed previously in this Decision Letter.

338. In addition to the predicted adverse effects during operation, the Secretary of State acknowledges that a slight beneficial, but not significant, effect during construction is also anticipated at Great Crabbles Wood SSSI due to the creation of a

new permanent habitat connecting this SSSI to Shorne and Ashenbank Woods SSSI [ER 14.5.104].

Route selection

339. The Secretary of State notes the significant concerns raised by NE and other Interested Parties regarding the additional direct and indirect impacts to the Shorne and Ashenbank Woods SSSI and ancient woodland resulting from the amendments to the route of the Proposed Development since the preferred route announcement [ER 14.5.109-112]. In particular, the Secretary of State notes that there will now be a direct and permanent loss of 5.85 ha of habitat, of which 0.95ha would be ancient woodland [ER 14.5.133] and that while the adverse effects on SSSIs have reduced following discussions and consultations between NE and the Applicant, significant adverse effects still remain which are greater than the Proposed Development originally consulted on in 2016 and 2018 [ER 14.5.109 – ER 14.5.110].

340. The Secretary of State notes the consideration given by the Applicant to SSSIs during the route options selection process and that the design sought to reduce both direct and indirect impacts upon SSSIs and that the loss of SSSI habitat would be mitigated during construction. The Applicant suggested that there had been a process to attempt to minimize the loss of SSSI designated land in a similar way to the ancient woodland reasoning while the needs and wishes of the various utility providers are appreciated [ER 14.5.113 – ER.14.5.115]. The Applicant reiterated in its closing statement its approach of first avoiding designated sites, then lessening adverse effects, before finally compensating [ER 14.5.116]. In particular, the Secretary of State acknowledges the reasons for the design changes and rationale for the utility diversions alignment [REP8-115, ExQ3_Q11.1.8]. Regarding the impact of the route selection on SSSI's, the ExA concluded that it was satisfied that the Applicant's optioneering exercise took account of the mitigation hierarchy in terms of avoidance, mitigation and compensation and that subsequent changes prior to and during the Examination have similarly followed that hierarchy, when considering SSSIs. The Secretary of State agrees. The Secretary of State also concurs with the ExA that a substantial review of route alignment options has taken place and that even if the current preferred alignment were to be amended, it would not be possible to find an alignment that did not cause equivalent or greater harm to SSSIs or other interests of equivalent or greater policy weight [ER 14.5.170]. Further consideration of the route selection and alternatives is set out in the Consideration of Alternatives section above.

Loss and damage to SSSIs, including mitigation and compensation

341. While the effects of nitrogen deposition on SSSIs during construction are noted to be unlikely due to the effects being cumulative over time and the construction period being time limited, the Secretary of State notes that in relation to operation, nitrogen deposition would result in residual adverse air quality effects on nine SSSIs, with four of these experiencing significant adverse effects after mitigation and compensation [ER 14.5.118].

342. The Secretary of State further notes the adverse effects predicted for the Shorne and Ashenbank Woods SSSI during both construction and operation with adverse effects assessed as significant being habitat loss and other non-significant adverse effects predicted to arise bring disturbance to species for which the SSSI is designated

and habitat degradation [ER 14.5.120 and REP9-120, paragraphs 8.6.9 – 8.6.14]. In terms of mitigation, the Design Principles and the Environmental Masterplan compensation form part of the suite of documents which capture the embedded mitigation to ensure that the realignment of Thong Lane to the north of the A2 is designed to avoid impacting the Shorne and Ashenbank Woods SSSI to the east [ER 14.5.121]. The proposals to compensate for adverse effects on the Shorne and Ashenbank Woods SSSI are set out in the outline LEMP and include the provision of four parcels of land for habitat creation with mitigation requirements [ER 14.5.123].

343. Noting the agreement in the final SoCG between the Applicant and NE regarding the general methodology [ER 14.5.126] and the findings of the assessment of effects of terrestrial biodiversity including SSSIs [ER 14.5.127], the Secretary of State is satisfied that there is no dispute regarding the adverse effects that would arise on several SSSIs as a result of the Proposed Development. Accordingly, the Secretary of State concurs with the ExA that the Proposed Development would result in adverse effects including significant effects to a number of SSSIs within and adjacent to the Order Limits at both construction and operational phases, loss and degradation of irreplaceable habitat and other habitat comprising the notified special features for which SSSIs are designated, and adverse effects on species comprising the notified special features for which the SSSIs are designated [ER 14.5.171 -172].

344. At the end of the Examination, the Secretary of State notes that some issues raised by Interested Parties remained outstanding. These issues included that the Proposed Development should not result in the direct loss of habitat in the Shorne and Ashenbank Woods SSSI [ER 14.5.131 and ER 14.5.133], that the Proposed Development would remove habitat replacement put in place under the Channel Tunnel Rail Link Act 1996 [ER 14.5.132] and that there is a risk of direct habitat loss through loss of wetland habitat, and habitat degradation due to dust deposition and changes in water quality and quantity which would result in the negative effect on the grazing marsh, saltmarsh, dykes and mudflats for which the South Thames Estuary and Marshes SSSI is designated [ER 14.5.133]. The Secretary of State acknowledges the Applicant's response to these concerns [ER 14.5.131 - 133] and that it proposes that the loss of SSSI habitat would be compensated with extensive woodland planting contiguous with the SSSI, enhancing connectivity with existing habitats and increasing the overall extent of planting [ER 15.4.134]

345. While recognising NE's position that it does not endorse the loss of and damage to SSSIs, which are afforded significant protection under planning policy [ER 14.5.128], the Secretary of State has had regard to the package of mitigation and compensation measures the Applicant has committed to providing [REP9A-014] and like the ExA, is satisfied that these would lead to increases in connectivity. In reaching this conclusion the Secretary of State has taken into account that NE has stated that it would help build resilience at a landscape scale but acknowledges that NE also highlighted that, although the extensive woodland planting proposed as compensation for the loss of SSSI habitat at Shorne and Ashenbank Woods SSSI would ensure overall resilience to habitats in the longer term, it will take time for this new planting to become established [ER 14.5.172].

346. The Secretary of State's consideration of the adequacy of compensation in relation to ancient woodland and nitrogen deposition compensation is set out within the Landscape and Visual Effects section below, beginning at paragraph 420.

Emerging SSSI notification at Thames Estuary and Marshes

347. The Secretary of State notes the concerns raised by NE regarding the proposed upgrading of footpath 200 due to the presence of breeding bird species sensitive to disturbance in the location of an emerging SSSI notification at Thames Estuary and Marshes. This matter remained in dispute at the end of the Examination [ER 14.5.138]. The Applicant's position is that scrub planting would offset the small amount of habitat loss and potential disturbance and places reliance on the CoCP which specifies vegetation clearance work taking place outside the nesting season from March to August wherever possible [ER 14.5.139]. However, NE considered a specific REAC commitment necessary to specify that vegetation clearance work is only undertaken between September and December [ER 14.5.140]. The Secretary of State agrees with the ExA that the control mechanisms would adequately address NE's outstanding concerns regarding the proposed footpath upgrading [ER 14.5.175]

348. NE also raised concerns regarding whether the Applicant had taken sufficient steps to safeguard nationally important habitats through avoidance as a first principle and called for REAC commitments to avoid areas of high-quality habitat for invertebrates [ER 14.5.141]. The Secretary of State notes that the Applicant maintains that it had taken all reasonable steps to avoid high-quality habitats in its outline design and stated that REAC commitment TB031 requires the use of the invertebrate heatmap developed with NE to inform detailed design, with a view to avoiding and/or minimising adverse effects as far as reasonably practicable [ER 14.5.141]. The Secretary of State notes the ExA acknowledged and agreed with NE that more refinement of avoidance could take place through detailed design with regard to high-value invertebrate habitats and notes that NE would continue to work with the Applicant to advise on the results of the additional surveys that have been undertaken. The ExA concluded that it was content that the Applicant's mitigation hierarchy and ongoing collaboration with NE identified the relevant habitats and species [ER 14.5.176]. The Secretary of State has no reason to disagree.

349. The Secretary of State notes that the ExA considered that the outstanding issues between the Applicant and NE were related to securing mechanisms and the ways in which NE would retain appropriate control for effects in the emerging SSSI notification [ER 14.5.176]. The ExA recommended changes to the retention of control for NE via S28E and s28H of Wildlife and Countryside Act 1981 ("WACA 1981"), additional wording for the oLEMP Advisory Group, and removal of some caveats in wording in certain of the Control Documents [ER 14.5.177]. With these changes, the Secretary of State, like the ExA, is content that the outstanding concerns raised by NE would be satisfactorily resolved [ER 14.5.178].

Disapplication of section 28E and 28H of the Wildlife and Countryside Act ("WACA 1981")

350. The Secretary of State notes that the Applicant's final DCO includes the disapplication of duties contained in sections 28E and 28H of the WACA 1981. Section 28E requires the Applicant to notify and seek consent from NE for any operation likely to cause damage to an SSSI before any works take place and section 28H requires the Applicant to give notice to NE before carrying out operations likely to damage any of the features of an SSSI, with timescales set out [ER 14.5.149].

351. The Applicant's justification for seeking to disapply 28E and 28H WACA 1981 is that the proposed operations affecting SSSI land are well understood, subject to appropriate mitigation and that NE and other Interested Parties have had extensive opportunity to comment on these matters during the course of the Examination [ER 14.5.147]. Further the Applicant raised concerns about the potential for delays in discharging the consenting requirements although these were not accepted by NE who were of the view that the Applicant's case was overstated and that following statutory provisions under WACA 1981, sections 28E and 28H would not hinder delivery [ER 14.5.164].

352. In support of its position, the Applicant cited some NSIP Orders where sections 28E and 28H WACA 1981 were disapplied [ER 14.5.153]. Like the ExA, the Secretary of State agrees that the decision regarding whether sections 28E and 28H WACA 1981 should be disapplied depends entirely on the specific facts of each scheme [ER 14.5.155].

353. The Secretary of State notes that this was a matter which remained in dispute with NE who remained opposed to the disapplication of sections 28E and 28H WACA 1981, because these duties would be crucial for environmental conservation. The crux of the issue is that NE considered that the application documents did not provide sufficient certainty about the works that are proposed for the nature and scale of the adverse effects to be fully recognised or certainty regarding avoidance, mitigation and compensation [ER 14.5.146 and ER 14.5.159] and that its responsibilities under WACA 1981 should only ever be disapplied in exceptional circumstances [ER 14.5.157].

354. The Secretary of State recognises NE's concern that to disapply sections 28E and 28H WACA 1981 when there is an absence of clarity regarding actions affecting SSSIs, may potentially enable damaging operations to a SSSI in breach of policy [ER 14.5.179]. For the reasons set out at ER 14.5.180, the Secretary of State agrees with the ExA's conclusion that disapplication of these sections would result in NE not having control over works on this land if it were later designated. Like the ExA the Secretary of State does not agree that the provisions of sections 28E, 28H and 28L WACA 1981 would hinder and frustrate the delivery of the Proposed Development [ER 14.5.181] and considers that the safe and policy compliant course of action is to retain the control for NE [ER 14.5.182]. The Secretary of State also notes and agrees with the amendment made by the ExA to article 53(1)(c) (disapplication of legislative provisions, etc.) of the DCO [ER 23.4.4]. The Secretary of State has amended the final Consents and Agreements Position Statement to delete the reference to consents in SSSIs, in paragraph 4.1.2b of REP9-011 [ER 14.5.182 and ER 23.6.25].

SSSIs Conclusion

355. The Secretary of State agrees with the ExA that the Proposed Development would result in adverse effects on SSSIs [ER 14.6.5] which would fail the policy tests set out at paragraph 5.29 of the NPSNN and paragraph 5.3.11 of NPS EN-1 which state that consent should not normally be granted for a Proposed Development that would have an adverse effect on a SSSI. Where an adverse effect is likely, an exception should only be made where the benefits of the development at this site clearly outweigh both the impacts that it is likely to have on the features of the site that

make it of special scientific interest, and any broader impacts on the national network of SSSIs [ER 21.4.5].

356. The ExA concluded that the substantial benefits arising from the development of the LTC at the relevant individual designated sites (because there is no reasonable alternative alignment that could avoid the harm caused) clearly outweighs the harm to these sites. In reaching this view, it is important to record that the harm caused is significant harm at the sites' individual locations and scale, but that substantial mitigation and (in respect of irreplaceable features) compensation has been provided, is secured and is acceptable. The ExA judges the effects of the harm in terms of broader impacts on the national network of SSSIs to be limited in scope. [ER 21.4.6]. The Secretary of State agrees with this conclusion.

Green Bridges

357. The Secretary of State notes that the Applicant proposes to provide seven mixed-use multi-functional green bridges at Brewers Road; Thong Lane South; Thong Lane North; Muckingford Road; Hoford Road; Green Lane; and North Road as part of the Proposed Development [ER 14.5.187]. The Applicant states that the overall purpose of these bridges is to mitigate the adverse effects arising from fragmentation on terrestrial biodiversity receptors during both construction and operation stages as major roads can be a barrier to wildlife [ER 14.5.184].

358. The proposed locations and design principles of the green bridges are set out in the Design Principles document and secured by requirement 3 in the DCO [ER 14.5.185]. The Applicant intends that the detailed design of these bridges would be developed further post-consent with input from Multi—disciplinary Workshops and input from stakeholders including the National Highways Design Review Panel [ER 14.5.186]. In this section, the Secretary of State considers green bridge and their effect on proposed ecological connectivity. The Secretary of State's consideration of the role of green bridges with regard to landscape mitigation is in the Landscape and Visual Effects section.

Designing green bridges for biodiversity

359. The Secretary of State notes the two inter-related biodiversity issues in relation to the design of green bridges, which remained unresolved at the end of the Examination which are the extent to which green bridge designs would meet the biodiversity function; and the width of green bridges [ER 14.5.189]. These included concerns raised by NE regarding the green bridges' design and effectiveness in providing landscape scale connectivity for people and wildlife, specifically with regards to the Brewers Road Green Bridge and Thong Lane Green Bridge [ER 14.5.191] and the likely effectiveness of the green bridges in achieving their stated design principles because they did not adhere to the minimum width, and width-to-length ratios within the various good practice guidance documents referred to by the Applicant [ER 14.5.192 – 14.5.193].

360. The Secretary of State notes the support for the principle of the creation of green bridges from NE, but which stated that their design should focus on reducing the impact of increased severance for both wildlife and recreational users [ER 14.5.193], and other Interested Parties who raised concerns regarding the green bridge

functionality for wildlife [ER 14.5.198]. She also acknowledges the concerns raised regarding their design and multi-functional use. These concerns included that the green bridges would offer poor habitat connectivity, particularly for bats where KCC consider that the designs would have limited potential to provide commuting links, and that roads on the green bridges would provide additional hazards for fauna [ER 14.5.195 – 14.5.196]; they had not been designed for wildlife and would not be suitable for the level of mitigation required for the project [ER 14.5.197]; they should be for the exclusive use of fauna because of the scale of fragmentation of habitat and should not be multi-functional because much of the wildlife expected to use the green bridges is sensitive to human disturbance and activity [ER 14.5.198]; and there is a lack of evidence to demonstrate the success of green bridges and they would not achieve functionally for wildlife [ER 14.5.199].

361. The Secretary of State has considered the Applicant's response to these points [ER 14.5.201 – 14.5.204] and has had regard to the inclusion of a requirement to plant both sides of the Brewers Lane and Thong Lane South green bridges, which NE considered would help reduce the adverse effects of severance for wildlife [ER 14.5.200]. The Secretary of State notes that the ExA agreed with the Applicant that the proposed green bridges are important and relevant when it comes to good design. However, she has also considered NE's overall concerns that local roads would be a dominant feature on the green bridges and that that minimum widths of "green" for the bridges would not be delivered meaning they would not meet the minimum parameters needed for effective functionality [ER 14.5.192 – 15.5.193]. It is noted that the Applicant acknowledged that the severance at the Thong Lane South Green Bridge would require small terrestrial mammals to cross the road to reach habitats at the far side [ER 14.5.204]. The ExA did not consider that from the perspective of meeting the good design tests, when considering biodiversity, that the Applicant had maximised opportunities for building in biodiversity within the Proposed Development [ER 14.5.220]. Although the Secretary of State acknowledges the concerns raised regarding the effectiveness of the design of the green bridges in relation to commuting bats [ER 14.5.195 and ER 14.5.199], she notes that protected species monitoring is proposed in relation to bats as part of the draft European Protected Species licence applications submitted in support of the DCO, and that NE supports the proposed approach towards the mitigation strategy in support of the draft licence and issued a Letter of No Impediment for bats [ER 14.5.205]. Accordingly, the Secretary of State agrees with the ExA that the robust monitoring regime together with agreed remedial actions as summarised at ER 14.5.206, is satisfactory in addressing connectivity issues in relation to bats [ER 14.5.221].

362. Despite this, the Secretary of State agrees with the ExA that the Applicant has not maximised opportunities for biodiversity within the design of the green bridges, and, in line with paragraph 5.33 of the NPSNN, considers that this weighs against the development.

Width of Green Bridges

363. The Secretary of State notes the representations made by various Interested Parties who considered the green bridges to be too narrow and maintained they should be wider and/or that their centre should be wider and disagreement with the Applicant's reasons against widening [ER 14.5.207 – 14.5.210]. The Secretary of State

notes that the adequacy of the width of the green bridges was an issue that remained outstanding at the end of the Examination [ER 14.5.189].

364. While the Secretary of State agrees that wider green bridges would benefit the functionality for wildlife if the planting corridors were more substantial and has taken into account the advice provided by NE which states that the width of the green bridges should align more closely with the minimum width, and width-to-length ratios set out in various good practice guidance [ER 14.5.218]. She recognises the significant technical and environmental constraints that would need to be overcome for this to happen. These constraints are set out at [ER 14.5.207] and summarised at [ER 14.5.219] and include the effects that would arise regarding land rights, utility diversions, the proximity to, and adverse effect on designated sites and habitats and implications on the delivery of the programme, including road closures and value for money considerations. Although the Secretary of State notes that some Interested Parties considered these issues to be surmountable [ER 14.5.209 – 14.5.210], she is satisfied with the Applicant's reasoning for not widening the green bridges and from a biodiversity perspective, agrees with the ExA that the green bridge widths should remain as proposed. The ExA concluded that although the green corridors would be narrower than recommended good practice, they would contribute in some way towards minimising habitat fragmentation in compliance with paragraph 5.36 of the NPNN [ER 14.5.219]. The Secretary of State agrees.

Securing mechanisms in connection with green bridges in the DCO and Control Documents

365. The Secretary of State notes the concerns expressed by NE regarding the nature and scale of matters which the Applicant proposed should be deferred to the post-consent stage and how these would be robustly secured. In particular, she notes that NE found the wording used by the Applicant in the Control Documents and the securing mechanisms to be ambiguous and that this could lead to a degree of uncertainty regarding the ecological and landscape mitigation measures that would be delivered post consent [REP9A-122, paragraph 3.14.7] or how stakeholders could influence matters within their remit post-consent [ER 14.5.212].

366. As a minimum, NE recommended wording in the Design Principles document be amended to address this uncertainty where it felt it applied to green bridges [REP1-262, paragraphs 3.1.9 to 3.1.10].

367. With regard to the overall good design for green bridges, including mitigation for adverse biodiversity effects, the ExA recognised the Applicant's need for flexibility and the reliance on Control Documents which are secured in the DCO. The ExA concluded that, while the deferral to post-consent of detailed design gave some Interested Parties cause for concern, some weight should be placed on the secured commitment to the Multi-disciplinary Workshops [ER 14.5.222]. The Secretary of State concurs.

368. The Secretary of State acknowledges that with regard to the use of only native species on green bridges, while noting that it would only apply to Thong Lane North Green Bridge, the ExA was of the view that this had not been accomplished in the final version of the Design Principles document. Accordingly, the ExA recommended that the Secretary of State should ask the Applicant to make a minor adjustment to the wording in the Design Principles document to state at LE2.11: after 'Only used on

Thong Lane Heavyweight Green Bridge” ADD “where non-native species are excluded’ [ER 14.5.224 – 14.5.225 and 23.6.22]. The Secretary of State concurs and in the DCO has required the Applicant to make this change.

Other Biodiversity Matters

Protected/notable Habitats and Species

Surveys

369. The Secretary of State notes that surveys for a number of protected species and habitats were undertaken for the Proposed Development and a summary of the survey outcomes can be found in section 8.4 of Chapter 8 of the ES [ER 14.5.228].

370. The Secretary of State acknowledges the concerns raised by various Interested Parties regarding the adequacy of the surveys undertaken by the Applicant. Particular concerns were raised as to whether sufficient survey work had been undertaken, and whether habitats and species had been fully covered to assess the impact. [ER 14.5.229]. She notes that by the end of the Examination, NE agreed with the Applicant’s ecological survey methodology relating to terrestrial invertebrates and the precautionary principle approach adopted by the Applicant where uncertainties exist [ER 14.5.230]. The ExA was satisfied that, notwithstanding the amount of time that has elapsed since the surveys were undertaken, the Applicant had adequately assessed the residual effects of the Proposed Development on protected species and habitats or those of principal importance using appropriate guidelines. Further, it noted that requirement 7 of the recommended Order requires that final pre-construction survey work be undertaken to establish whether European or nationally protected species are present on any of the land affected or likely to be affected by that part of the of the Proposed Development [ER 14.5.240]. The Secretary of State agrees with this conclusion.

Mitigation/Compensation

371. The Secretary of State notes that the Applicant considers that, aside from terrestrial invertebrates, there would be no significant impacts on protected species. However, the loss of habitat used by terrestrial invertebrates and mortality of terrestrial invertebrates assemblages is identified as a significant impact within the ES. Additionally, the Applicant identifies that there would be temporary adverse effects for habitats and species until newly created habitats become sufficiently established, and that in some circumstances, this would take several years [ER 14.5.239]. The mitigation measures proposed by the Applicant to reduce the adverse impacts on protected species are set out in section 8.5 of Chapter 8 of the ES. These include measures specific for individual species, and measures to minimise fragmentation and maintain connectivity, mammal passages, gully pots, fencing, false cuttings, timing of works, translocation and the creation of new habitats [ER 14.5.234]. It is noted that the Applicant states that some aspects of the habitat creation proposals would provide long-term benefits to some ecological receptors [ER 14.5.238].

372. The Secretary of State notes that it is proposed that essential mitigation measures for both barn owl and water vole include alternative breeding sites / the translocation to receptor sites to be established through an offsite reintroduction project supported by the Essex Wildlife Trust [ER 14.5.236]. As an agreement between

the Applicant and Essex Wildlife Trust had not been completed by the end of the Examination, the ExA recommended that the Secretary of State satisfy herself that agreements had subsequently been reached to secure this essential mitigation prior to reaching a decision [ER 14.5.237]. In her consultation letter dated 28 March 2024, the Secretary of State asked Essex Wildlife Trust whether an agreement had been reached. In its response dated 3 April 2024, Essex Wildlife Trust confirmed that the legal agreement covering the re-introduction of water voles was in its final stages and that regarding the barn owl nest box project, it was awaiting a Memorandum of Understanding from the Applicant. In a further update dated 23 July 2024, the Applicant set out that an agreement had been reached on securing the delivery of the water vole habitat, although the agreement regarding the barn owl nest box project was currently under discussion. The Secretary of State notes that in the Applicant's response dated 12 November 2024, an agreement on this matter had been concluded with Essex Wildlife Trust.

373. The Secretary of State acknowledges the various concerns raised in relation to the application of the mitigation hierarchy and whether the proposed mitigation measures offered sufficient protection for species and their habitats [ER 14.5.232 – 14.5.233]. The Secretary of State agrees with the ExA that, taking into account the proposed mitigation measures and the letters of no impediment issued by NE for bats, great crested-newt, dormouse, badger and water vole [ER 14.5.235], the Applicant has taken measures, so far as is reasonably practicable, to protect species and habitats in compliance with paragraph 5.35 of the NPSNN. However, she notes that a significant impact on terrestrial invertebrates and temporary harm to other species and habitats would remain. Like the ExA, while the Secretary of State welcomes the proposed mitigation and compensation measures, she considers it would take a significant amount of time for some of the habitats to mature or reach a favourable condition to provide compensation or for protected species populations to recover from disturbance [ER 14.5.241].

374. The Secretary of State notes that both the NPSNN and NPS EN-1 (paragraph 5.3.17) state that consent should be refused where harm to the habitats or species and their habitats would result unless the benefits of the development (including need) clearly outweigh that harm [ER 14.5.242]. The ExA was satisfied that there was no reasonable alternative alignment that could avoid the harm caused and concluded that the need case for the Proposed Development is met and the benefits arising from the development as summarised in ER 21.5.17 clearly outweigh the harm. The Secretary of State agrees.

Non-Designated Sites

375. The Secretary of State notes that the Proposed Development would result in a temporary loss of habitat at the nine Local Wildlife Sites set out at [ER 14.5.243] and the expectation that, following completion of the proposed works, it would take two to five years for these habitats to re-establish [ER 14.5.244]. In addition, the five Local Wildlife Sites set out at [ER 14.5.245] are predicted to experience significant adverse impacts during construction, including Low Street Pit Local Wildlife Site where habitat loss would comprise of 3.62ha (99%) of the site and Blackshots Nature Area Local Wildlife Site where the impact would be 12.34ha (68%) of habitats present [ER 14.5.246]. The proposed compensation measures are set out in section 8.5 of ES Chapter 8. The Applicant set out that the project design has had due regard to impacts

on local wildlife sites and to compensate for losses, new habitats would be created [ER 14.5.248]. The Secretary of State notes that the Applicant considers that the proposed mitigation and compensation measures would ensure the role that these sites play in meeting overall biodiversity targets are maintained and acknowledges that no likely significant effects are predicted on Local Wildlife Sites during operation [ER 14.5.249].

376. Like the ExA, the Secretary of State is satisfied that the Applicant has sought to minimise impacts where possible and compensate losses to seek to retain the function of these sites. While the Secretary of State agrees with the ExA that there would be an adverse effect, both temporary and permanent on Local Wildlife Sites, she also acknowledges that paragraph 5.31 of the NPSNN states that given the need for new infrastructure, local designations should not be used as a reason to refuse development consent but should be given due consideration [ER 14.5.250].

Role and Governance of the Landscape and Ecology Management Plan ('LEMP') Advisory Group

377. The Secretary of State notes that there are three matters outstanding at the end of the Examination regarding the role and governance of the LEMP Advisory Group and relate to wording in the terms of reference for the Advisory Group. The differences concern dispute resolution, whether the LEMP Advisory Group should be responsible for agreeing species and species groups monitoring requirements and whether the PoTLL should have a consultation role on the LEMP, and a place on the LEMP Advisory Group [ER 14.5.251].

Dispute Resolution

378. The Secretary of State notes the concerns raised by NE regarding the proposed dispute resolution process, particularly that significant detail would be deferred to the post-consent stage [ER 14.5.255], meaning it was likely that there would be areas of disagreement for which a resolution may not always be possible. It also considered that the proposed dispute resolution mechanism was not appropriate. The Secretary of State recognises NE's view that disputes should be deferred to the Secretary of State, or an independent expert agreed by all parties [ER 14.5.253]. Although the Secretary of State acknowledges that the Applicant's considered the proposed dispute resolution process to be adequate for the reasons summarised at ER 14.5.254, like the ExA, she finds the Applicant's position lacks justification and reasoning and does not fully address NE's concerns because the Secretary of State's approval process does not equate to dispute resolution [ER 14.5.256].

379. The ExA recommended that the Secretary of State asked the Applicant to replace the second sentence in paragraph 1.6.1 of the LEMP Advisory Group Terms of Reference as summarised at ER 14.5.256 and 23.6.21, to ensure that in the event of a dispute, this would be deferred to the Secretary of State or an independent expert agreed by all parties in line with DCO Article 64 (Arbitration). With this revised wording, the ExA was satisfied that any necessary dispute resolution would be clearly defined as a separate process from the post-consent approval processes involving the Secretary of State and this change is reflected in paragraph 1.6.1 [ER 14.5.257]. The Secretary of State agrees with the principle articulated by the ExA but does not consider it appropriate that she could be involved in both dispute resolution and the

post-consent approval processes. Accordingly, the reference to the Secretary of State's involvement in dispute resolution has been omitted.

Species and Species Groups Monitoring Requirements

380. At the end of the Examination, the Secretary of State notes that NE remained concerned that the terms of reference should include wording regarding agreeing the species/species groups and monitoring protocols as part of the holistic indicators of a successful approach. The Applicant had not included NE's suggested wording. NE considered that there was insufficient certainty that as part of the holistic indicators of a successful approach, looking at species as well as habitats, would be secured post-consent. Accordingly, NE proposed that the additional wording set out at [ER 14.5.258] should be included in the LEMP Advisory Group's terms of reference to ensure that a much clearer commitment was provided by the Applicant [ER 14.5.258], together with the additional wording set out at ER 14.5.259 for Section 4.1.14 of the oLEMP.

381. The Secretary of State acknowledges the weight given by the ExA to the policy importance of the success of mitigation and compensatory habitats, when considering the role of the LEMP Advisory Group in setting species and species group monitoring requirements. Like the ExA, the Secretary of State agrees with NE that there should be a broad base of success indicators to address habitat/ecosystem functional objectives [ER 14.5.262] and finds paragraph 4.2.3 of the oLEMP is insufficient because it does not set out responsibility for setting the monitoring requirements, and the commitment to review and consider key species is caveated by 'if necessary' [ER 14.5.263]. The ExA recommended that the additional wording proposed by NE as set out at [ER 14.5.258] and [ER 14.5.259] should be included at point 4.1.14i in the oLEMP and point 1.4.4h in the LEMP Terms of Reference [ER 14.5.265 and 23.6.21] for the reasons summarised by the ExA at [ER 14.5.264]. The Secretary of State agrees with the ExA's conclusion, and is content that with the two additions outlined above, the role of all the parties that form the LEMP Advisory Group would be clear [ER 14.5.264].

Roles for Port of Tilbury London Limited ("PoTLL")

382. The Secretary of State notes that PoTLL maintained its wish to be identified in the Order as a consultee in respect of the LEMP, and to be a member of the LEMP Advisory Group to secure its involvement in ecological design and management in the area. However, this was opposed by the Applicant, who considered that engagement with PoTLL should instead occur through the framework of the legal agreement rather than including them on the LEMP Advisory Group [ER 14.5.266]. The Secretary of State notes that the ExA broadly supported the Applicant's view, noting that if landowner interests more generally are included in the LEMP Advisory Group, then the group will become very large indeed and cease to be the 'technical reference' body that it is intended to be [ER 23.4.16]. The Secretary of State concurs.

Terms of Reference for the Detail Design Multi-Disciplinary Workshop

383. The Secretary of State notes the concerns raised by NE regarding a more collaborative approach, with greater emphasis on reaching agreement and consensus. Accordingly, NE requested that the Multi-disciplinary Workshop Terms of Reference should include a commitment from the Applicant to publish and share how it had taken into account stakeholder feedback, provide a detailed narrative where this

was not possible, and supply details of how areas of disagreement will be resolved through a clear dispute resolution process [ER 14.5.269].

384. While the Secretary of State acknowledges NE's concerns regarding formal stakeholder comments being treated as advisory at the Multi-Disciplinary Workshops [ER 14.5.268], she agrees with the ExA that this is reasonable for the role undertaken by the Multi-Disciplinary Workshop, particularly as the feedback would be used to inform the independent design reviews which would be undertaken by the Applicant's Design Review Panel [ER 14.5.271]. The ExA concluded that it would be reasonable for the Applicant to provide information regarding how the stakeholder feedback has been incorporated into the evolution of the detail design, and to set out reasons why not, if not [ER 14.5.272]. Accordingly, the ExA recommended that the Secretary of State should request the Applicant to add the wording set out at ER 14.5.273, as a new sub-sub paragraph at D.1.4.a.v in the Multi-Disciplinary Workshop Terms of Reference. The Secretary of State agrees and requires the Applicant to make this change.

385. Regarding the request by NE for details of how areas of disagreement will be resolved through a clear dispute resolution process [ER 14.5.269], the ExA recommended that a new paragraph should be inserted at D.1.6 in the final version of the Design Principles [ER 14.5.274] containing the wording set out at [ER 14.5.275]. The Secretary of State concurs with the ExA but, as above in the Dispute Resolution section, does not consider that she should be involved in the dispute resolution process and requires the Applicant to make the amendment subject to this change.

Biodiversity Net Gain ('BNG')

386. The Secretary of State notes that the Applicant used DEFRA Biodiversity Metric 3.1 Calculation Tool, to determine the change in biodiversity units [ER 14.3.16]. The overall change in biodiversity units the Proposed Development is predicted to be [ER 14.5.278]:

- +7% for area-based habitats.
- -11% for hedgerow units; and
- -7% for river units.

387. The Secretary of State acknowledges the concerns raised by various Councils and Interested Parties regarding the inadequacy of the condition assessments and use of an outdated version of DEFRA biodiversity metric [ER 14.5.280]. Noting that this was a matter agreed with NE at the end of the Examination [ER 14.5.277], and that the Applicant considered that the assumptions are precautionary to avoid potentially under-valuing the baseline, resulting in a realistic worst-case scenario [ER 14.5.287], the Secretary of State agrees with the ExA that the Applicant's approach to calculating and providing BNG is satisfactory [ER 14.5.288 and ER 14.6.3]. In reaching this conclusion, like the ExA, the Secretary of State has taken into account the Applicant's commitment to run the Metric again after detailed design is finalised, as agreed with NE in the SoCG [ER 14.5.288 and ER 14.6.3].

388. The Secretary of State notes the representations regarding the fact that for a project of this magnitude, the Proposed Development should deliver across all habitat types and achieve BNG of at least 10% [ER 14.5.280 – 14.5.281]. The Secretary of

State is aware that it is not currently a statutory requirement for NSIPs to achieve BNG [ER 14.5.289] and that, consistent with recent case law, she should not reduce the weight she would otherwise give to BNG or biodiversity loss by reference to the future target. While the Secretary of State recognises the landscape scale habitat creation that would be delivered, subject to detail design and the Applicant's case that there is potential for Metric performance improvement and that wider benefits would develop over time in terms of the landscape scale green infrastructure which would be delivered, she agrees with the ExA that BNG loss weighs against the Proposed Development [ER 14.5.288] albeit she has not reached her conclusion by reference to the future BNG target.

Biodiversity Mitigation, Compensation and Enhancement

389. The Secretary of State notes the approach adopted by the Applicant in relation to mitigation, compensation and enhancement as summarised at ER 14.5.290 to ER 14.5.296. In particular, the Secretary of State acknowledges that the design for the Proposed Development followed the mitigation hierarchy to first avoid, then lessen before finally compensating for adverse effects [ER 14.5.292]; the landscape scale approach adopted towards to habitat creation which would deliver multi-functional habitats providing mitigation and compensation [ER 14.5.294]; and the Applicant's commitment to monitoring and management in perpetuity of the new habitats to maintain their quality and ecological functionality as secured in the oLEMP [ER 14.5.296].

390. The Secretary of State agrees with the ExA regarding the contribution that would be made to ecological resilience and reduction of fragmentation from the proposed landscape scale approach as secured by the draft Order and various Control Documents. Further, like the ExA, she places weight on NE's recognition of the contribution that the mitigation and compensation would make [ER 14.5.297 and 14.5.300] and welcomes the secured commitment to management in perpetuity [ER 14.5.301]. The ExA acknowledged that whilst a number of Interested Parties consider the net gain provision to be too low, the Applicant anticipates an improvement to the BNG provision and that the habitats delivered would be greater in area and extent than those eligible to be considered in the BNG Metric [ER 14.5.300].

Marine Biodiversity

391. The Secretary of State notes that the Applicant's assessment of effects of construction and operation of the Proposed Development together with the proposed mitigation measures is contained in Chapter 9 of the ES [ER 14.5.303] and this topic is covered further in the HRA. The study area covered three European sites of marine biodiversity importance, namely the Southern North Sea Special Area of Conservation ("SAC"), Thames Estuary and Marshes Ramsar site, the Thames Estuary and Marshes Special SPA, and a further six nationally designated sites, including SSSIs and the Swanscombe Marine Conservation Zone [ER 14.4.1]. The Secretary notes the construction effects summarised at [ER 14.4.2 – 14.4.5], and that following the implementation of mitigation, the Applicant predicted no likely effects for marine biodiversity during construction [ER 14.4.7] and during operation [ER 14.4.9].

392. Although several concerns were raised regarding impacts to marine habitats [ER 14.5.302], the Secretary of State notes that no matters remained outstanding at the

end of the Examination, with the final SoCGs with the MMO and the EA showing all matters relating to methodology, monitoring, assessment of potential effects and proposed mitigation as agreed [ER 14.5.305]. The Secretary of State agrees with the ExA that the Applicant has appropriately considered the potential effects of the Proposed Development on sites of nature conservation importance and has sought to avoid significant harm to marine biodiversity and geological interest [ER 14.5.306]. Further, she is content that the Applicant consulted with the MMO and that the requirements of paragraph 4.52 of the NPSNN are therefore satisfied [ER 14.5.306]. The Secretary of State is content that the proposed mitigation measures are sufficient to ensure there would be no adverse effects on sites of nature conservation, importance or protected species in marine areas [ER 14.5.307] and overall, like the ExA, is satisfied that there would be no significant adverse effects of marine biodiversity [ER 14.6.11, eleventh indent].

The Secretary of State's Conclusion on Biodiversity

393. The Secretary of State agrees with the ExA that the Applicant's biodiversity assessment as set out in ES Chapter 8 and the ES Addendum (version) 10 provides sufficient information to understand the effects of the Proposed Development on biodiversity and ecological receptors, as required by the EIA Regulations and in line with the requirements of paragraph 5.22 of the NPSNN, and that the Applicant's air quality assessment has assessed the effects of nitrogen deposition on habitats and designated sites and protected species in accordance with paragraph 5.3 of the NPSNN [ER 14.6.1].

394. The Secretary of State agrees with the ExA that the Applicant has taken opportunities to conserve and enhance biodiversity, supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks in compliance with paragraphs 5.20, 5.22 and 5.24 of the NPSNN and notes that much of this would be delivered through compensation measures [ER 14.6.2 and ER 14.6.11].

395. With regard to ancient woodland and trees, the Secretary of State agrees with the ExA that the Proposed Development would result in the loss and deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees and is satisfied that the Applicant has set out the reason for this loss [ER 14.6.4]. As the loss and deterioration would fail the requirements of paragraph 5.32 of the NPSNN, the Secretary of State weighs the balance of this loss against the national need for and benefits of the Proposed Development in the Planning Balance section [ER 14.6.5].

396. The Secretary of State agrees with the ExA that appropriate mitigation measures are included for the Proposed Development in accordance with paragraph 5.36 of the NPSNN. While the Secretary of State notes that much of the detailed design would be agreed post-consent, she is satisfied that the incorporation of the suggested amendments of certain role descriptions as discussed above would ensure that NE's statutory advice would endure, and that mitigation would therefore be delivered in accordance with paragraph 5.33 of the NPSNN [ER 14.6.7].

397. The ExA concluded that the Proposed Development would incorporate some beneficial biodiversity which would meet the good design test set out in paragraph

5.33 of the NPSNN. However, in cases such as the green bridges, biodiversity opportunities have not been maximised [ER 14.6.8]. The Secretary of State agrees.

398. Like the ExA the Secretary of State notes the concerns raised, in particular by NE, regarding securing mechanisms in some of the Control Documents and the proposed disapplication of sections of the WACA 1981 which she considers further above. The Secretary of State agrees with the recommended changes and with these changes effected, agrees with the ExA that appropriate mitigation and compensation measures would be adequately secured through the documents which are certified under Schedule 16 of the draft Order in accordance with paragraphs 5.37 and 5.38 of the NPSNN [ER 14.6.10].

399. Overall, like the ExA, the Secretary of State is content that reasonable alternatives have been considered [ER 14.6.10] and is satisfied that the Applicant's assessment of the impact of the Proposed Development on biodiversity is adequate [ER 14.5.11, first bullet]. The ExA concluded that the loss and harm to irreplaceable habitats including ancient woodland, the significant adverse effects on SSSIs, and the harm to other habitats or species and their habitats, including terrestrial invertebrates, carried very great negative weight against the making of the Order [ER 21.2.89]. The Secretary of State agrees with this conclusion.

Landscape and Visual Effects

400. The Secretary of State notes the ExA's consideration of this matter in Chapter 15 of the Report. The Applicant's assessment of the impacts of the Proposed Development relating to landscape and visual impacts are set out in Chapter 7 of their Environmental Statement [ER 15.3.1]. The Applicant set out that this assessment has been prepared in accordance with the requirements of DMRB LA 107: Landscape and Visual Effects, whilst also considering other relevant guidance, including *Guidelines for Landscape and Visual Impact Assessment (Third Edition 2013)* ("GLVIA3") [ER 15.3.4]. The Applicant set out that the establishment of the baseline involved consultation with statutory bodies, local authorities, and other organisations such as Historic England ("HE"), NE ("NE") and Kent Downs Area of Outstanding Natural Beauty Unit ("KDAONB Unit") [ER 15.3.5].

401. During the course of the Examination (on 22 November 2023), all Areas of Outstanding Natural Beauty ("AONBs") were renamed National Landscapes. In view of the advanced stage of the Examination when this change occurred, and in the interest of maintaining consistency with the submitted Examination material, the ExA opted to continue to use the term AONB. Relevant Interested Parties, including the Kent Downs National Landscape Unit (formerly the KDAONB Unit) and GBC have issued similar statements confirming adoption of this approach [ER 15.1.2]. The Secretary of State has also decided to adopt this approach.

402. The ExA identified and examined the following main issues [ER 15.4.4]:

- The effect of the Proposed Development on the West Kent Downs LCA 1A in the AONB
- The effect of utility diversions in the AONB

- The effect of woodland compensation impacts on the landscape character of the AONB, with specific regard to Park Pale, Blue Bell Hill and Burham
- Implications of the amendment to section 85 of the Countryside and Rights of Way Act 2000 (“CRoW Act”)
- The effectiveness of green bridges as a landscape and visual impact mitigation measure in the AONB
- Lighting impacts
- Tilbury Viaduct
- Overall Landscape and Visual Impact.

Effect on the West Kent Downs LCA 1A

403. The Secretary of State notes the representations made by the KDAONB Unit, GBC and NE regarding the underassessment of effects on the West Downs LCA 1A and its Local Land Character Assessment (“LLCA”) sub areas Cobham and Shorne in the AONB. The Interested Parties asserted that the Applicant’s assessed level of impacts for the Cobham LLCA have been downgraded significantly from the Landscape and Visual Impact Assessment (“LVIA”) that accompanied the former (but withdrawn) 2020 Lower Thames Crossing DCO application, despite no significant change in either the application scheme, the susceptibility of the receptor, or the value of the landscape in this location. Those Interested Parties submitted that the effects had been reduced by the Applicant from “significant” to “not significant” in the Opening (Year 1) and Design (Year 15) Years, as a result of the downgrading of the sensitivity of the receptor from “very high” to “high,” and downgrading the magnitude of the effect from “moderate/minor adverse” to “negligible adverse,” resulting in an overall conclusion of “slight” significance of effect [ER 15.4.5].

404. The Applicant’s response was that there have been several design changes, and further development of the Proposed Development’s definition since the withdrawal of the 2020 DCO application, in line with the GLVIA3, and that the current LVIA reflects those design changes and a greater level of certainty around the likely effects of the Proposed Development. The Applicant also stated that the definition of baseline landscape and visual conditions had also been critically reviewed and updated since October 2020 [ER 15.4.6 – 15.4.7]. The sensitivity of the Cobham LLCA receptor was reduced by the Applicant from “very high” to “high” in line with landscape sensitivity criteria in DMRB LA 107 [ER 15.4.8]. The Applicant’s final position was that combining the sub areas of Cobham LLCA and Shorne LLCA into an assessment of the overarching West Kent Downs LCA 1A, the Proposed Development would have a large adverse significance of effect in the Opening Year, and a moderate adverse significance of effect in the Design Year, which remains material to decision making. On this basis, the Applicant disagreed with the main interested parties that the significance of effects had been underassessed or downgraded [ER 15.4.9].

405. Interested Parties argued that in their view, the downgrading of the Cobham sub area’s sensitivity was a direct result of the Applicant’s altering of West Kent Downs LCA sub boundaries, and not design changes as previously suggested by the Applicant. The KDAONB Unit stated that it had only recently undertaken a landscape character area boundary review, and it was not felt necessary to review in this location [ER 15.4.13 and EV-084, pages 29-30].

406. The ExA accepted that it is a good practice for an Applicant to review and update earlier assessments for new applications and accepts the Applicant's position that it is not bound by landscape character assessments published and adopted by competent authorities, and that it made a conscious decision to adopt a different boundary based upon fieldwork and professional judgement [ER 15.4.21]. However, it concluded that the KDAONB Unit's published boundaries for the Cobham and Shore LLCAs are a more accurate reflection of the landscape character in this part of the AONB, with the substantial wooded central reservation along the section of the A2 between Cobham and Shorne operating as a coherent boundary between the two sub areas [ER 15.4.22]. The central tree belt forms an important backdrop to both Cobham and Shorne along the A2, and it is not reflected in the Applicant's revision of the boundary between the two sub areas or its assessment [ER 15.4.23].

407. The Applicant also produced a landscape assessment for the West Kent Downs LLCA sub areas Cobham and Shorne based on the KDAONB boundaries. Based on this the sub area Cobham boundary would be assessed as [ER 15.4.16]:

- Large adverse during construction rather than the currently reported moderate adverse.
- Large adverse in the Opening Year rather than the currently reported slight adverse.
- Moderate adverse in the Design Year rather than the currently reported slight adverse.

408. For the Shorne LLCA, the Applicant reported the significance of effect based on the published sub area boundary would be 'large' during construction rather than the currently reported 'very large', due to the reduced extent of construction activity within the Shorne LLCA. The significance of effect levels during the Opening and Design Years on the sub area Shorne LLCA would not change though regardless of which of the two boundaries are used and are 'large adverse' and 'moderate adverse' respectively [ER 5.4.17].

409. The ExA agreed with Interested Parties that the landscape impact assessment of the sub area Cobham LLCA was influenced by the Applicant's decision to adopt a different boundary to that published by the KDAONB Unit, such that the impacts of the Proposed Development were largely recorded as indirect rather than direct. The ExA therefore, concluded that the impacts on the Cobham LLCA were underassessed by the Applicant in Chapter 7 of the ES [ER 15.4.25].

410. The Applicant considered that despite the worsening of effects on the sub area Cobham LLCA if the KDAONB boundaries are applied, the combined effect for the West Kent Downs LCA 1A would not change from those reported in Chapter 7 of the ES, and therefore the Proposed Development would have a large adverse significance of effect in the Opening Year, and a moderate adverse effect in the Design Year [ER 15.4.17]. The ExA, whilst considering the Applicant's assessment methodology for appraising the impacts to the two West Kent Downs sub area LLCAs to be flawed, were satisfied that the Applicant had identified the worst-case effects likely be experienced by the West Kent Downs LCA 1A receptor within the AONB had been adequately reported, and are therefore material to the decision-making process [ER 15.4.26]. The Secretary of State agrees.

The effect of utility diversions in the AONB

411. The KDAONB Unit asserted that much of the harm to the AONB arises as a result of utility diversions, and that alternative options for relocating utilities which would have less impact have been too readily discounted (such as under existing highways infrastructure). Relocation of utilities adjacent to the A2 carriageway results in an inability to provide replacement planting along the utility corridor, thus further opening up the landscape and reducing the current wooded context of the highways corridor. GBC raised similar concerns, arguing that the retention of open areas for utilities would exacerbate the apparent width and visibility of the road [ER 15.4.27].

412. The Applicant explained that the requirement for utility diversions is primarily a consequence of the proposed route alignment for the road and its supporting infrastructure. It further added that the proposed realignment of the existing utilities largely remains within the existing infrastructure corridor in to minimise further encroachment into the AONB, moderating any harm by combining the development with the existing road and rail infrastructure. The Applicant states that the Proposed Development has sought to avoid, where possible, work within the AONB, but where works are required, the Applicant has demonstrated the lack of deliverable or feasible alternatives [ER 15.4.28].

413. The KDAONB Unit disagrees with the Applicant that the proposed utility works largely remain within the existing infrastructure corridor. The utilities diversion to the north of the A2 involves encroachment, in this instance, relating to the need for a gas pipeline diversion 25 metres beyond the highway edge, which would see a loss of land designated as a Site of Special Scientific Interest ("SSSI") and ancient woodland. Coupled with the loss of both the wooded central reservation, and the HS1 mitigation landscaping in the AONB, this would have significant impacts [ER 15.4.30].

414. The Applicant did not share the KDAONB Unit's view that the impacts to the AONB via another gas pipeline routing would be significantly less damaging, as an alternative routing would have required additional pipelines to be installed of a greater bore than currently proposed to provide gas to the customers of the network. The Applicant argued this would increase the area of interface between the Works and the AONB, with the additional need for further Utility Logistics Hubs during the construction of the pipeline [ER 15.4.31]. The Applicant also stated that this alternative would not be acceptable to the gas network owner and operator, due to operational and maintenance considerations, including additional costs associated with the upkeep of that network [ER 15.4.32].

415. The ExA acknowledges that utility works are an integral component of an infrastructure development of this scale, and that the constraints of the highway corridor in this location results in the unfortunate requirement to encroach into land beyond the highway limits. The ExA further acknowledged that statutory undertakers have their own requirements for easements and maintenance arrangements, and that a considerable amount of disruption would entail if utilities laid beneath the A2 had to be accessed for repair and maintenance in the future [ER 15.4.41].

416. The ExA recognised that the extent of the woodland along the north side of the A2 corridor in the Shorne LLCA is a key feature [ER 15.4.42], noting the KDAONB Unit's assertion that the ancient woodland is a distinguishing feature, generating a

strong sense of enclosure. It plays a key role in including the Shorne LLCA within the AONB designation [ER 15.4.36]. The ExA concluded that the removal of part of this woodland would significantly harm the landscape character in this location and is at odds with the purpose of the AONB to conserve and enhance natural beauty. As a result, the ExA agreed with the KDAONB Unit's submissions that the harmful impact of woodland loss to this part of the AONB to accommodate the gas pipeline diversion cannot be overstated [ER 15.4.42].

417. Whilst the ExA were unconvinced that the Applicant had presented robust evidence to demonstrate that the alternative realignment suggestion would be impossible or more harmful, the ExA recognised that the Applicant had at least considered the cost of and scope for developing the utilities elsewhere or meeting the need for it in some other way, as set out by paragraph 5.151 of the NPSNN. The ExA was therefore persuaded that the Applicant's option, whilst harmful to the AONB, is the most feasible option [ER 15.4.43].

418. The Applicant asserted that the tree removal and retention plan align with the current limits of deviation attached to the gas pipeline diversion for Work No. G1A are a reasonable worst-case assumption. The gas pipeline diversion's final alignment would be determined at the detailed design stage, aiming to make as efficient use of land and retain as much woodland as possible. This is secured via the Design Principles LSP.01, S1.01, S1.02 and S1.03 and REAC LV001 and LV013 [ER 15.4.38]. The KDAONB Unit considered the commitments in the REAC provide no certainty on the level of tree loss/retention, given the use of wording like "*will aim to*" and "*as far as reasonably practicable*." It was also suggested that discrepancies remain across submitted plans about the extent of ancient woodland loss and that that the Design Principles, which include maximising reinstatement of woodland within the A2 corridor, are at odds with the Environmental Masterplan, which show large tracts of species rich grassland replacing removed woodland [ER 15.4.39].

419. The ExA recognised the Applicant's commitments to aim to minimise woodland loss set out in the specific Design Principles and REAC measures which are secured through the DCO. Whilst there is a stated need for flexibility and reliance on these Control Documents, the ExA considered that where there is woodland loss, but no wayleave/easement or visibility splay requirements, then replacement woodland should be provided to retain the current wooded character and enclosed nature of the A2 and its integration within the landscape as far as possible. The ExA set this out as the Proposed Development involves a loss of mitigation tree planting for HS1, and previous works to the A2, which have involved the removal of significant tracts of woodland [ER 15.4.44]. The ExA recommended adjusting the Design Principles document, noting the KDAONB Unit's point regarding the Environmental Masterplan [ER 15.4.45]. The Secretary of State agrees with this adjustment in wording and has inserted a new requirement 20 to the Order, stating that no part of the development under the Order may commence until the Applicant has amended this Control Document accordingly.

The effect of woodland compensation impacts on the landscape character of the AONB.

Park Pale Area

420. The Secretary of State notes the concerns from a number of parties, including NE, regarding proposed woodland planting at Park Pale, due to the significant alteration of the landscape character from its parkland nature. GBC argued this had not been assessed [ER 15.4.49].

421. Concerns about views were also raised in relation to the significance of effect on receptors at the representative viewpoint S-03 (located to the North of Park Pale, on PRoW NS161), as a result of the loss of views to the AONB to the south of the A2/HS1 corridor [ER 15.4.50]. The Applicant responded that the ancient woodland compensation proposed at Park Pale would provide biodiversity benefits by linking existing woodlands, and moderate beneficial effects to the PRoW receptor S-03 during Design Year, as it would largely screen views towards the A2 and HS1 corridors in keeping with the existing wooded character of the locality [ER 15.4.51].

422. Concerns were also raised about the Applicant's approach to linking woodlands to compensate for ancient woodland loss and nitrogen deposition, but the Applicant highlighted that this landscape scale approach was agreed by NE from the outset, as set out in the SoCG, and that this approach for mitigation and compensation measures aligns with the provisions of the Environment Act 2021 [ER 15.4.52]. During the Examination, GBC emphasised that the landscape scale strategy did not adequately integrate the biodiversity issues with the effects on landscape and cultural heritage. This was endorsed by the KDAONB Unit. GBC and the KDAONB Unit stressed that the landscape scale should take a much broader, more holistic approach and take account of all components of the landscape [ER 14.5.53].

423. The KDAONB Unit and GBC acknowledged the ecological benefits of linking woodlands but maintained that landscape character had not been fully considered in determining the best locations for compensation planting. [ER 15.4.54]. The Applicant set out that landscape character had been designed to "maintain key views" but added that where changes to views would be affected by mitigation or compensatory planting, then Design Principles have been proposed to ensure effects would be reduced as far as reasonably practicable at detailed design, specifically for Park Pale and viewpoint S-03 [ER 15.4.55]. The Applicant further explained that although the area north of Park Pale is largely open in character, it is also influenced by the existing M2/A2 corridor and buildings at Harlex Haulage. It was therefore considered that softening the appearance of the corridor and buildings at Harlex Haulage would be of benefit to the local landscape character. The Applicant added that greater enclosure created in the landscape by the ancient woodland compensation planting was considered to align with the key characteristics of the West Downs sub area Shorne LLCA and historic landscape character [ER 15.4.56].

424. The ExA recognised that the ancient woodland compensation planting in this location would notably alter the landscape character, resulting in an adverse effect on the landscape character of the Shorne LLCA. However, it also considered that the woodland planting would serve to screen some of the Harlex Haulage site and M2/A2 corridor for visual receptors on PRoW NS161, and this is a benefit [ER 15.4.63]. The ExA were therefore satisfied that the Applicant had fully considered the appropriateness and impact of the ancient woodland compensation area on the landscape at Park Pale. The Secretary of State agrees and like the ExA is content that commitments in the Design Principles will ensure that NE and the KDAONB Unit are fully involved in the design of the woodland, meaning that the end result is not currently

fixed and that sufficient scope exists to maintain a degree of openness sought by NE and KDAONB [ER 15.4.64]. The ExA were further satisfied with the inclusion of management requirements in the oLEMP, that would ensure the detailed design of proposed planting would be in keeping with local landscape character as far as reasonably practicable and would allow for input to the detailed design process by key stakeholders via the oLEMP advisory group [ER 15.4.65]. The Secretary of State is satisfied with the ExA's conclusion.

Blue Bell Hill/Burham

425. The Applicant submitted a change request to reduce the Order Limits required for nitrogen deposition compensation requirements by 40ha noting that "there are no likely materially new or different likely significant adverse environmental effects compared to those reported in the Environmental Statement (ES)" as a result of the reduction [ER 15.4.57].

426. The nitrogen deposition requirements are primarily discussed in the Biodiversity section of this Decision Letter. However, NE suggested that the Applicant should provide an updated assessment of the landscape impacts resulting from the change request, whilst the KDAONB Unit considered that the proposed reduction in overall compensation land south of the River Thames would no longer represent a landscape scale enhancement to the AONB. The Applicant disagreed stating that there would still be beneficial visual effect, though no longer considered significant, and the significant beneficial landscape effect would remain [ER 15.4.58]. The KDAONB Unit further stated that it wished to see the Blue Bell Hill site compulsorily acquired for nitrogen deposition compensation, not least because the compensation should be as close to the impact as possible, but also because it would benefit the landscape character of the AONB [ER 15.4.59]. The Applicant's final position was that as the sections of land removed by the change request had been concluded as not essential to meeting the key principles of the nitrogen deposition strategy, it cannot be included within the scope of the compulsory acquisition powers for the purposes of landscape enhancement [ER 15.4.61]. The ExA accepted that whilst the retention of these sites would result in a moderate beneficial landscape and visual effect for the AONB, it agreed with the Applicant that secondary landscape benefits that might accrue as a result of that compensation cannot be used in the justification for land acquisition [ER 15.4.66]. The Secretary of State agrees with this and the ExA's view [ER 15.4.67] that the impact of compensation woodland planting on landscape character in the AONB would be neutral.

Implications of the amendment to section 85 of the Countryside and Rights of Way Act 2000 ("CRoW Act")

427. The Secretary of State notes that during the course of the Examination, the Levelling Up and Regeneration Act 2023 ("LURA") came into effect, which included a provision at section 245 to subsequently amend section 85 of the CRoW Act, in relation to AONBs. The amendment to section 85 places a duty on relevant authorities, "in exercising or performing any functions in relation to or so as to affect land in an AONB (in England) to seek to further the purpose of conserving and enhancing the natural beauty of the AONB." This duty did not apply during the Examination, but it came into effect on 26 December 2023 and is now a relevant legislative duty [ER 15.4.68].

428. The legislative change was brought to the attention of the ExA by the KDAONB Unit just prior to the close of the Examination, and the ExA sought written submissions from the Applicant and Interested Parties on the possible effect of the altered duty and its interaction with paragraphs 5.150 to 5.153 of the NPSNN [ER 15.4.69]. There was disagreement on the impact of this legislative change. The Applicant considered that the amendment is not “outcome based,” rather an obligation on the relevant authority to look for opportunities to further the conservation and enhancement of AONBs insofar as possible. The Applicant suggested that the duty must be put into the context of the NSIP regime, which permits development which has adverse effects on the natural beauty of AONBs. It argued the section 85 duty should be interpreted against paragraphs 5.150 to 5.153 of the NPSNN, and overall, the Applicant’s position is that nothing has changed in policy terms [ER 15.4.70].

429. The KDAONB Unit considered that the legislative change requires a higher level of satisfaction on the Secretary of State that all reasonable steps to achieve avoidance of harm and measures to further conservation and enhancement of the AONB have been taken and secured [ER 15.4.72]. It also disagreed with the Applicant’s position that the amendment is not “outcome based”, arguing that the outcome should be that the special character and qualities of the AONB are improved as a result of the Proposed Development rather than harmed as little as possible [ER 15.4.71].

430. GBC disagreed with the Applicant that the new duty goes no further than existing policy guidance and considered that it requires as much as possible to be done to achieve the stated purpose when considering the merits of the Proposed Development and its effects on the AONB [ER 15.4.74]. Furthermore, it considered the move from a duty “to have regard” to a duty to “further the purpose,” to be a material change in the nature of the duty [ER 15.4.73]. NE suggested that a relevant authority must be able to demonstrate with reasoned evidence what measures can be taken to further the statutory purpose in addition to avoiding and mitigating the effects of the development [ER 15.4.75]. There was no agreement at the close of the Examination on what the new duty requires nor how it is to be achieved [ER 15.4.76].

431. The ExA noted that there were no regulations set by the Secretary of State for the Environment, Food and Rural Affairs as to how a relevant authority is to comply with the amended duty, nor had NE published any new guidance on the point [ER 15.4.77]. The ExA, therefore, referred to the Explanatory Notes on the House of Lords amendment for the Levelling Up and Regeneration Bill, [ER 15.4.78] and concluded that it was reasonable to assume that the section 85 duty was not intended to and does not remain the same in effect as it was prior to the amendment [ER 15.4.79].

432. The ExA considered the current guidance for the unamended section 85 duty, as provided by NE in the document “England’s statutory landscape designations: a practical guide to your duty of regard”, [ER 15.4.81] and agreed that the Applicant’s design and assessment in and adjacent to the designated National Landscape area has met the duty as it applied prior to the LURA amendments. However, the duty has now changed [ER 15.4.82] and the ExA is of the view that the amended duty requires something additional to the previous duty; this view being supported by the Explanatory Note to the new duty which explains that the provision is intended to strengthen the duty on authorities [ER 15.4.83]. The ExA highlighted that it was unable to fully examine the consequences of the new CRoW Act duty on the Proposed Development during the Examination and recommended that the Secretary of State

consult the Applicant and relevant Interested Parties to seek a 'CRoW Act section 85 new duty assessment' to inform consideration of whether this new duty is met [ER 15.4.89].

433. The ExA also considered how the amended duty affects the NPSNN and did not consider that the amendment to the section 85 duty affects the provisions contained with NPSNN paragraphs 5.150 to 5.153 for the purpose of compliance with section 104(3) of the PA2008. This is because the NPSNN paragraphs are in any case subject to compliance with the new statutory duty; they cannot over-ride it [ER 15.4.88]. In response to the ExA's recommendation on this application, on 28 March 2024, the Secretary of State invited the Applicant to provide comments on the implications and the Proposed Development's compliance with the amended CRoW Act duty. NH responded on 11 April 2024 and restated the arguments above and set out details of how the Proposed Development is compliant with the 2024 NPSNN, which references this duty. NH stated that the submissions made at ISH11 remained unchanged, and that the Secretary of State can be satisfied that the amended duty is complied with having regard to the meaning of the duty and having regard to compliance with the relevant 2014 NPSNN policies which provide for substantial protection for nationally designated areas (and have effect for decision making for the DCO). In addition, the Applicant highlighted that it had agreed with the KDAONB Unit to provide a fund of £4.24 million to enable further compensatory enhancements to other aspects of the environment within the AONB.

434. The Secretary of State on 19 April 2024 invited NE and any other interested party to comment on the Applicant's response. The KDAONB Unit disputed the Applicant's interpretation of the duty, and NE stated that in the absence of the Proposed Development avoiding or fully mitigating its impact on the National Landscape, they were not able to advise that the proposal sought to further conservation and enhancement of the natural beauty of the Kent Downs AONB. GBC also responded to dispute the response from the Applicant including the assertion that its approach aligns with the Secretary of State's decision on the A66 Northern Trans-Pennine DCO. GBC set out that it remained unconvinced that the Applicant had properly considered reasonable alternatives against the revised statutory duty, whether more could be done to mitigate significant harm to the National Landscape that would occur both within the AONB or its setting, and whether the compensatory fund agreed is sufficient. KDAONB Unit echoed the comments from GBC and concluded that that it strongly disagreed with the Applicant's conclusion that there is an 'absence of less harmful alternatives' and that all necessary steps have been taken to seek to further the relevant purposes of the AONB.

435. On 10 May 2024 the Secretary of State invited the Applicant and NE to agree a position on the new CRoW Act duty and, if an agreed position is possible, to set out what, if any, amendments they agree should be made to the DCO to address the enhanced duty and where an agreed position cannot be reached, the Secretary of State invited both parties to set out their respective views on what is needed to meet the enhanced duty. NE responded that it had not been possible to reach agreement with the Applicant to demonstrate compliance with the enhanced duty and recommended that the Applicant provide details of one or more projects, funded by the Lower Thames Crossing scheme, which could help demonstrate it had fulfilled their obligations under the amended duty. The Applicant reiterated their previous

position and set out areas where the Application already seeks to further the purpose of conserving and enhancing the Kent Downs AONB and why they considered the further proposals put forward by NE are not feasible or proportionate. The Applicant concluded that it did not consider any amendments to the DCO were required to meet the new duty but proposed a provision that could be included in the DCO if the Secretary of State disagreed.

436. On 9 July 2024 the Secretary of State invited NE to comment on this proposal, and invited both NE and the Applicant to propose further enhancement measures in the event they are considered necessary. NE considered that an acceptable approach to meet the amended duty could be that the Applicant provides a substantial financial package to fund projects that further the purpose of conserving and enhancing the natural beauty of the Kent Downs AONB. This would be in addition to the compensatory enhancement fund proposed previously by the Applicant, in recognition of the significant residual impacts resulting from the Proposed Development. The details of any projects could be agreed subsequently; however, no detailed proposals were provided by NE on what would be considered a suitable financial package. The KDAONB Unit suggested a fund of £38 million, which would help secure the requirement of the amended duty through several different measures. The Applicant considered this amount disproportionate, given the limited geographical extent of the impacts on the Kent Downs AONB. The Applicant maintained its position that it had met the enhanced duty, however and without prejudice to that position, the Applicant suggested a total fund of £3 million if the Secretary of State considered that further measures were required. On 26 July 2024, the Secretary of State invited comments from all interested parties on the responses provided by the Applicant, NE and the KDAONB Unit, as well as on a proposed requirement suggested by the Secretary of State setting out the proposals for agreeing the amount and managing disputes on this matter post consent. The Applicant responded on 7 August 2024 that whilst it did not consider that any further measures were necessary to meet the new duty, if the Secretary of State considered a provision was necessary, £3m was sufficient, that this should be included in the Control Documents and that any dispute should be resolved by the Secretary of State rather than relying on the existing arbitration provision in the DCO. It also highlighted that it considered any such provision could delay delivery and that the Secretary of State has the information already to make a decision on the amount now. NE responded on 7 August 2024 that it considered the wording of the proposed provision could be strengthened to help achieve a clearer outcome and timescales in accordance with the new duty and that it considered Kent Downs National Landscape Unit to be a key partner in this matter alongside NE. It considered that the greatest impact on the landscape would be during construction and that a package of measures needed to be agreed prior to commencement and delivered during the early construction and operational phases rather than agreed before operation. The KDAONB Unit responded on 7 August 2024 noting that in the time available it assessed the amount necessary to meet the new duty as £38m. Like the Applicant, it did not consider it appropriate to rely on the existing arbitration provision if agreement on the amount could not be reached and considered that any such dispute should be decided by the Secretary of State who may appoint an arbitrator through a process agreed by all parties if they decided this necessary. It also set out that the Applicant should cover their costs in contributing to any arbitration process given their limited resources.

437. The Secretary of State notes the comments from NE in relation to compliance with this duty. On the 16 December 2024, the Secretary of State for the Environment, Food and Rural Affairs published guidance for relevant authorities on seeking to further the purpose of Protected Landscapes. The guidance states that relevant authorities must now “seek to further” the statutory purposes of Protected Landscapes, although consideration of what is reasonable and proportionate in the context of fulfilling the duty is decided by the relevant authority and should take account of the context of the specific function being exercised. Given the scale and impact of the Proposed Development the Secretary of State considers that in this case, a financial contribution to support the delivery of the Kent Downs AONB Management plan is sufficient and necessary to meet the duty in this particular case, noting this will be delivered alongside other mitigation and enhancement measures already agreed. Noting the comments from various parties on this matter, the Secretary of State is aware that there remains disagreement on the amount of the financial contribution and that the amounts currently proposed by the Applicant and KDAONB Unit are quite far apart. She also recognises that given the timeframe for a decision parties may not have had time to thoroughly consider and agree a position on this. The Secretary of State has therefore added a provision to the DCO and the SACR to allow the amount to be agreed by all parties. Should dispute arise, the Secretary of State considers this is best addressed by dedicated arbitrators or an independent assessor, as agreed by parties, as arbitrators or an independent assessor will have the necessary skills and expertise to manage such a matter and provide a recommendation to the Secretary of State to enable her to make a final decision on the amount. Costs involved in the resolution of any dispute are to be covered by the Applicant including reasonable costs incurred by Kent Downs National Landscape Unit. The Secretary of State is content that with this provision in place, the new duty will be met.

The Effectiveness of Green Bridges as a Landscape and Visual Impact Mitigation Measure in the AONB

438. The Secretary of State notes that from the outset of the Examination, the KDAONB Unit, GBC and NE consistently argued that green bridges provide the greatest opportunity to help mitigate the impacts of the severance of the landscape in the AONB and to provide connectivity for habitats, landscape and recreation. The parties considered that the proposals to replace the Thong Lane South and Brewers Lane bridges with green bridges fell far short of the scale of response needed in view of the scale of environmental impact arising from the Proposed Development [ER 15.4.91]. All three parties appreciated there were technical difficulties with developing Brewers Road green bridge into a more substantial and better functioning landscape and ecological corridor, but suggested there are further opportunities to create another gateway green bridge to the AONB at Park Pale bridge, which is required to further mitigate the impacts to the AONB [ER 15.4.92]. It also considered that the Applicant had not followed best practice guidance on the width of the green bridges and the width and depth of planting areas, the latter meaning planting species options were constrained [ER 15.4.92].

439. The Applicant considered that there were notable constraints to providing wider green bridges over a live strategic network [ER 15.4.98] and argued that the scale and type of multi-functional green bridge structures proposed would align with current industry best practice and technical feasibility for green bridges within the UK [ER 15.4.93]. The Applicant considered that the proposed green bridges at Brewers Road

and Thong Lane South would help to reduce the perception of severance between the northern and southern parts of the AONB once planting has established and the proposed planting would also help to screen the views of the widened A2 corridor for users of the bridge [ER 15.4.94]. The Applicant further considered that there is no justification to deliver a green bridge at Park Pale because it is not needed to mitigate the impacts of the Proposed Development identified in their environmental assessment [ER 15.4.98].

440. While the green bridges were accepted in principle by these parties, their effectiveness in mitigating landscape and visual impacts within the AONB remained a matter not agreed at the end of Examination [ER 15.4.99].

441. The ExA considered that the inclusion of green bridges across the A2 would provide new foliage where currently there is none in a north-south direction, and to that extent they would provide some landscape benefits from trying to visually link to woodlands on both sides of the A2. This would also, in the ExA's view, improve the experience of WCHs crossing the A2. The ExA supported the idea of green bridges, and their inclusion in the overall design of the Proposed Development [ER 15.4.101] but in terms of mitigation for a widened transport corridor through the AONB and as an attempt to reduce perceived severance, as a result of lost linear woodland along the main highway alignment the ExA agreed with interested parties that the green bridges do not go far enough [ER 15.4.102]. The ExA stated that the approach to green bridges should be more exemplary if they are to help reduce the large residual landscape and visual impacts to the AONB [ER 15.4.104].

442. The ExA accepted the reasoning put forward by the Applicant as to why the two green bridges cannot be widened and noted that several interested parties had suggested that a green bridge at Park Pale would be an area of opportunity to provide additional necessary landscape mitigation and to define a gateway into the AONB. The ExA agreed with interested parties that Park Pale is a strategic location for a green bridge opportunity [ER 15.4.105]. The ExA agreed with the Applicant that Park Pale does not need to be replaced to facilitate the delivery of the Proposed Development but considered that mitigation for the adverse landscape effects on the AONB have not gone as far as possible, especially noting that moderate residual adverse effects would remain. The development of Park Pale as a green bridge would, in the ExA's opinion, reduce the harmful effect to the AONB, which it considered had been too readily discounted [ER 15.4.106]. The ExA noted that the adverse effects on the AONB would reduce over time, but fundamentally there would be an adverse change affecting many of the special qualities in this area. The ExA concluded the effectiveness of the two proposed green bridges at Thong Lane South and Brewers Road have been overstated, and that the mitigation for the harm caused to the AONB has not gone far enough [ER 15.4.107]. The Secretary of State agrees with this conclusion.

Lighting Impacts

443. The Secretary of State notes the concerns raised by GBC, NE and the KDAONB Unit about the possible impacts on the AONB as a result of new street lighting [ER 15.4.108]. The Applicant stated that the effects from proposed lighting has been considered in the overall assessment of visual effects at each representative viewpoint

and visual receptor, as detailed in their Environmental Statement: Appendix 7 [ER 15.4.109].

444. The Applicant set out that the proposed lighting has been designed with consideration of associated environmental impacts, including the use of luminaires that emit no light above the horizontal to reduce skyglow, directing lighting to reduce light spill, and the use of white warm LEDs to reduce the impact of light spill. Design Principles LST.02 and LST.03 had been introduced to reduce the impact of new lighting along the route and help preserve local nocturnal character [ER 15.4.110]. The Applicant notes that the presence of vehicle lights along the route would notably alter the landscape character of the Thurrock Reclaimed Fen (sub area Mardyke) LLCA, part of which is typically unlit and intrinsically dark in nature. The presence of vehicle lights within this landscape contribute to the large adverse residual effects assessed at Design Year, and the Applicant has introduced acoustic barriers and false cutting slopes to mitigate this. Furthermore, the proposed lighting along the A2 corridor would comprise new and replacement LED lighting columns at a lower height than the existing luminaires, although the additional lighting columns proposed and vegetation loss within the central reservation would reduce the amount of screening. Overall, the Applicant assessed that there would be a perceived increase in night-time lighting within the West Kent Downs (sub area Shorne) LLCA [ER 15.4.111]. The Applicant also clarified that both the Thong Lane South and Brewers Road green bridges have lighting due to their proximity to junctions, but it stated that these existing bridge locations are currently well lit on the bridges themselves and from the A2/M2 lighting.

445. In response to concerns regarding the lighting on green bridges, Design Principle LST.04 was added, which states that where lighting is required, it shall be carefully designed to focus light onto the highway and to minimise obtrusive light spill [ER 15.4.112]. The KDAONB Unit did not raise any objections to the terms of LST.04. GBC did not suggest any specific lighting requirements and while agreed that the design and modern technology would minimise light spill, stated that the cumulative effect of additional and new road space and traffic would impact on the AONB [ER 15.4.114].

446. The ExA agreed that proposed use of LED luminaries, which would emit no light above the horizontal, would reduce skyglow and ensure light is only projected where needed. However, the proposed woodland planting around the A2/M2/A122 LTC junction was considered to be largely ineffective in mitigating the most elevated parts of this structure, and therefore the ExA disagreed with the Applicant's assessment that the establishment of this planting would reduce the impact of the lighting on the AONB [ER 15.4.116]. Regarding the lighting on the green bridges, the ExA welcomed the inclusion of Design Principle LST.04 as a reflection of the potential impact of additional light spill in the landscape and on protected species, however, whilst Design Principles S1.17 and S2.12 secure planting to both sides of the Thong Lane South and Brewers Road green bridges, given that planting would be relatively low level, the light spill would not be entirely contained [ER 15.4.117]. NE suggested amended wording for Design Principle LST.04, to ensure that lighting along the green bridges are bollard level lights only, and the Secretary of State agrees with the ExA's amended wording to the Design Principles document [ER 15.4.118].

447. The Secretary of State agrees with the ExA's conclusion that the Proposed Development would reduce the tranquillity of the AONB given the scale of the A2 junction and wider traffic corridor [ER 15.4.119]. However, like the ExA, the Secretary

of State is satisfied that the Applicant has utilised a range of measures to minimise luminance along the length of the Proposed Development.

Tilbury Viaduct

448. The Secretary of State notes that the Applicant proposed that the Mardyke and Orsett Fen Viaduct would be a Project Enhanced Structure, given its impact on the Mardyke Valley. A Project Enhanced Structure is one that is coherent and distinctive, with a recognisable design language and consistent material palette. It shall be developed to reflect the nature of their context and integrated positively with the landscape works [REP9-227, entry to clause STR.04, page 22]. TC consider that the Tilbury Viaduct should also be identified as Project Enhanced Structure, as a similar large adverse effect would remain in the Design Year on residential receptors on Low Street Lane as a result of it [ER 15.4.120]. The Applicant acknowledges that the viaduct would be visible in mid-range views from Low Street Lane, and by residents of Low Street, but states it has been designed at the lowest possible height to reduce its impact on the surrounding area. The Applicant's arguments for not including the Tilbury Viaduct as a Project Enhanced Structure are set out at [ER 15.4.121-15.4.122], and conclude that a good, but more standard approach would be appropriate at West Tilbury [ER 15.4.122].

449. The ExA considered that whilst the setting of the Tilbury Viaduct is considerably different to the Mardyke and Orsett Fen Viaduct, it would be a significant engineered structure, which would have an undisputed large adverse effect on residential receptors on Low Street Lane and the Conservation Area. As a result, the ExA concluded that it is necessary to ensure that its design is of high quality, which aesthetically integrates into the landscape [ER 15.4.123, first paragraph] and recommended that it should be added to the list of structures that are subject to stakeholder engagement within Design Principle PRO.07 [ER 15.4.123, second paragraph]. The Secretary of State agrees with this approach.

Overall Landscape and Visual Impact

450. The Secretary of State notes the Applicant's overall conclusion that the Proposed Development would have a combined moderate significance of effect on landscape and visual receptors at Design Year [ER 15.4.126]. Several interested parties, including NE, GBC and TC, disputed this conclusion, arguing that the assessment should reflect worst case effects over the averaging of effects. NE's advice remained that the scale of landscape and visual impact resulting from the Proposed Development should, as a minimum, be "large adverse" based upon the information provided in the Environmental Statement, and the KDAONB Unit made similar submissions [ER 15.4.127]. The Applicant's final position is that adverse effects remaining above moderate would be localised and relate to local landscape character areas, five representative viewpoints and one visual receptor group out of a total of several hundred landscape and visual receptors [ER 15.4.129].

451. The ExA found that there was nothing unreasonable in the Applicant's reliance on DMRB LA 107 and accepted the Applicant's basis for arriving at a combined assessment. However, the ExA considered that to "smooth out" the effects of a scheme which covers a wide geographical area with a complex range of sensitivities and receptors, has the effect of ignoring significant variation in landscape character

areas and understating the impact on the most sensitive receptors. It further stated that the inclusion of sensitive landscapes, notably the AONB, within the assessment requires different judgements regarding the landscape and visual baseline and the assessment of effects, as set out in the NPSNN [ER 15.4.131]. However, the ExA was satisfied that the Applicant had presented all landscape and visual effects arising from the Proposed Development for ES purposes [ER 15.4.132] and concluded that combining the landscape and visual effects for both construction and operational assessments, the Proposed Development would give rise to significant, adverse effects on both landscape and visual receptors [ER 15.4.135].

The Secretary of State's Conclusion on Landscape and Visual Impacts

452. The ExA concluded that the Proposed Development would materially harm the National Landscape (AONB), and this harm is significant. In light of the great weight that should be given to conserving landscape and scenic beauty in nationally designated areas, and in accordance with paragraphs 5.151 to 5.153 of the NPSNN, these significant residual effects need to be balanced against other relevant factors to demonstrate that exceptional circumstances exist to outweigh that harm and that the development is in the public interest [ER 15.5.9, third indent].

453. The Proposed Development would materially harm visual amenity, and in accordance with paragraph 5.158 of the NPSNN, the Secretary of State has considered whether the visual effects on these sensitive receptors outweigh the benefits of the Proposed Development. The Secretary of State agrees with the ExA's conclusion that moderate weight should be given to the harm to visual amenity [ER 15.5.9, fourth indent].

454. Mitigation has been contemplated and included as part of the Proposed Development, but in light of the s85 CROW Act duty, options to seek to further the purpose of conserving and enhancing the natural beauty of the Kent Downs National Landscape have not been sufficiently examined prior to the Decision stage. For the reasons set out earlier in this Decision Letter, the Secretary of State considers that the DCO contains an appropriate mechanism for achieving compliance with the duty.

Historic and Cultural Environment Effects

455. The Secretary of State notes the policy requirements contained in the NPSNN, NPS EN-1, NPPF and those listed by the ExA in [ER 16.2.1 - 16.2.7]. The Applicant's assessment of the impacts of the Proposed Development on the cultural heritage environment is set out in ES Chapter 6: Cultural Heritage, which was superseded by version 2.0. ES Chapter 6 considers the scope and methodology of the cultural heritage assessment before considering the potential effects arising from the construction and operation of the Proposed Development in accordance with paragraphs 5.126 and 5.127 of the NPSNN and paragraphs 5.8.8 to 5.8.10 of the NPS EN-1 [ER 16.3.1].

456. As outlined in [ER 16.2.2], the Secretary of State has noted the matters highlighted by the ExA that she should take into account in reaching a decision. In particular, she is aware of the policy in 5.133 of the NPSNN that she should refuse consent where there is substantial harm, unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial

public benefits that outweigh that loss or harm. With regard to less than substantial harm, she has taken note of paragraph 5.134 of NPSNN, and is aware that in reaching a decision, and any less than substantial harm to the significance of a Designated Heritage Asset (“DHA”), needs to be weighed against the public benefits of the Proposed Development. The Secretary of State has also had regard to the scope and methodology of the cultural heritage assessment [ER 16.3.2 to 16.3.6]; the Applicant’s assessment of likely significant effects [ER 16.3.7 to 16.3.16]; and the mitigation described in ES Chapter 6 to avoid, reduce or compensate for adverse impacts to heritage assets. The Applicant acknowledges that the Proposed Development would have significant adverse effects on designated and non-designated heritage assets resulting in substantial harm, and less than substantial harm to heritage assets [ER 16.3.17 and 16.3.18].

457. During the Examination, the ExA considered the following matters [ER 16.4.5]:

- methodology of assessing value and levels of harm to heritage assets.
- methodology of assessment and extent of historic landscape and Characterisation (HLC) notably in relation to the landscape of Cobham Hall Estate; and
- impact of the proposed development on the Thong Conservation Area and the landscaping mitigation implications.

Methodology of Assessing Value and Levels of Harm to Heritage Assets

458. The Secretary of State is cognisant of concerns raised by GBC about the cultural heritage appraisal being confused in methodological terms which resulted in an underestimate of the impacts, and both GBC and KCC about the ‘value’ the Applicant assigned to certain heritage assets. KCC stated that there would be no positive benefits from the project for the historic environment south of the RT but put forward recommendations for mitigation. [ER 16.4.1 - 16.4.2 and 16.4.8].

459. GBC considered that the ES is not consistent with national policy in paragraph 5.131 of the NPSNN in terms of the ‘value’ that the Applicant has assigned to certain heritage assets. Its view was that Grade I listed Cobham Hall; Grade II* Listed Cobham Hall Registered Park and Garden; the Scheduled Romano-British villa and 19th century reservoir in Cobham Park; and the Scheduled bowl barrow in Ashenbank Wood, should be included in the ‘very high’ value category, as to include them in a ‘high’ value category, as the Applicant has done, understates their significance and diminishes the assessed level of impact upon them [ER 16.4.8]. The Applicant explained that its assessment of value of cultural heritage assets was determined using criteria derived from DMRB LA 104 and DMRB LA 106 [ER 16.4.9]. It acknowledged that the DMRB LA 104 differed from the NPSNN by separating out the very highest category of national asset, such as a World Heritage Site where UNESCO is the judge of whether the site is one of outstanding value to humanity, stating that as this is a high value beyond normal, it is appropriate to create a very high value category for such assets and for all other nationally designated heritage assets to be assigned a level beneath this, and thus a ‘high’ value [ER 16.4.10]. The ExA queried the methodology in relation to heritage value with the Applicant, and the Applicant agreed with representations from HE and Essex Place Services that the international significance of Tilbury Fort (SM13) and Coalhouse Fort (SM14) should be changed from ‘high’ to ‘very high’ [ER 16.4.11]. GBC remained of the view in its final SoCG that

the inclusion of 'very high' category was inconsistent with national policy and that the Applicant had understated the value and significance of impact upon assets listed in [ER 16.4.8]. The Applicant's response to that item was that the difference in value does not change the implementation of policy and the decision over whether harm should be exceptional or wholly exceptional. The categorisation of harm continued to be disputed in the final SoCG between the Applicant and GBC [ER 16.4.13 and ER 16.4.29].

460. KCC had one outstanding matter in its final SoCG relating to the Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (DAMS-OWSI) but has confirmed the matter is resolved [ER 16.4.2]. LBH and TC did not dispute the historic environment assessment in their LIRs, but both noted that the DAMS-OWSI was not necessarily agreed. At the end of the Examination, TC had agreed all matters with the Applicant, and LBH was content that the Applicant had made significant progress on the DAMS-OWSI but retained one minor concern about the programming of the two-stage fieldwork process for investigations into middle Palaeolithic remains [ER 16.4.3]. HE confirmed that the baseline data provided by the Applicant was adequate for the purposes of assessment and at the end of the Examination had agreed all matters with the Applicant in its SoCG [ER 16.4.4].

461. GBC raised concerns in its LIR about the Applicant's reliance on Tables 4.3 and 4.4 of ES Chapter 4 (EIA Methodology), which are reproduced from DMRB LA 104 for the assessment of heritage impacts, and that there would be a clear conflict with national policy arising from any reliance by the Applicant on these tables which state that 'slight' harm to heritage assets would not be material in the decision-making process. GBC also had concerns that the ES does not contain a table setting out what criteria had been used to determine the level of impact on heritage assets, and as such the methodology was therefore not transparent [ER 16.4.14 – ER 16.4.15]. In response to GBC's LIR, the Applicant stated that it recognised there could only be three categories of harm in policy terms [ER 16.4.16]. The ExA was concerned about the consistency of DMRB LA 104 tables with the NPSNN policy tests [ER 16.4.17]. The Applicant responded by stating it considered 'less than substantial harm' to be experienced by any designated asset where the impact is moderate, minor or negligible adverse leading to a large, moderate or slight effect. It added that a 'slight' adverse effect to a designated heritage asset is less than substantial harm, that it had not disregarded 'slight' adverse effects to designated heritage assets as immaterial to the decision-making process, and that the significance category and typical descriptions in Table 4.4 of ES Chapter 4: EIA Methodology, do not apply. [ER 16.4.18] and stated that every designated asset experiencing less than substantial harm is described and assessed within ES Chapter 6 but accepted that this could have been set out more clearly and provided Annex to fulfil this deficit [ER 16.4.19].

462. The Applicant determined that the following assets listed in ER 16.4.22 would experience substantial harm and this was not disputed by Interested Parties:

- Orsett Cropmark Complex (SM1) – Scheduled Ancient Monument.
- 1 and 2 Grays Corner Cottages (LB89) – Grade II listed buildings sited to the north of the RT near the A1089/A13 junction.
- Thatched Cottage (LB58) – Grade II listed building sited to the north of the RT adjacent to 1 and 2 Grays Corner Cottages.

- Murrells Cottages (LB96) – Grade II listed buildings located to the north of the RT on the south side of the A1013 Stanford Road, south of Orsett.

463. It is noted that HE considered that non-designated heritage asset Project ID 247 (cropmarks identified at Greygoose Farm), which surround asset SM1 should be considered as having equivalent effect with heritage asset SM1. While the Applicant agreed that the non-designated asset 247 should be considered against the policies relating to designated heritage assets, and that its loss amounts to substantial harm, it added that even considering SM1 and 247 together, its conclusion was unchanged in that the Proposed Development, together with its benefits, constitutes wholly exceptional circumstances which justify the substantial harm [ER 16.4.23].

464. The Secretary of State notes that the ExA concluded, having had regard to additional material provided by the Applicant during the Examination, that although the Applicant's rationale for the value judgement could have been made clearer in their application, it had taken a scrupulous and cautious approach to ascribing value [ER 16.4.32] and that the Applicant has taken a reasonable approach to value judgements [ER 16.4.33].

465. The Secretary of State notes that with regard to heritage assets experiencing substantial harm, that these are all north of the river in close proximity to the A13/A1089/A122 LTC junction, and that the design and positioning of the of the link roads of the Proposed Development had been responsive to the constraints of existing highway alignments, the necessity to provide free flowing links, and to ensure highway safety standards. The Secretary of State further notes that the ExA considered that the substantial harm that will be caused to heritage assets SM1, 247, LB58, LB89 and LB96 is unavoidable. The ExA also accepted the Applicant's explanation that the permanent construction impacts of the Proposed Development would physically impact heritage assets SM1 and 247 by the construction of the road and overhead line utility diversion. The location of the asset straddling the existing A13/A1089 junction and the necessity for the Proposed Development to provide links to the A13/A1089 means there is no reasonable alternative route or design to avoid the asset. The ExA accepted the Applicant's explanation that LB89 is located in what would be the centre of the proposed A13/A1089 junction while LB 58 is located where an embankment for the LTC is proposed and that in providing the links to the A13/A1089 means there is no reasonable alternative route or design to avoid these assets.

466. With regard to the Grade II listed building LB96 the Applicant explained that to accommodate the proposed link roads from the Orsett Cock roundabout to the A13 and the A1089 requires the Rectory Road bridge to be lengthened and raised which results in a direct conflict with the heritage asset LB96 and the ExA accepted that there was no reasonable alternative route or design to avoid the loss of this asset [ER 16.4.35-16.4.38]. In addition, the ExA further accepted that there was no alternative to avoid the other less substantial harms listed in Annex A to REP4-200 that arise as a result of the Proposed Development [ER 16.4.43 and ER 16.5.4].

467. The Secretary of State notes that by the end of the Examination the ExA were content that the Applicant had suitably identified and recorded assets, the impact, the reasons for the impact and the finding of harm [ER 16.4.43]. The Secretary of State has no reason to disagree with the conclusions drawn by the ExA.

468. With regard to LB58, it is noted that the possible relocation of this asset remained unresolved at the end of the Examination and the Secretary of State accepts the ExA's recommendation that the REAC be amended as set out in [ER 16.4.40] and [ER 23.6.17] (REAC reference CH004) to ensure it is not demolished before a final position on its possible relocation is reached [ER 16.4.39]. With regard to LB96, the Secretary of State also agrees with the ExA's recommendation at [ER 16.4.41] that the REAC be amended to ensure the retrieval and storage of salvageable fixtures, fittings and structural components. Alongside this the ExA agrees with HE's request that requirement 9 of the DCO is updated to include prevention of the demolition of the listed buildings until the bespoke provision for assessment, recording and publication for LB58, LB89 and LB96 takes place as required by REAC CH004, but recommends that this goes further to prevent advance demolition of the listed relevant assets until the relevant phase of development commences [ER 16.4.42]. The Secretary of State agrees with the ExA that these additional commitments provide robust protection and adequate safeguarding of undiscovered buried remains and detailed historic building recording of listed buildings [ER 16.5.6] and that this accords with NPSNN paragraphs 5.140 and 5.142 [ER 16.5.5, sixth indent].

Methodology of Assessments and Extent of Historic Landscape and Characterisation ("HLC") notably in relation to Cobham Hall Estate

469. The Secretary of State notes concerns raised by GBC in relation to how the Applicant had considered heritage value of landscape in the ES and the reliance by the Applicant on the HLC assessment which focuses on broad landscape types. While this is a useful tool as a starting point it only provides a baseline understanding of the historic dimensions of the current landscape and how in generalized terms different landscape typologies have come about. The issue is that little or no consideration is given as to how the categorised areas fit together and the overall level of impact as a wider integrated area of historic landscape that once formed part of the wider Cobham Hall Estate [ER 16.4.46]. GBC considers that while the importance of the Cobham Hall Estate is recognised within the text of the HLC, its significance in cultural heritage terms is the way in which land was owned, controlled and managed. GBC therefore submits that the Applicant had paid insufficient attention to the historic landscape of the Cobham Hall Estate and that the wider landscape development of the Estate as a unit is not adequately reflected in the Applicant's assessment of harm or how this might be mitigated. It considered that Applicant should assess the value of the historic landscape in this sensitive area as a whole and the level of impact that is likely to occur to the whole. [ER 16.4.47]. The Applicant believes that its HLC is proportionate and compliant with DMRB LA 106 and established practice, and notes that the methodology is not challenged by HE or KCC. It concludes that there are some areas where the historic landscape has already been significantly compromised and, in these areas, it would not be possible to take it into account given the scale of existing change, and states that the DAMS-OWSI allows for additional research and recording of any historic landscape identified as part of the project [ER 16.4.50 – ER 16.4.51].

470. The Secretary of State is aware that by the end of the Examination the ExA acknowledged the concerns raised by GBC but was satisfied that the submitted HLC was an appropriate and proportionate assessment in the context of the Proposed Development and complied with the requirements paragraph 5.145 of the NPSNN [ER 16.4.54 - 16.4.55]. The Secretary of State has no reason to disagree.

Thong Conservation Area

471. The Secretary of State is aware concerns were raised by GBC regarding the permanent impacts of the Proposed Development on the Thong Conservation Area and that the Council considers this is likely to be one of the greatest impacts on all cultural heritage assets south of the river. The Applicant assessed the impact of the Proposed Development as having a moderate adverse significance of effect on the Conservation Area during construction and operation (resulting in less than substantial harm). GBC considered that Thong would no longer be appreciated in its wider historic setting which was part of a wider managed or controlled landscape forming part of the Cobham Hall Estate and GBC therefore disagreed with the level of assigned harm and that the impact on Thong should be treated as at the upper end of less than substantial harm. GBC also considered that the impact could not be mitigated by landscaping [ER 16.4.56]. This issue remained contested at the end of Examination [ER 16.4.5, third bullet]. The Applicant is proposing mitigation in paragraph 6.9 of ES Chapter 6 which would overall result in a permanent impact of moderate adverse magnitude and effect, which is assessed as significant and less than substantial harm [ER 16.4.64].

472. The Secretary of State notes that the ExA concluded that the insertion of a large, engineered structure would have a negative impact on the Thong Conservation Area given its current largely agrarian setting. It is further noted that the ExA considered that this was not simply a landscape impact but one which affects the way in which the historic settlement is perceived [ER 16.4.66]. The ExA agreed with the unanimous view of the parties that the open setting around the Conservation Area to the west would be notably altered by increasing the enclosure of the Conservation Area and that the existing key northern approach to the Conservation Area on the historic route of Thong Lane would also be altered with new woodland planting screening along a new curving road alignment. Based on the Conservation Area characteristics, and site inspections of the immediate area, it is the ExA's view that this would alter the historic approach and screen the existing key views towards the asset on the approach from the north. Furthermore, the ExA's view was that these fundamental changes to the setting of the Conservation Area would adversely affect its significance [ER 16.4.67]. The ExA did not agree with the Applicant that their proposed mitigation screening will mitigate the impacts to the setting of the Conservation Area given it is a designated heritage asset which derives much of its significance from its open agricultural setting, which would be foreshortened, curtailed and largely eroded. The ExA took the view that the Applicant's assessment of the level of impact as moderate adverse resulting in a moderate adverse significance of effect was an underestimate of the level of harm to the Thong Conservation Area [ER 16.4.69].

473. The ExA acknowledged that the islanded nature of the Conservation Area would be retained, and the Conservation Area would maintain some of the existing relationship with the land to the northwest and the external views to the east with Shorne Woods would be unaffected and internal views with the Area would also remain unaffected. In that regard the ExA considered that the impact would not tip into the major adverse effect bracket and therefore agreed with the Applicant's assessment of moderate adverse effect but at the higher end of less than substantial [ER 16.4.70]. The Secretary of State is in agreement with the ExA and that this impact should be weighed against the public benefits of the scheme in line with paragraph 5.134 of the NSPNN.

The Secretary of State's Conclusion on Historic and Cultural Environment

474. Overall, the ExA is satisfied with the Applicant's general assessment of impacts on cultural and heritage assets, including in relation to setting and HLC and provides a sufficiently robust evidence base to arrive at sound conclusions and which is noted to comply with NPSNN [ER 16.5.8]. The Secretary of State agrees with the ExA's conclusions and notes that it has had regard to the mandatory considerations in regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010 [ER 16.5.4].

475. The REAC and requirement 9 of the DCO are noted by the ExA to provide robust protection and appropriate safeguard for unburied remains, and with the additional changes proposed in [ER 16.4.41 - 16.4.42] and [ER 23.6.17], will accord with paragraph 5.140 of the NPSNN.

476. The Secretary of State agrees with the ExA's assessment of the impacts on individual heritage assets and cumulative impacts. She agrees with the ExA that there would be substantial harm caused through both the construction and operation of the Proposed Development to one ancient monument (Orsett cropmark complex (SM1)), three grade II listed buildings (Thatched Cottage, 1 and 2 Grays Corner Cottages and Murrells Cottage (LB89, LB58 and LB96 respectively)) and one non designated asset (cropmarks identified at Greygoose Farm (247)) The ExA concluded, in line with paragraph 5.133 of the NPSNN, that great weight should be given to the assets' conservation, and that the substantial harm and total loss of significance that would be caused by the demolition of each of the listed buildings and the destruction of the scheduled ancient monument and non-designated heritage asset, must be outweighed, both in each case and collectively, by substantial public benefits of the Proposed Development. The Secretary of State agrees with the ExA that there is no reasonable alternative alignment that could avoid the substantial harm cause to the assets and that the substantial public benefits arising from the development of the LTC recorded in this decision letter and the Report outweigh the loss and harm to these historic assets [ER 21.4.21].

477. With regard to other designated heritage assets, the ExA agreed with the Applicant's conclusion that the effects of the Proposed Development on those assets would be less than substantial harm. In line with NPSNN Paragraph 5.134 that harm needs to be balanced against the public benefits of the scheme [ER 16.5.9, bullet 4].

478. In reaching the above conclusions the Secretary of State has also had regard to the considerations identified in regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010.

479. The ExA ascribed the adverse effects of the Proposed Development on the historical environment very great weight in the planning balance [ER 16.5.9, bullet 7]. The Secretary of State is satisfied that the substantial harm is necessary in order to deliver substantial public benefits that outweigh that loss or harm and that the less than substantial harm is outweighed by the public benefits of the proposal.

Social and Economic Considerations

480. The Secretary of State notes the concerns, most notably from GBC, TC and the LBH, relating to the socio-economic effects of the Proposed Development [ER 17.4.1]. The main issues at the close of the Examination were [ER 17.4.3]:

- Whether the Applicant's Skills, Education and Employment ("SEE") Strategy is sufficiently robust and would secure benefits for local residents.
- Whether the demand for workforce accommodation would have an unacceptable effect on local housing markets.
- Whether there would be any unacceptable effects on public open space and community facilities, with particular regards to Shorne Wood Country Park ("SWCP"), the Southern Valley Golf Course ("SVGC"), Gravesend Golf Centre, the Ron Evans Memorial Field and the Thames Chase Community Forest ("TCCF Centre").
- Whether there would be any unacceptable effects on businesses, with particular regard to the Brentwood Enterprise Park.
- Whether the creation of new PRowS would have an unacceptable effect on landowners.
- Whether the replacement Gammon Fields Traveller Site would result in unacceptable effects on current occupiers.

Skills, Education and Employment ("SEE") Strategy

481. The Secretary of State notes the various concerns raised by TC regarding the SEE strategy, including a request for a dedicated, Council-led Labour and Business Team to ensure its residents benefit economically from the Proposed Development [ER 17.4.4]. LBH raised concerns regarding the delivery of the SEE Strategy through the supply chain which it argued would have the effect of watering down the commitments [ER 17.4.5]. The Applicant resisted ringfencing the SEE Strategy commitments at a local level as suggested by LBC stating that the use of regional targets is a more proportionate way of maximising the use of the local workforce without unduly constraining the delivery of the Proposed Development. The Applicant also argued against the TC suggestion of the Thurrock Labour and Business Team stating that it formed a dedicated SEE team in 2021, which has since worked closely with local authorities, education and training providers to develop upskilling initiatives to minimise potential skills gaps and to provide information to residents on the upcoming job opportunities [ER 17.4.6].

482. TC also wanted the Applicant to establish clear and ambitious targets for engaging local labour and apprentices during the construction phase and argued that grants should be provided to improve businesses environments and support green businesses [ER 17.4.4]. Similarly, LBH wanted to see specific local targets so that employment and apprenticeship opportunities are secured for Havering residents and GBC's LIR argued for a skills and training hub in Gravesham and commitments to ensure contractors should be required to use local labour whenever possible, including apprenticeships to provide a long-term legacy [ER 17.4.5]. The ExA considered that the targets contained in the SEE strategy are appropriate and has seen no substantive evidence, which would lead it to conclude that the targets are not ambitious or would be undeliverable. The ExA further noted that the Applicant would review and update the SEE strategy, including targets, in consultation with the Employment and Skills Working Group at least every two years. This body would include representatives from Brentwood Council, ECC, LBH, GBC and TC. As such, should local authorities have concern that certain targets are not being met there would be a process through which these matters could be raised and addressed [ER 17.4.55].

483. The ExA considered that given the length and scale of the Proposed Development, and that it would pass through multiple local authority areas, the Applicant's project wide approach would be the more effective and flexible way to deliver the Proposed Development while ensuring local residents benefit from jobs and training opportunities. The setting of individual local targets would be problematic for a host of reasons not least that different authorities would seek different and conflicting targets making coordination difficult and for similar reasons the ExA considered the TC request as being unnecessary [ER 17.4.53]. The ExA further noted that the money for economic and skills officers was included in the final signed section 106 agreements with local authorities, which would provide local authorities with funding to allow a dedicated member of staff to input into the SEE Strategy [ER 17.4.54].

484. In terms of job creation, TC suggested that the figure of 22,000 jobs contained in the SEE strategy was misleading. The Applicant argued this figure includes both those employed directly by the Proposed Development, and those who would benefit from the supply chain [ER 17.4.7]. The ExA were unable to form a judgement as to the robustness of the 22,000 figure from the information provided by the Applicant but concluded that while there might be some uncertainty regarding the Applicant's figures, there was no suggestion from TC or any other local authority that the Proposed Development would not deliver very considerable employment benefits [ER 17.4.56].

485. Whilst the Applicant could have taken a different approach in relation to the delivery of the SEE Strategy, and could have provided more clarity around its job creation figures, the ExA concluded that the Applicant did not provide an unreasonable approach in the delivery of its SEE strategy and strikes an appropriate balance between the securement of local benefits while maintaining sufficient workforce flexibility to deliver what will be a very large and complex project [ER 17.4.57]. The Secretary of State agrees.

Workforce Accommodation

486. The Secretary of State notes that GBC and TC raised concerns about the Applicant's assumption that the construction workforce would be able to find local accommodation without affecting the local housing market, particularly in relation to vulnerable and homeless households. In GBC's case these concerns were heightened by the Council's constrained housing supply [ER 17.4.8]. The Applicant referred to its Workers Accommodation Report ("WAR"), which showed that the demand for housing from the Proposed Development would be unlikely to be significant at a macro-scale [ER 17.4.10]. To ensure the conclusions of the WAR were robust, the Applicant updated the WAR to reflect the most up to date 2021 census data, which showed that there are now 4780 more households (translating into approximately 10,000 more bedspaces) in the private rented sector compared to 2011. This, according to the Applicant, further reduced the impact of the Proposed Development on local accommodation beyond that stated in the WAR [ER 17.4.11]. The Applicant also carried out a sensitivity test that reduced the catchment area artificially to 30 minutes journey time. Even at that scale, the WAR demonstrated that demand would represent a very small proportion of overall supply and remains well within the level of frictional vacancy available (calculated by subtracting the monthly churn rate of households changing hands from the percentage of properties that are vacant) [ER 17.4.10]. At the close of the Examination, TC and GBC remained concerned about a potential

reduction in emergency accommodation available to the Council homeless households. The Applicant highlighted the amendments made to the Framework Construction Travel Plan, which included a commitment relating to the management of workforce accommodation [ER 17.4.13]

487. The ExA were satisfied that the Applicant has appropriately assessed the issue of workforce accommodation. However, and notwithstanding, the very clear conclusions of the WAR in terms of housing supply and demand, the Applicant's approach recognises that there is a level of uncertainty regarding pressure on housing services. To that end, the FCTP and WAR contain commitments to best-practice monitoring, forward-looking assessments, collaboration, and intervention [ER 17.4.58].

488. GBC suggested a number of new requirements for the DCO, which related to housing and worker accommodation, specifically the use of accommodation by non-local workers based on the Hinckley Point C DCO. The Applicant considered the requirement to be unnecessary in light of the highly precautionary assessment and sensitivity analysis, which shows no effect on accommodation in the WAR [ER 17.4.14]. The ExA agreed, noting that the circumstances of the Proposed Development are very different to Hinckley Point C both in terms of workforce demand and the level of existing housing supply in the local area. It was considered that there was sufficient flexibility in the Applicant's monitoring strategy to respond to pressures should they arise during the construction phase. The ExA, therefore, did not consider the Proposed Development would give rise to unacceptable effects on local housing markets [ER 17.4.59]. The Secretary of State has no reason to disagree with this.

Effects on Public Open Space provision

489. The Secretary of State notes that concerns were raised about the effects of the Proposed Development notably on Shone Woods Country Park ("SWCP"), Southern Valley Golf Course ("SVGC"), Gravesend Golf Centre, Ron Evans Memorial Field and Thames Chase Community Forest ("TCCF") and Folkes Land Woodland.

490. With regard to SWCP, the Secretary of State notes the concerns about the effects of the construction programme, in particular the closure of Brewers Road bridge on the viability of SWCP [ER 17.4.15]. The Applicant accepted that the bridge closure will impact SWCP, but that the main access to SWCP will remain open, alongside access for NMUs [ER 17.4.16]. The Applicant has also offered 1.91ha of replacement land to mitigate against the loss of 0.44ha of permanently acquired land and 1.06ha over which permanent rights are to be sought – with the replacement land noted by the Applicant to act as a functional connection providing improved access between Brewers Wood and Great Crabbles Wood improving access between open spaces. The Secretary of State notes that KCC did not object to the quantum, nor location of replacement land and that further mitigation for SWCP could be provided in the form of Side Agreement between KCC and Applicant. This would set a methodology for KCC to claim quarterly against losses where it can be demonstrated that the loss is caused by the Proposed Development [ER 17.4.17]. The Applicant provided a post-Examination representation on the 15 March 2024, confirming that a side agreement has been reached with KCC on the issue of SWCP.

491. The ExA is satisfied that there would not be a significant adverse effect on SWCP, based on both the quantum of replacement land proposed, and the fact the main access would not be impacted by construction impacts [ER 17.4.60]. The Secretary of State sees no reason to disagree with the conclusion drawn by the ExA.

492. The Secretary of State is aware that GBC argued in its LIR that the loss of SVGC without the provision of replacement land would conflict with paragraph 5.16 of the NSPNN [ER 17.4.19]. The Secretary of State notes that the SVGC ceased operations in August 2022 and is now in the ownership of the Applicant. There is no dispute that prior to its closure, the site was previously promoted as a housing site. Furthermore, there has not been any substantial challenge to the Applicant's assessment that there is limited viability and local demand for such a facility, and the Applicant proposes to provide replacement land of an equivalent scale that would be public open space at Chalk Park to cover that lost at SVGC [ER 17.4.20]. GBC accepted that this provision of open space at Chalk Farm would be accessible to the wider public in a way the former golf course was not, but argued the loss of sporting facilities would disadvantage the local community [ER 17.4.21].

493. The ExA did not accept this argument as the facility is not operating, and even when operating it was a private facility from which most local residents derived no benefit. Even for those using the facility, they had to pay to do so. The Secretary of State is in agreement with the ExA that the provision of open space at Chalk Farm, which is free of charge and would be highly accessible and inclusive, will address the deficit of such facilities in the local area and provide significant health and wellbeing benefits that outweigh the loss of a derelict, private golf course. The Secretary of State also agrees with the ExA's conclusion that as there is no obvious impediment of the provision of active sports events at Chalk Park and is satisfied there is no conflict with the NPSNN in respect of the SVGC [ER 17.4.62].

494. Swing Rite Golf Ltd, operator of Gravesend Golf Centre, raised concerns about the loss of golf needs in the local area given that part of the Gravesend Golf Centre will be permanently acquired as a result of the Proposed Development. To mitigate the impact on the Gravesend Golf Centre, the Secretary of State is aware that replacement land is proposed to the east of the Cascades Leisure Centre on part of the SVGC site and that GBC (the landowner) have accepted the principle of a settlement regarding funding, consenting and delivery of a replacement recreational facility within their SoCG [ER 17.4.22 - 17.4.24]. The ExA concluded that the Design Principle S3.17 and commitments in the SACR are sufficient to ensure a suitable amount and quality of replacement land to ensure there will not be unacceptable adverse effects on Gravesend Golf Centre [ER 17.4.63]. The Secretary of State accepts the conclusion drawn by the ExA on Gravesend Golf Centre.

495. The Secretary of State is also aware that a disagreement with TC remained at the close of Examination about the timing of the provision of replacement land at Ron Evans Memorial Field [ER 17.4.25]. The Applicant plans to provide the replacement land after the works are complete, meaning the replacement land will be available for public use five years after the existing Ron Evans Memorial Field is impacted by the Proposed Development. The uplift in the amount of replacement land being offered reflects the amount of time the playing fields would be closed to the public. In addition, 6.24ha of the Ron Evans Memorial Field that are outside of the Order Limits would remain available for public use during the works [ER 17.4.26 - ER 17.4.27]. In

response to the concerns raised, the Applicant confirmed 3.43ha of replacement land could be brought forward in the northern parcel at an earlier date than originally intended, which the Applicant reflected in an updated SACR secured via article 61 of the DCO [ER 17.4.28 - ER 17.4.29]. The Secretary of State agrees with the ExA and TC that up to five years is a significant period of time during which the local community would be deprived of access to the Ron Evans Memorial Field. However, bearing in mind the uplift in replacement land and availability of alternative land, the Secretary of State is minded to agree with the ExA that the Applicant's proposals for Ron Evans Memorial Field are acceptable, and will not create significant adverse effects for the local community [ER 17.4.64].

496. The Secretary of State notes the concerns raised regarding the potential impact on the TCCF, both as a greenspace and community endeavour, as a result of the permanent acquisition of 10.14ha of the 46ha of land at TCCF, and the temporary possession ("TP") of land and permanent acquisition of rights for diversion and modification of utility works covering a further 7.06ha of TCCF for the Proposed Development [ER 17.4.30]. The ExA concluded that there will be a degree of betterment for community and users of TCCF with the provision of the uplift in the amount of replacement land, connectivity benefits arising from its location and the 6.6ha net gain of open space for LBH [ER 17.4.65]. The Secretary of State sees no reason to disagree with the conclusions drawn by the ExA.

497. Furthermore, the Secretary of State notes that the proposals include the permanent acquisition of land and rights over it at Folkes Lane Woodland, with 2.9ha of replacement land proposed. LBH have raised no objection to the amount or quality of the replacement land [ER 17.4.32]. The Secretary of State is satisfied like the ExA that the effects of the Proposed Development on Folkes Lane Woodland have been appropriately considered and mitigated, and thus will not result in significant effects on existing users of the land [ER 17.4.66].

Effects on businesses

498. Concerns were raised by GBC and others that the proposed works would result in the displacement of a number of businesses (namely Baylis Landscape Contractors and Cobham Service Station), for which alternative locations have not been agreed and where the loss of such businesses has been deemed to result in moderate adverse effects for each business, which is significant [ER 17.4.33].

499. In response, the Applicant highlighted that businesses could claim compensation under section 152 of the PA 2008 or section 10 of the Compulsory Purchase Act 1965 when their land or property is being compulsorily purchased [ER 17.4.34]. With respect to Cobham Service Station the Applicant highlighted that it was working to improve provision of roadside facilities including a possible new lorry park at Chigwell and encouraging the inclusion of further service provision within forthcoming Route Strategies in the region [ER 17.4.35]. Furthermore, in response to the ExA, the Applicant stated that NH do not establish or operate roadside facilities, and that Tollgate Services nearby have recently expanded [ER 17.4.36].

500. The ExA is noted to be satisfied that the effects on business and business land have been appropriately identified and assessed in ES Chapter 13 and that there would be significant adverse effects on a number of businesses that would be lost as

a result of demolition with mitigation in the form of appropriate compensation mechanisms [ER 17.4.67]. The Secretary of State sees no reason to disagree with the ExA. With reference to Cobham Service Station, the Secretary of State carried out further consultation with regard to the loss of the Service Station, which has been discussed in this Decision Letter.

501. The Secretary of State is aware that BCC, ECC and landowners of Cobham Hall Estate expressed concerns that the Proposed Development may impact on plans for the new employment site and subsequent delivery of the Brentwood Enterprise Park ("BEP"), in particular, in a scenario whereby the LTC scheme is implemented in advance of the BEP proposals [ER 17.4.37].

502. Clarification was provided during the Examination that should both projects proceed at the same time, joint access to the BEP would be provided from the B186. Paragraphs 4.3.18-20 of the CoCP confirms that both projects would be able to co-exist if brought forward at the same time. A Design Principle was also agreed with the landowner St Modwen Development Ltd to reflect this position [ER 17.4.38]. The Secretary of State is also aware that the Applicant changed the Proposed Development during the Examination, reducing the area within the Order Limits by approximately 14.5ha to remove a potential obstacle to the implementation of any future planning applications to extend the BEP, and a number of issues were agreed at Examination between BBC and St Modwen Developments Ltd [ER 17.4.39]. The SoCG between the Applicant, BBC and ECC confirm that matters relating to the BEP are agreed, including the agreement on the potential bridge construction scenarios over the A127, meaning the BEP could proceed independently of the Proposed Development [ER 17.4.40].

503. The ExA concluded that the relevant SoCGs confirm that the matters pertaining to the BEP are agreed, and that from the evidence provided it was satisfied an extension to BEP could proceed independently to the Proposed Development [ER 17.4.68]. The Secretary of State accepts the conclusions drawn by the ExA.

504. PoTLL raised the matter that Tilbury 2 is of national significance and should be able to operate unfettered throughout the construction period. However, it is noted that within the ES Chapter 12, TP of approximately 27ha of land at Tilbury2 would be required for access to the northern tunnel portal, which the Applicant assessed would result in a slight adverse impact on the operation on Tilbury 2 [ER 17.4.41]. Considering both the scale of overall land impacted by TP, and the unlikely event that LTC construction would overlap with Tilbury 2, the ExA concurs with the Applicant that the effect would be slight adverse [ER 17.4.69]. The Secretary of State sees no reason to disagree with the conclusions drawn.

505. The Secretary of State is aware that the ExA has considered the written and oral submissions made by the owners of Whitecroft Care Home and the Applicant's responses noting that there is no dispute between parties that the proximity of construction operation would have an adverse effect on the business. However, the ExA is noted to not agree with the Applicant's assessment included in ES Chapter 13 and its Equality Impact Assessment [ER 17.4.42]. The Secretary of State carried out further consultation with regard to the compulsory acquisition of Whitecroft Care Home which has been discussed in this Decision Letter.

Effects on landowners

506. The Secretary of State is aware that a number of agricultural landowners raised concerns about the adverse effect of the Proposed Development on their respective land holdings. A total of 1804.65ha of agricultural landholdings identified within ES Chapter 13 would be impacted, with 33 landholdings in agricultural use to be permanently affected with moderate to very large adverse effects [ER 17.4.43].

507. In response, the Applicant stated that it had and will continue to work proactively with landowners to reduce the impact of the Proposed Development as far as reasonably possible, and that where land take is unavoidable, compensation would be payable in accordance with the Statutory Compensation Code [ER 17.4.44].

508. The Secretary of State notes concerns were raised during the Examination about proposals to upgrade certain routes to bridleway status due to historical misuse in the area, and concerns were raised about the effects on adjoining land uses/owners to these routes [ER 17.4.45]. The Applicant confirmed that it would work with the landowners to see if these concerns could be addressed at the detailed design stage in accordance with the Design Principles [ER 17.4.73].

509. Whilst it is noted that disagreements remained at the end of the Examination, the ExA is satisfied the Applicant extensively engaged with landowners and sought to identify and address specific area of concern through design changes [ER 17.4.74]. Furthermore, the ExA is satisfied that the Applicant satisfactorily explained why permanent acquisition of the freehold of land is necessary where PROWs are created [ER 17.4.75]. The Secretary of State sees no reason to disagree with these conclusions.

Effects on NMUs

510. The Secretary of State is aware that several Interested Parties raised concerns regarding the potential for disruption to local communities and residents, as a result of the closure or diversion of PROWs and/or traffic severance [ER 17.4.46].

511. In response, the Applicant highlighted that all routes severed by the Proposed Development would be reinstated via bridges or underpasses, bar Hornsby Lane in Thurrock, and in most cases, re-provided road links will include new or enhanced provision for WCHs. Some re-provided local road links also include green corridors to reconnect or enhance connections to ecological habitats [ER 17.4.47]. The Secretary of State notes that the Applicant did accept that there would be temporary adverse impacts to residents and communities, which will be managed through measures and commitments in the Control Documents to ensure these are managed effectively in collaboration with local authorities [ER 17.4.48].

512. The ExA agrees with the Applicant that the outline Traffic Management Plan for Construction contains commitments to minimise the disruption to routes during the construction phases and that overall, the Proposed Development would be unlikely to result in significant adverse effects on NMUs during the construction phase [ER 17.4.77].

Effects on Community Land

513. The Secretary of State is aware that Gammon Field Traveller site would be permanently acquired in connection with the construction of the Proposed Development, and that to mitigate the impact of the Proposed Development on current occupiers of the site a new site would be provided to the west of the existing site to be secured via requirement 13 of the DCO and Design Principle S11.12. It is noted that significant engagement has been carried out between the Applicant, TC and the residents of Gammon Field and that there have been no concerns raised that the replacement site would not be equivalent in terms of size and quality [ER 17.4.50 - 17.4.51]. Given this provision of replacement site, the Secretary of State accepts the ExA's conclusion that the Proposed Development will have a neutral effect on residents of Gammon Field Traveller Site [ER 17.4.78].

The Secretary of State's Conclusion on Social and Economic Considerations

514. The Secretary of State agrees with the ExA's conclusion that, in terms of socio-economic effects, the Applicant has adequately assessed the effects of the Proposed Development and has provided sufficient evidence to support its conclusions on those effects [ER 17.5.2].

515. Likewise, the Secretary of State sees no reason to disagree with the ExA's conclusion that the Proposed Development will accord with the relevant socio-economic policy contained within NPSNN, notably paragraphs 5.215, 5.216, 5.162, 5.166, 5.174, 5.175 and 5.181 [ER 17.5.5]. Where outstanding matters remain unaddressed in terms of side agreements for financial compensation, the ExA were satisfied that in the case of Gravesend Golf Centre, sufficient mitigation out with the pending legal agreements has been secured by the DCO application, in particular the Control Documents, and thus there would be no significant disbenefits [ER 17.5.3]. The Secretary of State accepts the conclusions drawn.

516. Furthermore, the ExA concluded that there will be significant benefits from the proposed construction phase for NMUs and that, despite the adverse construction impacts, that overall, the positive economic and social benefits weigh significantly in favour of the Order being made [ER 17.5.5]. The Secretary of State also agrees with this.

Green Belt

517. It is noted that the majority of the alignment the Proposed Development is designated Metropolitan Green Belt [ER 18.3.2]. The Secretary of State notes the applicable policy considerations are summarised in [ER 18.2.1 – 18.2.3]. The Secretary of State has paid due regard to paragraph 5.178 of the NPSNN, which outlines the Secretary of State will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. In view of the presumption against inappropriate development, the Secretary of State will attach substantial weight to the harm to the Green Belt, when considering any application for such development. The Secretary of State has also paid due regard to paragraphs 152 to 155 of the NPPF which are to be considered for proposals affecting the Green Belt.

518. The Secretary of State notes that Appendix E of the Planning Statement outlines the Applicant's assessment of the Green Belt [REP9-223] and their very special circumstances case. The Secretary of State notes that the Applicant's case for VSC includes an overriding need for the Proposed Development to deal with longstanding transportation, economic, community and environmental problems caused by congestion at Dartford and the lack of alternative river crossings to the east of the Dartford crossing [ER 18.3.13]. The Secretary of State has had further regard to the fact it had been found that to satisfy the objectives of the Proposed Development, technical considerations, and achieve a least impactful solution, it would not be possible for an intervention to take place without it being located in the Green Belt [paragraph E.8.3 of Appendix E]. The Secretary of State has taken account that the Proposed Development was included in the Road Investment Strategy (RIS) for 2015-2020 and is in RIS2 2020-2025 [ER 18.3.14]. It is further noted that the Proposed Development is expected to have transformational and significant positive benefits on the future growth potential of the national and regional economies and the prosperity of the local population [paragraph E.8.5 of Appendix E]. Furthermore, the Applicant's assessment of the Green Belt harm took into account the various local authority Green Belt assessments covered by the route of the Proposed Development [ER 18.3.4].

519. The first Green Belt purpose is to check the unrestricted sprawl of large built-up areas, and the key purpose is to prevent the towns of Rochester and Gravesend from merging. The Applicant's assessment found that the Proposed Development would not prejudice this purpose as it would create a firm eastern Green Belt boundary to contain any further expansion of Gravesend [ER 18.3.5]. The second purpose is to prevent major neighbouring towns merging into one another, but as the Proposed Development is a highway scheme the Applicant did not consider it would result in the merging of towns [ER 18.3.7]. In relation to the third purpose, the Applicant accepted that the Proposed Development would conflict with the third purpose, to assist in safeguarding the countryside from encroachment, but highlighted that the Proposed Development includes new public open spaces such as Tilbury Fields, which is beneficial in terms of retaining the openness of the Green Belt and safeguarding the countryside from encroachment. Proposed woodland planting and restoration would help to mitigate the visual impacts and help safeguard from encroachment. In respect of the fourth purpose, to preserve the setting and special character of historic towns, the Applicant considers there would be no harm to such towns. The fifth purpose is to assist in urban regeneration by encouraging the recycling of derelict and other urban land. The Applicant states that the Proposed Development would have economic, community and transport benefits and that the economic growth benefits could help to assist in urban regeneration [ER 18.3.9]. The position of the Applicant is that the Proposed Development would result in no harm to four of the five purposes, but it recognised that it would not contribute to the purpose of safeguarding the countryside from encroachment. The Applicant set out that there is explicit recognition in the NPSNN that linear infrastructure will often have to pass through the Green Belt [ER 18.3.10].

520. The Secretary of State also notes the Applicant's conclusion that whilst the Proposed Development would harm the spatial and visual dimensions of openness, the extent of that harm would vary depending upon the specific location in the Green Belt. Overall, the Applicant concluded there would be significant harm to the openness of the Green Belt. [ER 18.3.11].

521. The Applicant accepted that the Proposed Development taken as a whole does not fall within any of the exceptions identified in paragraphs 154 or 155 of the NPPF and is therefore considered as ‘inappropriate’ development in the Green Belt [ER 18.3.3 and ER 18.5.1, third indent], which in line with paragraph 5.170 of the NPSNN sets out that there is a presumption against inappropriate development, unless very special circumstances exist. However, at paragraph 171 of the NPSNN, it is recognised that linear infrastructure such as new roads will often have to pass through Green Belt land [ER 18.2.2]. The Secretary of State has noted that under paragraph 5.178 of the NPSNN, she will need to assess whether there are very special circumstances to justify inappropriate development.

522. The Secretary of State has considered concerns raised by TC and GBC, alongside various other parties, pertaining to the Applicant’s assessment of the Green Belt and concerns over the generalised nature related to the loss of the Green Belt [ER 18.4.1 – ER 18.4.2]. In response to concerns raised, and at the request of the ExA, the Applicant provided a Green Belt Harm Assessment [REP7-181] to establish the extent of harm the Proposed Development could cause to the Green Belt, with a revised version of Appendix E to the Planning Statement taking account of the harm assessment was submitted at Deadline 9 [REP9-223] [ER 18.4.4]. The Secretary of State notes that within this assessment, the Applicant explains that very special circumstances exist and there is no alternative means of providing the scheme without a route through Green Belt land.

523. The Secretary of State notes that the ExA found the additional Green Belt assessments submitted satisfactorily addressed concerns raised in the LIRs and are sufficient to enable all parties to come to an informed view on the level of Green Belt harm, as well as the core elements of the Applicant’s VSC [ER 18.5.1]. The Secretary of State is also satisfied there is sufficient information to inform her decision.

The Secretary of State’s Conclusion on Green Belt

524. In accordance with paragraph 153 of the NPPF, the Secretary of State agrees with the ExA that the harm to both the openness of Green Belt and to the purpose of safeguarding the countryside from encroachment must carry substantial weight in the overall Green Belt balance [ER 18.5.1, third indent]. However, given the benefits that the Proposed Development will deliver including tangible transport, economic, community and environmental benefits and that the ExA set out that there are no preferable Green Belt or non-Green Belt alignments that would meet the objectives of the Proposed Development [ER 21.2.112], the Secretary of State is content that the significant harm to the Greenbelt and any other harm (as identified elsewhere in this decision letter) is clearly outweighed by these factors and that very special circumstances therefore exist that means that consent can be granted. However, in accordance with paragraph 5.178 of the NPSNN the Secretary of State agrees with the ExA that in relation to the planning balance, these matters attract substantial weight against the Proposed Development and DCO being made.

FINDINGS AND CONCLUSIONS IN RELATION TO HABITATS REGULATIONS ASSESSMENT (“HRA”)

525. This section should be read alongside the Secretary of State's HRA titled: Habitats Regulations Assessment for an Application under the Planning Act 2008 – The Lower Thames Crossing (March 2025).

526. Under regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) ("the Habitats Regulations"), the Secretary of State (as the Competent Authority) is required to consider whether the Proposed Development (which is a project for the purposes of the Habitats Regulations) would be likely, either alone or in-combination with other plans and projects, to have a significant effect on a European Site [ER D.3.1].

527. Where likely significant effects cannot be ruled out, the Secretary of State must undertake an appropriate assessment ("AA") under regulation 63(1) of the Habitats Regulations to assess potential AEoI. Such an assessment must be made before any decision is made on undertaking a plan or project or any decision giving consent, permission or other authorisation to that plan or project. In the light of any such assessment, the Secretary of State may grant development consent only if it has been ascertained that the plan or project will not, either on its own or in combination with other plans and projects, adversely affect the integrity of such a European Site, unless there are no feasible alternatives and imperative reasons for overriding public interest apply (regulation 64).

528. The Secretary of State agrees with the ExA that the Proposed Development is not directly connected with or necessary to the management of a European Site and has considered the application in line with her duty under the Habitats Regulations [ER D.2.2].

529. The Secretary of State has given consideration to the Applicant's supporting HRA documents as set out at ER 20.2.2 and ER 20.2.3 and she has considered the potential impact of the Proposed Development on four European protected sites that are within 30km of the Proposed Development; Thames Estuary and Marshes Special Protection Area ("SPA"), Thames Estuary and Marshes Ramsar site, North Downs Woodlands Special Area of Conservation ("SAC"), and Epping Forest SAC.

530. The Secretary of State notes that Natural England, as the Statutory Nature Conservation Body, did not dispute the sites scoped into the Applicant's HRA assessment (ER D.2.15) and she agrees with the ExA that all relevant sites have been considered (ER D 2.17).

Likely significant effects

531. A screening assessment was undertaken by the Applicant to identify likely significant effects ("LSE") on the following European sites [ER D.2.11]:

- Thames Estuary and Marshes SPA.
- Thames Estuary and Marshes Ramsar.
- North Downs Woodlands SAC; and,
- Epping Forest SAC

532. During the Examination, the PLA raised concerns regarding the age of the Applicant's baseline terrestrial and marine surveys used for its HRA. NE stated that for projects of the scale of the Proposed Development, some design elements would be decided at a further detailed design stage and that updating survey data at a later stage was an appropriate action. The PLA acknowledged that large projects would need to update surveys after consent was granted, but maintained its position that the initial decision should be made on valid data, referring to estuarine habitats as particularly subject to rapid change. The ExA noted that pre-construction surveys are secured by the Applicant in its CoCP, and within the DCO. The Secretary of State notes that the ExA considered that there are sufficient means to ensure that as design develops, appropriate ecological surveys will be undertaken, which is secured in the DCO Schedule 2 Requirements [ER D.3.5 - D.3.8]. The Secretary of State finds no reason to disagree.

533. The Applicant screened the sites listed below in the table, and considered each site against the potential impacts set out in the second column, and concluded no LSE of the Proposed Development alone, and in combination with other plans and projects:

Thames Estuary and Marshes SPA	<ul style="list-style-type: none"> • reduction in habitat area <ul style="list-style-type: none"> ○ changes in groundwater quality and quantity from tunnel ○ changes in surface water quality and quantity (associated with functionally linked land ("FLL")) ○ changes in air quality from construction dust emissions (associated with FLL) ○ changes in air quality from vehicle emissions (associated with FLL) ○ introduction/spread of invasive non-native species (INNS) (associated with FLL) • reduction in species density <ul style="list-style-type: none"> ○ vehicle collision with species (associated with FLL) ○ utilities infrastructure collision (associated with FLL) • disturbance to species <ul style="list-style-type: none"> ○ changes in noise and vibration – under water and above ground from tunnel construction (associated with FLL) ○ changes in light levels (associated with FLL) ○ changes in visual disturbance – vehicles in eyeline (associated with FLL) ○ changes in recreational disturbance – wider visitor pressures • changes to key indicators • climate change
Thames Estuary and Marshes Ramsar	<ul style="list-style-type: none"> • reduction in habitat area <ul style="list-style-type: none"> ○ changes in groundwater quality and quantity from tunnel ○ changes in surface water quality and quantity (associated with FLL)

	<ul style="list-style-type: none"> ○ changes in air quality from construction dust emissions (associated with FLL) ○ changes in air quality from vehicle emissions ○ changes in air quality from vehicle emissions (within the site) ○ introduction/spread INNS (associated with FLL) ● reduction in species density <ul style="list-style-type: none"> ○ vehicle collision with species (associated with FLL) ○ utilities infrastructure collision (associated with FLL) ● disturbance to species <ul style="list-style-type: none"> ○ changes in noise and vibration – under water and above ground from tunnel construction (associated with FLL) ○ changes in noise and vibration above ground within site and associated FLL ○ changes in light levels (associated with FLL) ○ changes in light levels – within the site (associated with FLL) ○ changes in visual disturbance – vehicles in eyeline (associated with FLL) ○ changes in recreational disturbance – wider visitor pressures ● changes to key indicator ● climate change
North Downs Woodland SAC	<ul style="list-style-type: none"> ● reduction in habitat area <ul style="list-style-type: none"> ○ changes in air quality from vehicle emissions (within the site) ● reduction in species density ● disturbance to species ● changes to key indicators ● climate change
Epping Forest SAC	<ul style="list-style-type: none"> ● reduction in species density ● disturbance to species ● changes to key indicators ● climate change

534. The Applicant concluded no LSE from changes in light levels at both the Thames Estuary and Marshes SPA and Ramsar sites. The Applicant noted in its HRA [APP-487 at Table 6.16] that NE agreed with this conclusion. The ExA concluded that there was potential for LSE from this impact pathway (ER Table D1) but did not progress to Stage 2 Appropriate Assessment nor outline why it disagreed with the Applicant and NE. The Secretary of State has reviewed the Applicant's HRA Report and NE's response, and she is satisfied that LSE from changes in lighting can be ruled out.

535. The ExA noted that NE agreed with the Applicant's screening stage conclusions, except for the following [ER D.3.14]:

- Conclusions of no LSE from underwater noise on Thames Estuary and Marshes SPA birds.
- Concerns with the approach to assessing air quality effects with regard to whether the Development's traffic model builds in the same data for in combination development as that used for Local Plans; and
- Conclusions of no LSE on North Downs Woodlands SAC.

536. The PLA also disputed the conclusion of no LSE from underwater noise on the Thames Estuary and Marshes SPA [ER D.3.15].

537. In addition, the conclusion of no LSE in relation to impact pathways was also disputed by other Interested Parties. These disputed matters were explored by the ExA [ER D.3.16]:

- Thames Estuary and Marshes SPA/Thames Estuary and Marshes Ramsar site:
 - Underwater noise and vibration – construction.
 - Visual disturbance – construction.
- Thames Estuary and Marshes Ramsar site:
 - Nitrogen deposition – operation.
 - Air quality – construction.
- North Downs Woodlands SAC:
 - Air quality – operation.

538. The Applicant's in combination assessment approach was also disputed by several Interested Parties, in particular the identification of other plans and projects in relation to air quality assessments, which are relevant to the in combination assessment of effects on integrity [ER D.3.19]. The ExA's conclusions are summarised below.

Underwater noise – Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar site

539. The Applicant's modelling in its HRA concluded that both noise on underwater feeding birds and particle velocity (affecting invertebrate prey distribution) would not be affected by tunnel construction. The Applicant concluded that noise and vibration would not be perceptible in the water column above the tunnel during construction against background noise and that there was no LSE on the qualifying features of the SPA and Ramsar site alone or in combination with other plans or projects [ER D.3.21].

540. This conclusion of no LSE from this impact pathway alone or in combination was disputed by NE and PLA [ER D.3.22]. The Applicant provided a technical note to clarify and support its conclusion that as tunnel noise would not be heard above background levels, there would be no possibility of an effect [ER D.3.23]. However, NE maintained that if noise could breach background levels, then an effect pathway still exists and that was a matter that should be explored through an AA, although NE also considered that the Applicant had provided sufficient information to be able to conclude that adverse effect on site integrity ("AEoI") was unlikely [ER D.3.25 and D.3.29]. The ExA notes that the disagreement between the Applicant and NE was a procedural matter

[ER D.3.30]. The Secretary of State agrees with NE that LSE cannot be ruled out at Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar site, and that this impact pathway progresses to Stage 2 AA.

Visual Disturbance – Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar site

541. The PLA disputed the conclusion of no LSE from visual disturbance. On further examination, the PLA noted that the Applicant's REAC within the CoCP and the first iteration of Environmental Management Plan requires a 3m high noise-attenuation barrier to be installed and that would also provide visual screening. The Applicant's HRA [APP-487 at paragraph 6.2.99] noted that false cuttings and noise attenuation barriers for human receptors are considered industry standards regarding their effectiveness in reducing noise and were integral to the Proposed Development, and therefore there was no scope for visual disturbance to birds using the foreshore. The PLA considered there would be no effect from working on the foreshore in winter with the mitigation in place. No other Interested Parties raised concerns on this matter [ER D.3.32]. The Secretary of State notes that the ExA was content that there would be no LSE from visual disturbance due to the design of the Proposed Development, and was satisfied that there are other relevant measures secured by the Applicant's final REAC, which would minimise impacts to these European sites but have not been relied upon to reach a conclusion of no LSE [ER D.3.33]. The Secretary of State finds no reason to disagree with the conclusion of no LSE from visual disturbance on the Thames Estuary Marshes SPA and the Thames Estuary Marshes Ramsar site.

Nitrogen deposition (operation) – Thames Estuary and Marshes Ramsar site

542. The PLA raised the issue that nitrogen deposition during operation of the Proposed Development as an impact pathway required assessment for LSE. The Applicant explained that there were no intertidal habitats that could be affected within 200m of the Affected Road Network ("ARN") because the new road is in the tunnel at this point. The PLA and other Interested Parties did not make further representations on this matter [ER D.3.34].

543. The PLA pointed out that the nitrogen deposition critical load ("NCLo") at the Ramsar site had reduced, as shown on the Air Pollution Information System from May 2023. However, in its Deadline 1 response [REP1-262] in relation to the new NCLo, NE stated that its "current position is not to require reassessments of protected sites where previous decisions were made based on the earlier critical loads, and where planning applications are at an advanced stage of determination." This was noted by the PLA [ER D.3.35]. The Secretary of State notes that NE were satisfied with the Applicant's rationale for screening out LSE during the operational stage of the Proposed Development [ER D.3.36] and that no other Interested Parties submitted representations on this matter [ER D.3.37]. The Secretary of State notes that the ExA was satisfied with a conclusion of no LSE for this impact pathway, based on the reasons provided by the Applicant and taking into account the view of NE as the appropriate nature conservation body [ER D.3.38]. The Secretary of State agrees that LSE can be ruled out from nitrogen deposition during the operational phase of the Development on the Thames Estuary and Marshes Ramsar site.

Air quality construction dust – Thames Estuary and Marshes Ramsar site

544. The Applicant's initial HRA identified control of dust at source, through the CoCP and other Control Documents, as a measure integral to the design of the Development (and not included to address impacts on the European sites). The Applicant concluded, therefore, that there would be no LSE on the Ramsar site's qualifying features from changes in air quality during construction due to there being no impact pathway from dust. The Applicant explained [REP4-194] that a combination of control at source, monitoring (including onsite and offsite inspections) and compliance through the REAC would ensure there is no impact pathway. The ExA was satisfied with the response but reviewed the 'where practicable' caveat applied to some measures identified at paragraphs 3.3.5 - 3.3.8 of the Applicant's HRA [APP-048] and recommended a change to clarify that there must not be an inadvertent change that could lead to an impact pathway where it is necessary to secure that there is none [ER D.3.39].

545. The ExA was satisfied that there was no impact-pathway from construction dust from the Proposed Development on the Ramsar site [ER D.3.39]. However, the Secretary of State sought clarification from NE in her consultation (9 July 2024) on this matter. NE confirmed (23 July 2024) that it agreed "with the conclusion within the Report on the Implications for European Sites ("RIES") that likely significant effects in respect to dust deposition, both alone and in combination with other plans and projects, for the Thames Estuary and Marshes SPA and Ramsar site can be screened out. This conclusion was reached, subject to the good practice measures embedded within the project design (which are required irrespective of any potential impact pathways to the designated sites), being secured and implemented in full." The Secretary of State is therefore satisfied that LSE from construction dust can be ruled out.

Air quality construction nitrogen pollutants – Thames Estuary and Marshes Ramsar site

546. NE disputed the Applicant's initial conclusion of no LSE in relation to ammonia and nitrogen deposition [ER D.5.28]. In response, the Applicant provided a 'without prejudice' update on air quality, which demonstrated that there was potential for LSE from nitrogen oxides (NO_x) during construction, but not from ammonia (NH₃) emissions or nitrogen deposition [ER D.3.40]. NE agreed with the conclusions of no LSE from NO_x, but it did not agree with the Applicant's conclusion of no LSE from nitrogen deposition and NH₃. NE considered that all three pollutants have the potential for AEoI [ER D.3.41]. In light of this, the Applicant prepared an updated HRA Report [REP8-122] confirming that this updated HRA Report was not on a 'without prejudice' basis and that there was potential of LSE from NO_x, NH₃ and nitrogen deposition during construction, both alone and in combination with other plans and projects [ER D.3.43]. The ExA concluded that this impact pathway could lead to LSE on the Thames Estuary and Marshes Ramsar site and should be progressed to Stage 2 AA [ER D.3.44]. The Secretary of State agrees with this conclusion.

Air quality operation – North Downs Woodland SAC

547. Several Interested Parties disputed the Applicant's conclusion of no LSE, primarily due to the method of assessing air quality impacts [ER D.3.45 – D.3.46]. NE queried whether the Applicant had accounted for all allocated developments (consented and unconsented) from Local Plans within its traffic modelling and the use

of 'inconsequential' NO_x in its air quality modelling [ER D.3.47]. This meant that there was also disagreement of no LSE in combination during operation [ER D.3.46]. NE requested revisions to the Applicant's methodology and that further modelling be completed [ER D.3.48]. CPRE Kent queried the use of national growth models included in the traffic modelling rather than local plans and projects [ER D.3.49].

548. The Applicant responded at Deadline 2 with a technical note appended to its SoCG with NE, and a 'without prejudice' sensitivity test technical note on air quality and European sites to address NE's position on the methodology and modelling, the results of which indicated an LSE on this site from this impact pathway [ER D3.50]. By Deadline 8, the Applicant provided an updated HRA Report [REP8-122], which concluded that there was potential for LSE both alone and in combination [ER D.3.51]. The ExA was content that NE's concerns were addressed by this conclusion [ER D.3.52] and the Secretary of State also agrees that this impact pathway should be progressed to Stage 2 AA.

Likely significant effects in combination

549. An assessment of the Proposed Development in combination with other plans or projects has been completed at Stage 1 LSE screening and Stage 2 AA. At Stage 1 LSE screening the assessment is limited to the European sites and effect pathways where no LSE has been found as a result of the Proposed Development alone. The Applicant explains that where LSEs alone are identified, then the effects in combination with other plans and projects are considered at Stage 2 AA. The ExA indicates in its RIES that in combination impacts were addressed in Stage 2 AA [ER D.3.12 – D.3.13]. The Secretary of State is content with this approach.

Likely significant effects conclusions

550. The ExA considered that the Development is likely to have significant effects on the qualifying features of the European sites identified, when considered alone and in combination with other plans and projects [ER D.3.54]. The ExA was satisfied that the correct impact pathways on each site have been assessed and are summarised in Table D1 [ER D.3.53]. The Secretary of State accepts this view.

551. The following European sites and impact pathways were progressed to Stage 2 AA:

- Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar
 - disturbance to key species using functionally linked land.
 - changes in surface water quality and quantity (Ramsar site only)
 - changes in underwater noise and vibration (tunnel construction only)
 - air quality (construction)
- North Downs Woodland SAC
 - changes in air quality (operation)
- Epping Forest SAC
 - changes in air quality (operation)

552. In reaching the conclusion of the LSE screening assessment, the Secretary of State took no account of any measures intended to avoid or reduce the potentially harmful effects on the European sites.

Appropriate assessment

553. The Secretary of State has undertaken an objective scientific assessment of the implications of the Development on the qualifying features of the European sites, using the best available scientific knowledge and on a precautionary basis. The assessment has been made in light of the conservation objectives for the European sites.

554. As conservation objectives for Thames Estuary and Marshes Ramsar site are not available, the Applicant considered that the Thames Estuary and Marshes SPA conservation objectives were sufficient to support the assessment of both the SPA and Ramsar site given the Ramsar site largely overlaps with the SPA [ER D.4.4]. NE confirmed its agreement with that approach, on the basis that both sites have overlapping qualifying features and in the absence of any stated site-specific objectives for the Ramsar site [ER D.4.5]. The Secretary of State has no reason to disagree with this approach.

Applicant's approach to in combination air quality assessment

555. The Applicant's Appendix 16.2 of its Environmental Statement provided a shortlist of plans and projects used in its in combination assessment. It includes permitting information gathered from the EA in July 2020 [ER D.5.5]. However, several Interested Parties raised concerns that [ER D.5.6]:

- Traffic generating projects not operational at the opening year (2030) of the Proposed Development did not appear to be included, and thus raise queries as to whether a worst-case year has been adopted for the assessment.
- The methodology used of a general national growth figure for traffic rather than a more locationally specific growth including traffic figures for developments allocated in Local Plans and as such may not be sufficiently precautionary; and
- The methodology excluded consideration of any non-road-based nitrogen emitting developments not controlled by EA permits (e.g. small agricultural sites held on the local planning portal that could have locally important emissions).

556. NE also considered that the air quality assessment should consider NO_x, NH₃ and nitrogen deposition separately in its assessment [ER D.5.7]. The Applicant provided, at Deadline 2, a technical note on air quality (Annex C.12 [REP2-008]) and a 'without prejudice' update to its air quality assessment [REP2-068] [ER D.5.8].

557. The ExA also asked the Applicant to confirm the list of projects used in its HRA, in light of the concerns raised on the approach to the selection of projects for the in combination assessment. The Applicant responded [REP4-194] that the approach to the selection of projects was governed by the spatial extent of the impact pathways and also listed those plans and projects considered to contribute to nitrogen deposition but not via vehicle emissions [ER D.5.9].

558. NE considered [REP5-109] that the Applicant's 'without prejudice' assessment provided at Deadline 2 addressed the matter of pollutants, but concerns remained

about whether the approach overall to the in combination assessment was suitably precautionary [ER D.5.11].

559. Following NE's advice on the assessment methodology at Deadline 5, the Applicant provided its final air quality assessment at Deadline 8 [REP8-122] to address these concerns [ER D.5.13] and, it is noted, takes account of NE's recommendation that NO_x, NH₃ and nitrogen deposition be separately assessed against the relevant critical level and critical load for each site. The Applicant also confirmed that none of the transport modelling submitted to the Examination after Deadline 6 affected the assessment of effects in the HRA [ER D.5.14].

560. NE agreed in the SoCG [REP9A-014] that the Applicant's approach to non-traffic in combination assessment was satisfactory, but maintained its position that the approach did not recognise the defined local plan allocations and was not as precautionary as required by the Habitats Regulations [ER D.5.16]. NE asserted in [REP8-154] that it did not agree with the Applicant's approach of not including local plans within the in combination assessment but accepted that it was unlikely to reach agreement on this point by the end of the Examination [ER D.5.17]. It is noted that the Applicant utilised NE's 2018 guidance document 'NE's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001)' which includes guidance on in combination assessments [APP-487].

561. The Secretary of State notes that the ExA was satisfied that an assessment of AEoI from the Proposed Development in combination with other plans and projects can be based on this information, and that no other plans and projects are required to be taken into account [ER D.5.18]. NE considered the non-traffic in combination assessment was satisfactory [ER D.5.16]. The Secretary of State has no reason to disagree.

Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar

Disturbance to key species

562. Two parcels of land at Coalhouse Point and at the Metropolitan Police Firing Range have been proposed to provide wetland habitat for bird species displaced from functionally linked land by the Proposed Development [ER D.5.37]. KCC agreed with the Applicant's proposals for the firing range site, subject to the timing of works being secured to avoid sensitive times of the year for birds. Essex Wildlife Trust and NE also highlighted construction time as an important consideration. Essex Wildlife Trust also noted that mitigation should be fully ecologically functional prior to construction of the Proposed Development [ER D.5.38]. The Applicant considered that if the over-wintering and breeding seasons were avoided, then there would not be a sufficient time window to implement the habitat creation [ER D.5.39]. NE noted the difficulties in seasonal restrictions to work but advised it expected that phasing work to periods when disturbance would be less impactful on breeding and non-breeding birds should be further explored and in its Deadline 6 response identified it had been discussing the wetland at Coalhouse Point and the timing of the works with the Applicant [ER D.5.40].

563. The Applicant considered that the habitats would be ecologically functional once the scrapes and ditches were filled [ER D.5.41]. In relation to the timings of the works, NE [REP8-154] stated in response to the Applicant's Deadline 7 submission [REP7-187] that it was content that their previous concerns regarding timings of works were resolved. Furthermore "NE is now satisfied that there is unlikely to be an adverse impact to breeding birds as a result of the proposed timing of mitigation measures". NE noted that breeding birds associated with the South Thames Estuary and Marshes SSSI (and hence the SPA and the Ramsar site) were not using the areas of the site close to Milton Compound (where some new ground protection tunnel works will occur) and as such adverse effects are unlikely because of the proposed timing. The mitigation is detailed in commitment HR002 of the REAC [ER D.5.42].

564. The Applicant confirmed that the wetland habitat would be constructed prior to the main works at the North Portal site and is secured through commitment HR010 of the REAC. Following a number of technical notes and meetings, NE confirmed in the final SoCG that the information was "sufficient to for it to be confident in the conclusions of the HRA on this matter". Furthermore, NE noted the reasoning for the conclusion that AEoI due to disturbances to key species can be ruled out include [ER D.5.44]:

- the affected area is grazed land reducing potential for nitrophilic grasses to take over; and
- the impact is temporary, occurring during the construction period only.

565. The Secretary of State notes the conclusion and agrees that AEoI from disturbance to key species both alone and in combination can be ruled out for the qualifying species of the Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar site.

Changes to surface water quality and quantity

566. It is noted that the MMO and TC discussed with the Applicant the proposed water control structures required to provide water for the proposed wetland at Coalhouse Point [ER D.5.45]. The provision for water control structures at Coalhouse Point is secured as part of the licensable marine activities in Schedule 15 of the DCO. Without further information on the deliverability and viability of Coalhouse Point, NE was unable to agree with the conclusion of adverse effects on integrity on the functionally linked land ("FLL") [ER D.5.46]. NE advised that saline water should be sourced from a tidal exchange structure in the sea wall, whereas the Applicant and the EA's preferred choice was to use an existing drain to avoid disturbance to existing flood defence embankments. In its draft SoCG [REP5-034] with the EA, the Applicant explained that the choice of water control structure was still under discussion [ER D.5.47] and provided details of the proposed design of a new water level control inlet structure through the existing flood defences. The ExA noted that the Applicant considered these to be feasible, and that licensing would be determined as part of the detailed design and informed by water demand estimates [ER D.5.48].

567. In its FRA, the Applicant concluded that the new wetland would not have an adverse impact on flooding elsewhere. The FRA further notes that an inspection and maintenance plan would be developed in the detailed design to address residual risks of the control structure failing [ER D.5.49]. NE explained that works to install the water

control structures could disturb wintering qualifying birds using the foreshore and that amendments were required to the existing mitigation measures, particularly commitment HR011 of the REAC [ER D.5.50].

568. By Deadline 9, noting the changes to the seasonality of the works (commitment HR011 of the REAC) the Applicant had made, NE confirmed in their final SoCG that the information provided in a number of technical notes and meetings was “sufficient to for it to be confident in the conclusions of the HRA in this matter” [ER D.5.52].

569. The ExA was satisfied, given the above, that AEol from the Proposed Development alone or in combination with other plans and projects can be ruled out in relation to changes to water quality and quantity on the qualifying features of the Thames Estuary and Marshes SPA and the Thames Estuary and Marshes Ramsar site [ER D.5.53]. The Secretary of State agrees with this conclusion.

Changes to underwater noise and vibration (tunnel construction only)

570. Changes to underwater noise and vibration from tunnel construction was progressed to Stage 2 AA as a procedural matter. In the SoCG [REP4-324] between the Applicant and NE, NE considered that an AEol was unlikely but that the matter was better addressed at the AA stage as a pathway for LSE exists from underwater noise and vibration during tunnel construction. The PLA deferred the matter to NE in its capacity as the appropriate nature conservation body [ER D.3.29].

571. The Secretary of State notes that the ExA was content that the conclusions were agreed, and the outstanding matter is that of a procedural nature as to whether this matter needed to progress to the AA stage.

572. The Secretary of State agrees with NE and she has therefore addressed this issue at the AA stage within the HRA undertaken by the Secretary of State. She also agrees with the ExA that the Applicant has provided sufficient evidence within the technical note [REP2-009] to conclude that adverse effects on integrity from underwater noise and vibration on the qualifying features of the Thames Estuary SPA and Thames Estuary Ramsar site can be ruled out.

Air quality (construction)

573. It was agreed by NE that only vehicle emissions during construction needed to be assessed and that there was no impact from operational traffic. This position was agreed by the ExA for both alone and in combination effects [ER D.5.25]. The Applicant's Habitats Assessment Report predicted an increase in NO_x causing an exceedance of the NO_x critical level at both sites during the first two years of construction [ER D.5.26] and that this would not result in adverse effects on integrity either alone or in combination. The reasoning being that construction was temporary and that only a small area of the qualifying feature habitat would be affected, such that the ‘maintain’ target for air quality would not be affected and the Proposed Development would not undermine the conservation objectives [ER D.5.27].

574. The conclusion was disputed by NE arguing that NO_x, NH₃ and nitrogen deposition should be considered in their own right in the assessment of effects on integrity alone and in combination [ER D.5.28]. It was further noted by the ExA that the issue was whether higher nitrogen would result in a change in vegetation patterns at

the site (species/communities or saltmarsh zonation) that could make it less suitable for use by the qualifying bird features. NE considered that other sources of nitrogen, such as sedimentation or grazing, were more likely to cause a change in vegetation than atmospheric nitrogen from the Proposed Development, particularly given the 5-year construction period duration, and concluded therefore that provided further evidence of nitrogen deposition and NH₃ were provided in the assessment, that AEoI from this impact pathway could be excluded. This additional information was provided by the Applicant in its 'Assessment of the air quality effects on European sites following NE advice' [REP8-122] [ER D.5.29].

575. The Applicant concluded [REP8-122] that there would be no adverse effects on integrity on the SPA and the Ramsar site and therefore mitigation measures were not needed [ER D.5.30]. In the final SoCG with the Applicant [REP9A-014], NE was satisfied with the conclusions in the revised assessment in relation to air quality effects on the SPA and the Ramsar site [ER D.5.31].

576. The Secretary of State notes that no other Interested Parties had commented on or disputed the conclusions of no AEoI from this impact pathway [ER D.5.32].

577. The Secretary of State notes that the ExA was also satisfied that this LSE pathway from the Proposed Development will not result in AEoI on the Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar site alone or in combination with other plans and projects [ER D.5.33] and agrees with that conclusion.

North Downs Woodlands SAC

Changes in air quality – vehicle emissions (operation)

578. The Applicant provided an air quality assessment on the North Downs Woodland SAC in its HRA Report and its 'Without prejudice assessment of the air quality effects on European sites following NE advice' [REP2-068] and its 'Assessment of the air quality effects on European sites following NE advice' [REP8-122] [ER D.5.54]. The Applicant assessed the potential for impacts from changes in air quality from vehicle emissions during operation. It was accepted by NE [REP5-109] that impacts would occur from operational traffic emissions only and that there would be no impact from construction traffic [ER D.5.56]. The Secretary of State notes the ExA's agreement of this position for both alone and in combination impacts.

579. NE disagreed with the Applicant's 'without prejudice' conclusions on the following matters as it considered [ER D.5.57]:

- The full footprint of nitrogen deposition exceedance had not been calculated.
- The impact of NH₃ on integrity had not been assessed; and,
- The in combination assessment did not address the full extent of traffic from in combination plans and projects or appropriately "non-road" developments.

580. It was noted by the ExA that NE nevertheless considered that AEoI is likely to be able to be excluded from a revisit of the in combination assessment [REP5-109]. NE further explained that the qualifying SAC features are not present within 200 metres of the area experiencing the greatest addition of nitrogen, that there were no plans to extend the SAC qualifying features into this area, and therefore that the conservation

objectives for these features would not be undermined from the pollution arising from the Development [ER D.5.58].

581. The Applicant provided an updated assessment at Deadline 8 addressing NE's concerns in providing an assessment for each nitrogen pollutant and an in combination assessment that included non-road developments, but maintained its position that the in combination assessment was sufficiently precautionary. The Applicant concluded that no AEoI would occur either alone or in combination with other plans and projects [ER D.5.59].

582. NE confirmed in the final SoCG [REP9A-014] that the updated assessment by the Applicant was sufficient for it to agree with the conclusions of no AEoI either alone or in combination with other plans and projects and the ExA agreed [ER D.5.60 - D.5.61].

583. The Secretary of State agrees with this conclusion that AEoI, both alone and in combination with other plans and projects, can be ruled out from changes in air quality during the operational phase of the Proposed Development on the North Downs Woodlands SAC.

Epping Forest SAC

Changes in air quality – vehicle emissions (operation) alone

584. The Applicant provided an air quality assessment on the North Downs Woodland SAC in its HRA Report and its 'Without prejudice assessment of the air quality effects on European sites following NE advice' [REP2-068] and its 'Assessment of the air quality effects on European sites following NE advice' [REP8-122] [ER D.5.62]. The Applicant assessed the impacts from changes in air quality from vehicle emissions during operation. It was accepted by NE [REP5-109] that impacts would occur from operational traffic emissions only and that there would be no impact from construction traffic. The Secretary of State notes the ExA's agreement of this position for both alone and in combination impacts [ER D.5.64].

585. The Applicant used its air quality model to predict where increases of more than 1% of the critical level or load for NO_x, NH₃ and nitrogen deposition are likely to occur and required assessment [ER D.5.65]. It was noted that the concentrations of NO_x and NH₃ were identified as already exceeding their critical level without the Proposed Development in place. The Applicant's surveys indicated that SAC qualifying features were present within 200m of the ARN but did not identify any nitrogen sensitive species being present. The Applicant concluded that historically high concentrations of NO_x and nitrogen deposition had led to a loss of nitrogen sensitive species in the areas within 200m of the ARN. It also noted that the SSSI unit for this area of the SAC affected is considered by NE in its most recent condition assessment to be 'unfavourable recovering' [ER D.5.66].

586. The updated air quality assessment indicated that NO_x, NH₃ and nitrogen deposition would exceed the relevant critical level or load with the Proposed Development in place for a four-year period. It is noted by the Applicant that the modelling approach was conservative, in that it assumed no changes in nitrogen deposition between the base year (2016) and opening year (2030). The Applicant also explained that improvements in technology were not included, such as the anticipated

shift to the uptake of electric vehicles which will most likely result in reducing the emissions of NO_x, NH₃, and therefore the position is likely to be better than predicted in the model [ER D.5.67]. The assessment indicated that the proportions of qualifying habitat affected by increases in NO_x, NH₃ and nitrogen deposition would be very small (0.17, 1.10% and 0.76% respectively). The contribution of the project to the overall exceedance of the critical load would also be very small (<0.5%) from the Proposed Development during operation [ER D.5.68 and REP8-122, paragraph 6.2.31].

587. The Applicant concluded that there would be no AEol from changes in air quality from vehicle emissions from the Proposed Development alone when operational [ER D.5.69]. NE [REP9A-014] did not agree but indicated that with mitigation secured and enforceable it could agree with the conclusion. This matter is discussed further in the in combination assessment below [see also ER D.5.72 and D.5.75], where mitigation secured through a revised REAC commitment addresses operational changes in air quality from the Proposed Development, both alone and in combination.

Changes in air quality – vehicle emissions (operation) in combination with other plans and projects

588. The North London Heat and Power was the only other plan or project identified by the Applicant for an in combination assessment [REP8-122]. The assessment showed that the other project did not identify any changes in NO_x and NH₃ and concluded that the effect of these pollutants in combination is the same as the Proposed Development alone [ER D.5.70]. The duration, four years, was considered to be short term and that the length of time for which in combination effects could occur was also limited to four years and too short for changes to be detected in the receiving vegetation, particularly as the most sensitive lichens and bryophytes were not abundant in the affected area [REP8-122, paragraphs 6.2.25 – 6.2.27 and Table 6.8]. The Applicant concluded that there would be no AEol on the qualifying features of the SAC in combination with other plans and projects [ER D.5.71].

589. NE did not agree [REP5-109] with the Applicant's conclusion, indicating that the SAC is already exceeding the critical load and level for nitrogen deposition and NH₃ [ER D.5.73], and the reason for the low-quality habitat and lack of nitrogen sensitive species noted by the Applicant's survey was a result of long-term pollution at the SAC. It considered that the pollution was hindering the recovery of the SAC, hence its ability to meet the objective to 'restore' the site to at or below its critical levels or loads would be further affected by the Proposed Development [ER D.5.74].

590. The Applicant submitted a 'without prejudice' mitigation proposal of a reduced speed limit on the M25 westbound between Junctions 27 and 26 for four years following completion of the construction phase and until the total NO_x emissions with the Proposed Development fall below the total emissions at opening year without the Proposed Development [ER D.5.72]. This mitigation, NE considered, to be effective in addressing the AEol, subject to it being secured through the Applicant's REAC. NE suggested that the mitigation, along with monitoring of NO_x, NH₃ and nitrogen deposition, should remain in place if pollutant values remain above pre-operational values in accordance with a monitoring plan. With this in place, NE agreed with a conclusion of no AEol on the qualifying features of Epping Forest SAC [ER D.5.75]. The Applicant remained of the view that no mitigation was required to reach a conclusion of no AEol for this site, but NE maintained that the proposal for monitoring

and feedback would provide the certainty required by the Habitats Regulations to conclude the Proposed Development would not result in an AEol of the SAC and would also address the concerns regarding the fleet composition and government policy [ER D.5.77 - D.5.78]. In response to the ExA's question (QR21: PD-048) regarding the implementation of the speed limit measure, the Applicant indicated that it had no concerns with its implementation, other than it was not considered to be necessary [ER D.5.80]. The final SoCG recorded [REP9A-014] that the Applicant and NE did not reach agreement on the need for mitigation measures or a monitoring plan [ER D.5.82].

591. The Secretary of State notes that the ExA did not consider the Applicant had provided sufficient evidence to dismiss NE's view that there would be AEol at Epping Forest SAC arising from vehicle emissions during operation of the Proposed Development. The ExA considered that reducing running speeds from 70mph to 60mph for four years between M25 Junctions 27 and 26 westbound appeared in principle to be an operable and effective mitigation measure and that, with this in place, the Applicant and NE agreed that AEol can most likely be excluded. The ExA also noted that, with monitoring in place, both parties agreed that any need for this control measure to be extended can also be provided for in a REAC commitment [ER D.5.83].

592. The ExA proposed minor changes to the proposed REAC commitment to ensure that a reduced speed limit is not imposed if it is not required at the time and that the extent and duration of the proposed speed limit reduction is contained to the minimum extent. The ExA also recommended an annual monitoring process to this end [ER D.5.84 and ER 23.6.18]. This was in recognition of the fact that there could be changes in the emissions profile of the vehicle fleet using the SRN in the period between consenting and commissioning the Proposed Development and/or the operational period which might contribute towards a reduction in the adverse effects from traffic emissions considered during Examination [ER D.6.9]. Dialogue between the Applicant and NE will be required, using air quality modelling and monitoring, to identify a threshold for setting a speed limit and the geographical extent of road over which it should apply until the next monitoring point (if necessary varied by the Secretary of State) [ER D.6.11].

593. The ExA considered that the Secretary of State can give effect to the recommended amendment to the proposed REAC commitment without further consultation with the Applicant or NE, because it is not averse to the approach taken by either party [ER D.6.12]. The Secretary of State agrees with this approach, and the Order now requires the Applicant makes that amendment. The Secretary of State concludes that the AEol on the Epping Forest SAC, both alone and in combination with other plans and projects, can be ruled out from changes in air quality during the operational phase of the Proposed Development with the mitigation secured through a revised REAC commitment.

Conclusions of the Habitats Regulations Assessment

594. As the competent authority in relation to the application for development consent, the Secretary of State has undertaken an AA under regulation 63 of the Habitats Regulations for the Thames Estuary and Marshes SPA, Thames Estuary and Marshes Ramsar site, North Downs Woodland SAC and Epping Forest SAC.

595. Based on the submissions to the Examination, as summarised in the ExA's RIES and Recommendation Report, the Secretary of State is satisfied that the views of NE as the appropriate nature conservation body have been considered and that they are in agreement with the scope and conclusions of the Applicant's HRA assessment.

596. Having carried out the AA, the Secretary of State concludes that the Proposed Development would not adversely affect the integrity of the Thames Estuary and Marshes SPA, Thames Estuary and Marshes Ramsar site, the North Downs Woodland SAC, and the Epping Forest SAC. The Secretary of State has therefore concluded that taking into account the mitigation measures it is permissible for her to give consent for the Proposed Development.

Compulsory Acquisition and Related Matters

597. The Secretary of State notes the request for compulsory acquisition ("CA") powers and temporary possession ("TP") powers and the purposes for which the land is required as set out at in the Applicant's Statement of Reasons and the Book of Reference and in general terms at [ER 22.3] and [ER 22.4.17-22.4.27].

598. The Secretary of State notes the changes/amendments made to application documents as the Examination progressed including the three formal change requests seeking additional land and rights, over and above the land and rights sought in the accepted application [ER 22.3.6 – ER 22.3.12]. In respect of additional land and rights sought by these change requests the ExA concluded that the Applicant had consulted appropriately, sufficient opportunity has been provided within the Examination to enable all additional Affected Persons to be heard, and following two representations received, no new issues of substance have arisen. The Secretary of State agrees with the conclusions of the ExA that the Application should be considered inclusive of the three submitted change requests [ER 22.7.9].

599. The Secretary of State has noted the legislative requirements and national guidance set out by the ExA at ER 22.2. The PA2008, together with related case-law and guidance, sets out that CA can only be granted if certain conditions are met. This includes Section 122(2) of the PA2008 which requires that the land for CA must be required for the development to which development consent relates or is required to facilitate or be incidental to that development. In respect of the land required for the development, the land must be no more than is reasonably required and be proportionate. Section 122(3) of the PA2008 requires that there must be a compelling case in the public interest for the land to be acquired compulsorily [ER 22.2.3]. Section 123 of the PA2008 requires that one of three procedural conditions must be met, namely: (i) the application for the order included a request for CA of the land to be authorised, (ii) all persons with an interest in the land consent to the inclusion of the provision, or (iii) the prescribed procedure has been followed in relation to the land. [ER 22.2.4]. The Secretary of State is satisfied that in the case of the current application the first of these conditions is met [ER 22.3.19].

600. The Applicant set out that the powers of CA and TP sought in the DCO are necessary to deliver, and thereafter maintain, the Proposed Development [ER 22.4.3]. The ExA accepted that the Applicant is seeking to acquire the minimum necessary to construct, operate, maintain and mitigate the Proposed Development [ER 22.14.6]. The Applicant also set out if less land is required following detailed design, it would

only seek to acquire areas of land that are necessary and minimise the effect on landowners [ER 22.4.4]. Consequently, the ExA found that Section 122(2) and CA Guidance test in “Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land” (DCLG, September 2013) (“the CA guidance”), that the land in question is needed and that it is no more than is reasonably required for the purposes of the development has been met subject to satisfactory agreement being in place in relation to Whitecroft Care Home [ER 22.16.1] which is considered below. The Secretary of State also notes that the ExA concluded that the Applicant had made a justified case for the location and extent of the land and rights that it seeks to acquire to deliver the Proposed Development [ER 22.6.7]. The Secretary of State agrees with these findings.

601. The Secretary of State notes the ExA findings that the Applicant has followed the advice of paragraph 25 of the CA guidance to seek to acquire land and access land and rights needed to deliver development by negotiation and agreement wherever practicable recognising that the power to acquire land compulsorily should only be sought if attempts to acquire by agreement do not succeed [ER 22.4.39 – 22.4.40]. The Applicant engaged with all landowners and occupiers with a view to acquiring their land interest by agreement and throughout the Examination continued to engage with numerous landowners on this basis. However, by the end of the Examination not all negotiations had been successfully completed [ER 22.16.1].

Individual Representations

602. The Secretary of State notes the ExA’s consideration of individual objections at ER 22.6.4 and agrees with its reasoning and conclusions in respect of CA and TP at ER 22.6.7. The ExA recommended that the Secretary of State consult the Applicant for an update on the status of a number of outstanding matters summarized at ER 22.6.8. The Secretary of State’s consideration of these is as below.

Objector	ExA recommendation	Secretary of State decision
Clearserve Ltd	Consult the Applicant and Clearserve Ltd to amend the REAC (provisionally as a Geology and Soils commitment) to provide that beneficiaries of minerals and waste consents are indemnified against non-performance of restoration and after-care conditions.	The Secretary of State did not consider it necessary to consult on this matter and has instead amended the DCO to reflect the need for this amendment to the REAC, as recommended by the ExA at ER 23.6.20.
Hill Residential Ltd, and other affected persons (“APs”) with frontage land required for WCH alignments	Consult the Applicant in respect of progress on the use of agreements with APs with frontage land required for WCH alignments which may	In response to the Secretary of State’s letter of 10 May 2024, both the Applicant’s letter dated 23 May 2024 and Hill Residential’s letter of 22

	obviate the need for permanent acquisition.	May 2024 confirmed that it was envisaged final agreement would be reached but no further update was provided. The Secretary of State, therefore, agrees with the ExA's conclusion of no change to the WCH alignment proposed by the Applicant, and agrees with the ExA's recommendation to investigate the use of agreements to form WCH alignment that obviate the need for the permanent acquisition of frontage land.
E10-40 Mayor's Office for Policing and Crime for London ("MOPAC")	Consult the Applicant, MOPAC and the RSPB to ensure that agreement has been reached on the continuing future safe use of the firearms training facility.	In response to the Secretary of State's letter of 10 May 2024, the Applicant outlined that the Side Agreement is now in the agreed form subject to final MOPAC/RSPB legal reviews and governance approval. The Applicant set out that this was likely be concluded after the decision stage. The Applicant, in its letter of the 12 November, provide an update that an agreement in negotiation. To ensure the future safe operation of the Metropolitan Police's firing range, the Secretary of State considers it is necessary to include a provision within article 35 of the DCO to ensure an agreement is in place prior to the Applicant taking temporary possession of the land.
E10-60 Thamesview Camping	Consult the Applicant before decision in order to be satisfied that the land	In response to the Secretary of State's letter of 28 March 2024 the

	interests recorded in the Book of Reference and on sheet 22 of the land plan are correct.	Applicant clarified the position in a letter dated 11 April 2024 and provided an updated DCO.
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Statutory Undertakers

603. Section 127(6) of the PA2008 states that an Order may include provision authorising the creation of a new right over statutory undertakers' land, providing that it can be done without serious detriment to the carrying out of the undertaking, or any detriment can be made good by the undertakers by the use of other land belonging to or available for acquisition by them [ER 22.2.17]. Section 138 of the PA2008 provides for an Order to include provision for the extinguishment of the relevant rights, or the removal of the relevant apparatus of statutory undertakers only if the Secretary of State is satisfied that such actions are necessary for the purposes of carrying out the development to which it relates [ER 22.2.18].

604. The Secretary of State agrees with the ExA's considerations regarding statutory undertakers at ER 22.8.1 – 22.8.26 noting the ExA's conclusion that the tests in sections 127 and 138 of the PA2008 either have been met, will have been met during the reporting period or are capable of being met [ER 22.8.27].

605. Regarding Protective Provisions, the ExA recommended that the Secretary of State seeks an update on the position of Agreements between the Applicant and the following prior to making her decision given that, at the close of Examination, no agreement had been reached [ER 22.8.28]:

- Northumbrian Water Ltd ("NWL")
- HS1 Ltd,
- Lumen,
- National Gas Transmission (NGT),
- National Grid Electricity Transmission ("NGET"),
- National Grid ("NG"),
- Network Rail,
- Port of London Authority Ltd ("PLA"),
- Port of Tilbury London Ltd ("PoTLL"),
- Southern Water.

606. Following the close of Examination, the Secretary of State notes that confirmation was received by letter dated 20 March 2024 confirming that a side agreement was in place with Southern Water and that they withdraw their objection. Confirmation was also received on 15 March 2024 that side agreements are in place with Lumen Technologies Ltd, NGT, NGET, and NWL. The Secretary of State is therefore content that there is adequate protection in place for these Statutory Undertakers.

607. In relation to HS1, it is noted from the Applicant's letter of 11 April 2024 that all matters had been agreed except two. The first is in relation to a request by HS1 for the inclusion of a provision which would require its consent to be obtained before any compulsory acquisition and temporary possession powers are exercised in respect of HS1 land. The Applicant rejected this, and the ExA concluded that this provision was not necessary as there are adequate means in the DCO for a balance to be struck between HS1's role as a statutory undertaker and the Applicant's ability to construct the Proposed Development [ER 22.8.14]. The Secretary of State agrees. The second matter was in relation to an additional indemnity HS1 are seeking to extend to consequential losses. The Applicant argued that the DCO includes sufficient protection without the need for this and that HS1 has the option of pursuing remedies in the usual way for loss of profit, and express provision in limbs 37(a) and (b) goes beyond the protections achieved by other Order indemnities. The ExA did not give a view on this matter, but the Secretary of State agrees with the Applicant on this and does not consider that an additional indemnity is necessary.

608. With regard to Network Rail, the Applicant set out that there are three principal areas of disagreement, namely (i) the 'consent provisions', (ii) terms of the indemnity being offered to Network Rail and (iii) whether the Applicant should be required to notify Network Rail before an application is made to the Secretary of State to transfer the benefit of the Order to another party. The Applicant noted that since the close of Examination, one new addition to the Protective Provisions had been agreed between the parties relating to 8 plots of operational rail land that are subject to freehold powers where the Applicant confirmed it is not seeking to acquire the operational railway. It was noted that discussions between the Applicant and Network Rail were ongoing but that it was unlikely the full Protective Provisions would be agreed given the outstanding disagreement.

609. The ExA did not give a view on these matters, but the Secretary of State agrees with the Applicant in respect of all three: (i) the rail Protective Provisions in the Order apply to both HS1 and Network Rail and so both rail parties are being treated exactly the same [REP9-279, paragraph 3.2.15], making the proposed consent provision unnecessary for the reasons given above in respect of HS1; (ii) that there are specific provisions in the DCO in relation to costs arising from contracts with train operating companies and that a general indemnity for consequential losses is not appropriate and a reciprocal obligation for NR to notify the Applicant of any contracts with train operating companies that may be relevant to those parts of the railway interacting with the Scheme is both reasonable and proportionate; and (iii) that the Secretary of State will be best placed, on receipt of such an application, to determine whether consultation with Network Rail, or any other party, is appropriate in each case and that she sees no reason for Network Rail to be treated differently from other stakeholders.

610. With regard to PLA, no further update was provided on the Protective Provisions. The ExA noted that PLA's outstanding objection related to specific Protective Provisions as set out at ER [22.8.23]. The ExA however concluded a balance had been struck between the role of PLA as a statutory undertaker and the Applicant in relation to managing its tunnel protections and that the Protective Provisions and controls recommended by the Applicant were sufficient [ER 22.8.23]. The Secretary of State agrees but has removed the provision relating to the Secretary of State acting

as arbitrator in any dispute as this is sufficiently covered by the arbitration provisions in the DCO.

611. In relation to PoTLL, the Secretary of State notes that the latest letter from PoTLL received on 27 September 204 confirmed that whilst some amendments to the Protective Provisions has been agreed, there were still matters outstanding on both the Framework Agreement and the form of Protective Provisions. A copy of the preferred Protective Provisions was included which contained additional provisions PoTLL considered necessary. The ExA concluded that a balance has been struck between the role of PoTLL as a statutory undertaker and the ability of the Applicant to construct the Proposed Development and the Protective Provisions were sufficient without this provision. The Secretary of State agrees.

612. Overall, the Secretary of State has consulted on the outstanding agreements as suggested by the ExA [ER 22.8.28] and provided a view as set out above on the ones that continue to be outstanding. Like the ExA the Secretary of State is satisfied that the tests in sections 127 and 138 of PA 2008 have been met [ER 22.8.27]. The Secretary of State is content that:

- the Proposed Development and the CA powers sought, in accordance with section 127 of the PA2008, would not lead to any serious detriment to statutory undertakers undertaking their functions; and
- the rights sought by the Applicant from statutory undertakers would, in accordance with section 138 of the PA2008, be necessary for the purposes of the Proposed Development.

Crown Land

613. The Secretary of State notes the request for acquisition of interests in Crown land and thus section 135 of the PA2008 is engaged [ER 22.9.1]. At the end of Examination, the ExA noted that formal letters of consent under section 135 of the PA2008 were still outstanding from the Secretary of State for Environment Food and Rural Affairs, the Secretary of State for Transport, the Crown Estate and the Duchy of Lancaster. The ExA noted that the Secretary of State may wish to satisfy themselves that these consents have been obtained [ER 22.9.11]. The position regarding these Crown Bodies is as follows:

Crown Body	ExA's recommended action	SofS conclusion
The Secretary of State for Environment Food and Rural Affairs	Consider whether this body consents to CA and TP of Forestry Commission/ FE interests under section 135 PA2008.	In response to the Secretary of State's letter dated 28 March 2024, the Applicant provided a copy of the letter from Forestry England on behalf of the Secretary of State for Defra that confirmed that consent had been provided.
The Secretary of State for Transport	Consider whether this body consents to CA and TP of HS1 interests under PA2008 section 135.	The Secretary of State notes the responses received by the Applicant and the Estates team within the Department for

	<p>Reference should be made to the record in Table E10 in relation to agreement.</p>	<p>Transport regarding the compulsory acquisition and temporary possession of land in the interests of HS1 Ltd. The Secretary of State notes that an agreement between the two parties has now been reached. The letter of 24 May 2024 confirmed DfT consent under section 135 of the PA2008 for all Crown Land for which the Secretary of State for Transport is the crown authority - including HS1. The provided consent is on the understanding that appropriate commitments will be entered into between the parties to safeguard the network. The Secretary of State expects both parties to work together and for the parties to ensure that the appropriate commitments are entered into to safeguard the network.</p>
The Crown Estate	<p>Consider whether the Crown Estate either consents to CA and TP of its interests under section 135 PA2008 or can confirm that these are bona vacantia interests in respect of which consent is not required.</p>	<p>The Applicant has identified that the interest relating to Ashdown Minerals Limited (a dissolved company, and therefore reverting to the Crown Estate) has been removed from the Title Register of the affected land. Therefore, the Applicant set out that there are no further interests in land held by the Crown Estate that are affected by the Proposed Development. The Secretary of State invited the Crown Estate in a letter dated 9 July to confirm if they disagreed with this but no response was received. The Applicant, in its response of 23 July, provided correspondence between itself and HM Treasury, confirming that there was no Bona Vacantia interest vested in the Crown. The Secretary of State has no reason to disagree with the update provided by the Applicant.</p>

The King's Most Excellent Majesty in the Right of His Duchy of Lancaster	Consider whether the Duchy of Lancaster either consents to CA and TP of its interests under section 135 PA2008 or can confirm that these are bona vacantia interests in respect of which consent is not required.	The Applicant set out in their letter of 11 April that the Duchy of Lancaster's solicitors had confirmed there was no objection as they do not consider it to be a Bona Vacantia interest and that this obviates the need for any Crown consent. In the Applicant's response of 29 May, Annex B enclosed the correspondence from the solicitors confirming this. The Secretary of State invited the Duchy of Lancaster in a letter dated 21 May to confirm if they disagreed with this but no response was received. The Secretary of State has no reason to disagree with the update provided by the Applicant.
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614. Overall, the Secretary of State is content that all necessary section 135 consents in respect of making an Order authorising the CA of the interests in Crown land have been received.

Strategic Development

615. The Secretary of State notes the concerns raised regarding the potential adverse effects of the proposed CA and/or TP of land on various stages of emerging proposals for strategic development and the ExA's consideration of individual CA and/or TP representations as set out in Appendix E of the Report. The ExA found that the selection of the alignment for the Proposed Development has been thorough and justified by the Applicant so that the location and extent of land sought to be taken to enable construction is justified. Instances where the alignment affects land that is subject to emerging development proposals, the national need for NSIP highway development, as set out in NPSNN paragraphs 2.12 onwards, take effect to justify the CA and TP of land and rights in priority over development opportunities that do not benefit from an adopted Local Plan allocation or an extant planning permission. The ExA is of the opinion that the Applicant's CA and TP request appropriately accommodates known and committed development proposals and permissions [ER 22.10.3]. The Secretary of State has no reason to disagree with these conclusions.

Non-Motorised Users ("NMUs") and Public Rights of Way ("PRoW")

616. The Secretary of State acknowledges the concerns raised regarding the potentially sterilising effects of CA on freehold road frontage land to provide new and diverted alignments for NMUs, the possibility of future anti-social behaviour arising from new rights of way on private land and PRoWs potentially limiting opportunities for agricultural improvement or possible new development [ER 22.11.1]. The Secretary of State agrees with the conclusion of the ExA that the land sought for CA is justified;

noting there will be opportunities for PRow provision to be implemented by taking rights rather than land; further noting that opportunities to reduce land take will emerge at the detailed design stage, but there is no justification to reduce the extent of land subject to CA at this point [ER 22.11.2].

Biodiversity Mitigation and Compensation

617. With respect to CA for biodiversity mitigation and compensation measures, the Secretary of State is aware that a substantial number of APs raised concerns regarding the amount of land being taken for these purposes, arguing natural environment outcomes could be met in a more dispersed manner [ER 22.12.1]. The ExA has given full consideration to this issue above in the 'Biodiversity' section and notes the consistent support of NE and Forestry England for the broad extent and location of the land to be taken and the necessity of the purposes to which it would be put. The ExA considers that a more dispersed approach to natural environment management would not deliver the necessary outcomes; that the management of land for biodiversity will create public benefits; and no land being sought for biodiversity mitigation or compensation should be removed from the scope of the land and rights requested [ER 22.12.2]. The Secretary of State agrees with the ExA's conclusions.

Public Open Space

618. The Secretary of State notes that the ExA sought information regarding the extent of public open space land and the need for and adequacy of replacement land [ER 22.13.1]. As the Applicant is seeking compulsory acquisition powers over public open space then sections 131 and 132 of the PA2008 are engaged [ER 22.2.19 and 22.2.25]. With regards to the compulsory acquisition of open space land, section 131(3) of the PA2008 provides that the DCO would be subject to special parliamentary procedure unless the Secretary of State is satisfied that one of subsections (4) to (5) applies [ER 22.2.19], and section 132(2) of the PA2008 makes similar provision in relation to the acquisition of rights over open space land [ER 22.2.25].

Southern Valley Golf Course

619. GBC raised concerns about the impact of CA and TP on the public open space at Southern Valley Golf Course. The ExA notes the context of this concern is the relationship between the combination of recreational facilities currently available which includes the golf course, the Swing-Rite golf driving range and Cascades Leisure Centre [ER 22.13.4]. The ExA noted that the Applicant had already acquired the Southern Valley Golf Course and proposes to create a multi-functional public open space (Chalk Park) which will be different in character to the previous combination of facilities but will still offer a golf element [ER 22.13.5]. The ExA found that the proposal to create Chalk Park was necessary to enable the management of construction arisings and then to provide the public open space. The facilities offered would be different in character from the previous combination of 18-hole golf course with existing leisure and driving range activities, but additional recreational opportunities will be provided for other users. The Secretary of State agrees with the conclusion that the tests in s131 and s132 PA2008 are satisfied in relation to Chalk Park [ER 22.13.7].

Ron Evans Memorial Field and other open space in Thurrock

620. TC raised objections to the loss of public open space facilities including the Ron Evans Memorial Field with specific concerns regarding the extent of the replacement land, its suitability and the 5-year delay in provision [ER 22.13.8 and 22.13.9]. The ExA notes that the Applicant has sought to address these concerns through the SACR [ER 22.13.10] committing (at commitment 14) to the provision of replacement land before public access to specific open space plots is restricted. The SACR commitment is secured in the DCO, and it is the ExA's view that this is sufficiently legally binding to provide the assurances sought by TC. The Secretary of State agrees with the conclusion of the ExA that the approach proposed by the Applicant regarding open space replacement is justified [ER 22.13.11].

Extent of replacement land

621. A number of APs raised concerns about the extent of replacement land and that the proposed land take was either an over-acquisition or equivalent public benefit could be obtained if the land in question remained in current private ownership. The ExA, having had regard to the location and effects on existing open space land is of the opinion that the open space acquisition proposed is justified and the Secretary of State sees no reason to disagree with this conclusion [ER 22.13.12 – 22.13.13]. The ExA noted that at the close of Examination, some of the open space proposed to be created was on Crown Land and noted that formal consent was required from the Secretary of State for DEFRA. This has now been received.

622. Whilst noting the loss of open space can trigger Special Parliamentary Procedure under section 131 of the PA2008, the Secretary of State is content that replacement land will be provided in exchange [ER Table 34]. Owing to this section 131(4) of the PA2008 applies, meaning Special Parliamentary Procedure is not triggered in respect of the land subject to CA.

Deemed Marine Licence (“DML”)

623. The Secretary of State notes that at the close of the Examination there were several “matters not agreed” within the Statement of Common Ground between the MMO and the Applicant [REP9A-012] regarding the DML. This is secured within Schedule 15 (Deemed Marine Licence) of the DCO.

624. The Secretary of State notes the MMO's concerns regarding paragraph 21(2) of Schedule 15, which sets out that the MMO would have 30 business days to request further information regarding a return. The Secretary of State is content to agree with the Applicant this is a reasonable timescale to allow the MMO to request further information. In relation to the paragraph 25(3) of Schedule 15, the MMO suggested removing this provision as it would restrict the MMO's ability to make updates to the DML. The Secretary of State is satisfied that article 8(7) of the DCO provides sufficient protection for the MMO.

Time period for exercising CA powers

625. The Applicant, under article 27 of the DCO, has applied to vary the statutory time period for the exercise of CA powers from the standard five years to eight years [ER 22.4.28]. The Secretary of State notes this was considered during the Examination and agrees with the ExA that given the scale of the project and the need for proper diligence in relation to many thousands of land interests and Affected Persons, a

period of eight-years in justified in this case [ER 24.2.12]. The Secretary of State has, however, decided to remove the wording relating to this period commencing from the final determination of any judicial review to ensure parties have certainty on timing. The effect of this will be that compulsory acquisition of land will need to take place within eight years from the date the Order is made.

Human Rights and PSED

626. The Secretary of State considers that as set out at ER 22.14.3, the ExA has provided any IP or AP raising concerns about relevant aspect of the effects of the Proposed Development a reasonable opportunity to participate in the Examination. The Secretary of State agrees with the ExA's conclusion, that in relation to human rights, the Examination has ensured a fair and public hearing and the requirement of Article 6 of the European Convention on Human Rights ("ECHR"), as incorporated in the Human Rights Act 1998 is met [ER 22.14.3].

627. The Secretary of State notes the effects of the Proposed Development on the living conditions of local residents both during construction and operation [ER 22.14.4]. The Secretary of State notes that, in relation to Article 1 of the First Protocol to the ECHR, the ExA is satisfied that the Proposed Development is in the public interest, and that any interference would be justified and lawful [ER 22.14.5] and agrees with that conclusion. The Secretary of State is in agreement with the ExA that consideration has been given to all CA and TP representations in relation to human rights, health and the PSED. The Secretary of State agrees that the Applicant's proposals generally strike a fair balance between public benefit and the interference with individual rights, that the rights sought are considered to be the minimum necessary to deliver the Proposed Development [ER 22.14.6].

628. Further consideration was given to Gammon Fields Traveller Site and Whitecroft Care Home. Although not strictly a CA matter, the proposed loss and re-provision of Gammon Fields Traveller Site is an important and relevant consideration. It is noted the ExA was concerned to ensure that any potential matters relating to the relocation of this facility were examined in relation to human rights, health and PSED [ER 22.14.9]. Both the Head of Housing Operations at TC and the Traveller Liaison Manager for Gammon Fields confirmed, in their view, the loss and re-provision had been carefully and appropriately managed by the Applicant with the new facility offering an improvement to the existing site [ER 22.14.10]. The Secretary of State agrees with the ExA that the Proposed Development in relation to Gammons Field will not lead to any human rights, health or PSED considerations [ER 22.14.11].

629. The occupants of Whitecroft Care Home are a group of people with protected characteristics under the Equality Act 2010. They are beneficiaries of the PSED under section 149(1) which binds both the ExA and the Secretary of State to have due regard to the need to '(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.' Section 149(7) provides that age and disability are protected characteristics, one or both of which are found amongst most of the occupiers of the facility. Article 8 of the ECHR protects the right to respect for private and family life and homes, which include care facilities [ER AppE9-2]. The ExA found the likely duration and effects of construction noise on that location to be unacceptable for sensitive receptors. It is noted that the Applicant did not initially identify the care home for CA. The ExA recommended that unless the

Applicant can demonstrate that a voluntary agreement to purchase this facility has been concluded, that the Secretary of State should require its acquisition before the Order is made [ER 24.2.18].

630. The Secretary of State has not been informed that an agreement for the purchase of Whitecroft Case home is in place. Following the Secretary of State's letter of 19 April 2024 noting that previous response from both parties indicated that it was unlikely an agreement would be reached and inviting both parties to set out a proposed approach in the event an agreement was not in place by the time of the Secretary of State's decision, the owners of Whitecroft Homes set out in a letter dated 28 March 2024 two options for compulsory acquisition that could be secured via provisions in the DCO, one of which the Applicant agrees could be included if considered necessary. This would involve the addition of a new paragraph (6) in article 30 (modification of Part 1 of the 1965 Act) of the DCO, so as to enable its owner to require a purchase of identified plots if any part of the authorised development is begun. With this provision in place, the Secretary of State is content that the PSED duty has been met.

631. Overall, the Secretary of State agrees with the ExA's conclusion that the public benefit from the Proposed Development outweighs any impact on the human rights of those with an interest in the land affected, meeting the overarching aims of the Human Rights Act 1998 and relevant guidance [ER 22.16.1].

Funding

632. The ExA noted the Government's commitment in relation to funding of the Proposed Development was re-profiled in March 2023 to set the main delivery period back to commencing in March 2025, the anticipated commencement of Road Investment Strategy 3 (RIS3). The ExA were satisfied that RIS2 currently commits adequate and secure funding to enable CA and TP within the statutory period following the Order being made but noted that it will be necessary for the Government to commit to the availability of necessary funds for delivery in the RIS3 period [ER 24.2.15].

633. On 29 January 2025, the Chancellor of the Exchequer made a public statement setting out that "the Government is assessing options for privately financing the Lower Thames Crossing." The Applicant, in its letter of the 30 January 2025, considered it would be helpful to provide the Secretary of State with an update on the effect of this announcement on the application for the Lower Thames Crossing DCO, including a revised Funding Statement. The Secretary of State agreed and issued a consultation letter on 5 February 2025 requesting the updated information. The Applicant provided a response on 27 February 2025, outlining that it had identified two supplementary options which could viably deliver the Proposed Development using private financing, and a further iteration of the Funding Statement had been prepared to reflect those options. Three funding models are now being proposed by the Applicant:

- Full public funding to construct the Proposed Development, provided by the Government through the Road Investment Strategy. Funding to operate the Proposed Development would be provided through the Road Investment Strategy, and revenue from the road user charges would be received by the Government.

- Full public funding for the tunnels, with the connecting roads being delivered and funded by the private sector under a DBFOM contract. Under this model, the funding for the construction and operation of the tunnels would be provided by the Government, with road user charge receipts being received by the Government. One or more private DBFOM contracts would provide for the construction and operation of the roads, and after the opening of the Proposed Development, the contracted parties would receive availability payments from the Government to repay the cost of the investment over a period of time. The cost of the procurement and management of the DBFOM Roads contract, including management of the interface risk between the Applicant and the DBFOM, as well as the pre-construction enabling works for the roads (including utility diversions, developed scheme design, including initial detailed design of key elements, archaeology, ecology and work to deliver Requirements associated with these activities) would be covered by Government funding.
- A regulated private entity model, under which a private sector body finances, builds and operates the Lower Thames Crossing in its entirety in perpetuity, subject to the oversight of an independent regulator. The regulated private entity would receive the road user charging revenue from both the Proposed Development and the Dartford Crossing, and use this to cover the construction, operation and maintenance costs. The cost of the delivery of the regulated private entity model, including the set-up, transfer of assets into and sale of the Regulated Private Entity model, establishment of the independent economic regulator, and pre-construction enabling works for the entire Proposed Development up to Regulated Private Entity financial close (including utility diversions, developed scheme design, including initial detailed design of key elements, archaeology, ecology and discharge of Requirements) would be covered by Government funding

634. The Secretary of State notes that in all three funding models, allowance for compensation payments in respect of compulsory acquisitions of land for the entire Proposed Development (Tunnel and Roads) has been made by the Applicant, using RIS funding (Sections 3.1.3, 3.1.19 and 3.1.25 and of the Applicant's revised Funding Statement – 27 February 2025). The Secretary of State, therefore, is satisfied that the Applicant is able to demonstrate that adequate funding is likely to be available to enable the compulsory acquisition within the statutory period following the Order being made, and that the resource implications of a possible acquisition resulting from a blight notice have been taken account of, as per the test set out in the 2008 Act Guidance on Compulsory Acquisition.

635. The Secretary of State issued a consultation letter on the 28 February requesting comments from Interested Parties on the Applicant's updated documentation. TAN, in its response of the 13 March 2025, note that for all the funding scenarios set out in National Highways evidence, none are certain or guaranteed. Several Interested Parties highlighted the increased total cost of the scheme when delivering the Proposed Development through a privately financed option, and highlighted that cheaper alternatives could be constructed instead of the Proposed Development. The issue of alternatives and value for money is previously discussed in this Decision Letter. KCC re-iterated its support the Proposed Development, and hope that funding can be sourced publicly or privately.

636. Regarding deliverability, the Secretary of State notes that the Applicant's updated Funding Statement provides high-level information regarding the three funding models. The Applicant highlighted that funding beyond RIS2 is currently being agreed with the Department as part of the Spending Review, however, it asserted that there is continued strong government support for the Proposed Development, as evidenced by the Chancellor of the Exchequer's statement on the 29 January 2025 (3.1.13). The Secretary of State, therefore, is satisfied that the Proposed Development could be funded by the Department through the Statement of Funds Available.

637. With regard to the two privately financed models, the Secretary of State notes the Applicant's considerations that there is likely to be a market interest for a DBFOM for Roads and a Regulated Private Entity model. In the case of DBFOM for Roads, the Applicant cited precedents of its use on similar projects in the United Kingdom, such as the Silvertown Tunnel and Mersey Gateway Bridge (3.1.21). In the case of the Regulated Private Entity Model, the Applicant cited precedents of its use for the delivery of capital projects in the United Kingdom, such as the Thames Tideway Tunnel, Carbon Capture Usage and Storage, and Sizewell C (3.1.27). Noting these precedents and the Applicant's evidence, the Secretary of State is satisfied that the Applicant is able to demonstrate that adequate funding is likely to be available to deliver the scheme within the timeframe of the DCO powers.

Overall Conclusions

638. The Secretary of State agrees with the ExA's conclusion at ER 22.16. Although at close of Examination there were some individual matters unresolved including in relation to Whitecroft Care Home, these are considered and concluded as above.

639. The Secretary of State agrees with the ExA's conclusion at ER 24.2.10 that:

- The parts of the Proposed Development which are the development of a highway under section 22 of the PA2008 for which the land and rights are sought would be in accordance with national policy, as set out in the NPSNN.
- The parts of the Proposed Development which are the development of transmission system infrastructure (diversions of electric lines) under section 16 of the PA2008 for which the land and rights are sought would be in accordance with national policy, subject to transitional policies in the designated energy NPSs (2024), as set out in the NPS EN-1 and NPS EN-5 (2011).
- The parts of the Proposed Development which are the development of transmission pipeline infrastructure (diversions of gas transmission pipelines) under section 20 of the PA2008 for which the land and rights are sought would be in accordance with national policy, subject to transitional policies in the designated energy NPSs (2024), as set out in the NPS EN-1 and NPS EN-4 (2011).

640. The Secretary of State is satisfied that the Applicant has adequately demonstrated that there is a clear and significant need for the Proposed Development, and that the benefits, including the need, outweigh the potential harm [ER 22.16.1, third indent]

641. The Secretary of State agrees with the ExA that the private loss to those affected is mitigated through the fact the Applicant is seeking to acquire the minimum possible rights and interests that they would need to construct and maintain the Proposed Development [ER 24.2.12] and that adequate compensation provisions are in place for those whose land is affected [ER 22.15.6].

642. With regard to the Applicant's request for a period for the acquisition of rights that is greater than the standard five-year period, the Secretary of State agrees with the ExA that given the scale of the project and the need for proper diligence in relation to many thousands of land interests and Affected Persons, a period of eight-years is justified in this case [ER 24.2.12].

643. The Secretary of State notes the ExA was content the Applicant has explored all reasonable alternatives to the CA of land, rights and interests sought and there are no alternatives that ought to be preferred [ER 24.2.13] and is satisfied that there was a reasonable prospect of the requisite funds for the CA and implementing the scheme becoming available [ER 22.16.1].

644. The Secretary of State concluded on the purpose for which CA is sought and that the requirements of section 122(2)(a) and (b) of the PA2008 are met. She is satisfied that the land to be acquired by CA powers would be required and are proportionate to facilitate or to be incidental to the Proposed Development [ER 22.6.5]. The ExA has found that all relevant regulations and guidance requirements have been met both in respect of the original application and the changes to it [ER 22.16.1] and the Secretary of State has no reason to disagree. The Secretary of State is also satisfied that there is a compelling case in the public interest for the land to be acquired compulsorily and the public benefits associated with the Proposed Development would strongly outweigh the private loss suffered by those whose land would be affected.

Planning Balance

645. The ExA considered that the following matters weigh in favour of the Proposed Development:

- Need for the Development – very significant positive weight awarded to the application, as it would contribute to the established need as set out in the NPSNN, [ER 21.2.8] as well as the economic and community objectives set out for the scheme in Table 33 of the ExA's report [ER 5.3.1]
- Traffic and Transport – very significant positive weight. Even after considering the negative weight attributed to the loss of HGV parking and the construction effects, due to the substantial national, regional and sub-regional transport benefits it will bring, including relieving congestion, improving resilience on the network and safety, the weighting remains very significant positive [ER 6.5.6].
- Social and Economic Considerations – great positive weight, due to the significant economic benefits resulting from the construction phase [ER 21.2.104], and the long-lasting legacy for NMUs [ER 21.2.105]

646. The following are considerations the ExA has weighed against the Proposed Development:

- Carbon and Climate – limited negative weight because of the minor adverse effect resulting from an increase in carbon emissions that is not significant as it would not have a material impact on the ability of the Government to meet its carbon reduction targets, in accordance with paragraph 5.18 of the NPSNN [ER 21.2.39].
- Biodiversity – very great negative weight, an outcome that reflects the losses of and harms to specific protected assets, and the unavoidable policy breaches that flow from those [ER 21.2.89]
- Landscape and Visual Impacts – moderate negative weight due to the harm to visual amenity [ER 21.2.96]
- Historical and Cultural Environment Effects – very great negative weight, due to the harm to and loss of assets [ER 21.2.102]. The Secretary of State is satisfied that the substantial harm is necessary in order to deliver substantial public benefits that outweigh that loss or harm and that the less than substantial harm is outweighed by the public benefits of the proposal.
- Green Belt – The Proposed Development would constitute inappropriate development in the Green Belt, cause significant harm to the openness of the Green Belt, and harm to the purpose of safeguarding the countryside from encroachment [ER 21.2.111]. However, the Applicant has set out the tangible transport, economic, community and environmental benefits the Proposed Development provides. Furthermore, it is relevant to consider that there are no preferable Green Belt or non-Green Belt alignments for the Proposed Development that would meet the scheme objectives [ER 21.2.112] and the Secretary of State is satisfied that very special circumstances exist.

647. The ExA has concluded that the remaining matters weigh neutrally in the planning balance for the Proposed Development:

- Geology and Soils
- Tunnelling Considerations
- Waste and Materials
- Air Quality
- Road Drainage, Water Environment and Flooding

648. The Secretary of State agrees with the majority of the ExA's overall conclusions regarding the weighting of matters in the Planning Balance. However, following the resolution of the Water Framework Directive issue, which the ExA had attributed moderate negative weight [ER 21.2.69], the matter of Road Drainage, Water Environment and Flooding now weighs neutrally in the planning balance. Furthermore, the Secretary of State placed greater weight on the omission of the East Tilbury Rest and Service Area, due to the removal of Cobham Rest and Service Area, which will further reduce the provision of HGV parking in the region, although the overall weighting of the Traffic and Transport remains unchanged.

649. In addition to the above, the Secretary of State carried out an AA to determine any adverse effects on the integrity of the Thames Estuary and Marshes SPA, the Thames Estuary and Marshes Ramsar site, the North Downs Woodland SAC and the

Epping Forest SAC. In conducting the AA, the Secretary of State has applied the precautionary principle and is satisfied that no reasonable doubt remains as to the absence of such effects. Having carried out the AA the Secretary of State is satisfied that, when mitigation measures are taken into account, the Proposed Development will not adversely affect the integrity of the above sites. The Secretary of State concludes that the HRA weights neutrally in the planning balance.

Overall Conclusion

650. The Secretary of State is satisfied that there is a need for the Proposed Development which accords with the need case established by the NPSNN and affords substantial weight to the contribution the Proposed Development would make to meeting the need set out in the NPSNN. The Secretary of State is of the view that having carefully weighed these benefits of the Proposed Development against the adverse effects of the Development as set out above, the Secretary of State is of the view that the potential negative impacts are substantially outweighed by the benefits of the Proposed Development.

DRAFT DEVELOPMENT CONSENT ORDER AND RELATED MATTERS

651. The Secretary of State has made a number of minor textual amendments to the Order in the interests of clarity, consistency and precision. Further to the textual amendments the Secretary of State also makes the following modifications:

- Throughout the DCO, text (largely in square brackets) premised on the Port of London Authority's Harbour Revision Order application being approved before the DCO, has been omitted.
- In articles 12-14, 18-21, 23-24 and 35-36, to improve clarity "as if it were" has been inserted into the paragraphs relating to the determination disputes.
- In the preamble:
 - the reference to section 83 of the 2008 Act has been replaced by a reference to section 74, as it was a panel that examined the application; and
 - paragraphs 4, 16 and 18 of Schedule 5 to the 2008 Act has been cited as the proposed development includes the activities referred to in those paragraphs. Similarly, paragraph 30A has been cited due to the inclusion of a deemed marine licence in the DCO.
- In article 2(1) (interpretation):
 - terms that are only used in a single article have been moved to that article;
 - the definition of "highway" has been decoupled from those of "highway authority" and "local highway authority" to allow for more accurate citations; and
 - greater detail has been added to the definitions of "the tunnel" and "the tunnel approaches".
- In article 8 (consent to transfer benefit of Order), additional text proposed by the Applicant has been included and the drafting has been simplified.
- Article 9(9)(a) (application of the 1991 Act) has been omitted as legislation relating to permits already requires authorities to ensure each permit

application received is treated equally regardless of the works or its promoter and that an authority must issue a permit where the permit application meets the requirements of the permit scheme on the merits of that permit application alone.

- In article 12 (temporary closure, alteration, diversion and restriction of use of streets), references to “by vehicles, or classes of vehicles, or pedestrians” have been omitted as it is not necessary to achieve the objectives of the article and also that drafting would not provide for restrictions on equestrian traffic.
- in article 15 (classification of roads, etc.) a definition for “GLA road” has been inserted to avoid there being an undefined term.
- In article 16 (clearways, speed limits and prohibitions):
 - preceded text has been added to paragraph(5) to address the scenario where there is no speed limit indicated until shortly before the sign is passed by a vehicle; and
 - definitions for “a traffic sign which indicates that the national speed limit is in force” and “speed limit sign” have been inserted to avoid there being undefined terms.
- In article 18(3) (powers in relation to relevant navigation or watercourses) the reference to the 1961 Act has been removed, as that Act is considered unlikely to apply to the scenarios in article 18.
- In article 24(3) (trees subject to preservation orders), text has been added requiring that “where possible the undertaker must seek to replace any trees which are removed” and requiring the undertaker to consult the relevant planning authority prior to undertaking activity permitted by the article.
- In article 27 (time limit for exercise of authority to acquire land compulsorily), the period has been revised to 8 years beginning with the day on which the DCO is made as, noting the uncertainty that this would cause for landowners, the Secretary of State was not persuaded by the need to increase the period from the usual 5 years to 8 and to further defer the start date until the conclusion of any legal challenge.
- In article 30 (modification of Part 1 of the 1965 Act), paragraph (6) has been inserted to ensure that the Care Home will be acquired in full.
- In articles 31 (application of the 1981 Act) and 32 (modifications of the 2017 Regulations), references to “any third party” have been replaced with “a statutory undertaker or local authority”, as the Applicant vesting land in unidentified third parties is not considered desirable. Text has also been omitted from article 32(1) to remove an unrestricted power to make consequential amendments to the 2017 Regulations.
- Article 35(13) (temporary use of land for carrying out the authorised development) has been inserted to ensure the safe operation of the Metropolitan Police firing range, requiring the Applicant to reach an agreement with the Mayor’s Office for Policing and Crime and the RSPB prior to taking temporary possession of the identified plots.

- Article 40(1)(c) (special category land) has been inserted to add an extra requirement that the relevant planning authority has certified that the replacement land scheme has been implemented to its satisfaction.
- In article 45 (road user charging), text proposed by the Applicant has been inserted to include express provision to enable the Secretary of State to transfer the power to charge under the DCO and setting out the applicable procedures.
- Article 46 (suspension of road user charging) has been modified to limit a suspension due to emergency to a maximum of 30 days, avoiding inconsistency with the regime applying at the Dartford Crossings.
- Article 48(9)(c)(i)(bb) (protection of the tunnel area, etc.) has been omitted as there is no clear rationale for the alternative procedure and it would not be desirable for the Secretary of State to designate substances or articles without the agreement of the PLA and/or the Health and Safety Executive.
- In article 49(17) (removal of vehicles) a definition of “owner” has been inserted to address vehicles subject to a hiring agreement or hire-purchase agreement.
- In article 62 (certification of documents), paragraphs (4) to (9) have been omitted as they do not appear to be preceded in any previous DCO and the justification for adopting provisions only previously included in hybrid Acts is not persuasive.
- Ex-article 65 (appeals to the Secretary of State) has been omitted. So far as the Control of Pollution Act 1974 is concerned, it remains the Secretary of State’s position that there are appeal procedures available within the court system and this provision is therefore viewed as being unnecessary. In respect of the broader appeal mechanism, the Secretary of State notes opposition from a number of interested parties and is not persuaded that there is a need for them. Similar text has been omitted from:
 - paragraph 13(3) of Part 1 of Schedule 1 and
 - paragraph 99(6) (Design of, and coordination of, tunnelling works to ensure existing and future use of river Thames) of Part 8 (for the protection of the Port of London Authority) of Schedule 14 (Protective provisions).
 - paragraph 128 (disputes) of Part 9 (for the protection of the Environment Agency) of Schedule 14
 - paragraph 150 (disputes) of Part 10 (for the protection of Port of Tilbury London Limited) of Schedule 14
 - paragraph 164 (disputes) of Part 11 (for the protection of local highway authorities) of Schedule 14.
- New article 65 (financial arrangements for the Kent Downs National Landscape) has been inserted to provide a mechanism through which an appropriate financial contribution by the Applicant for the benefit of the Kent Downs National Landscape can be determined.
- In Schedule 2 (requirements), Part 1:
 - paragraph 3(2) (detailed design) has been inserted to ensure that in relation to the detailed design, the Applicant has regard to the duty in section 85 of the Countryside and Rights of Way Act 2000; and

- new paragraph 20 (amendments to the control documents) has been inserted to ensure that the amendments to the control documents recommended by the ExA are amended in accordance with the new Part 3 (amendments to be made to the control documents) of Schedule 1 prior to any part of the authorised development commencing.
- In Schedule 6 (traffic regulation), Part 1 (speed limits), descriptions of speed limits as being “proposed” have been omitted as this implies that the speed limits will be made at a later point under Road Traffic Regulation Act 1984 powers, which is understood not to be the Applicant’s intention.
- In Schedule 14 (protective provisions):
 - in Part 4, at paragraph 46(2) to (4), text proposed by the Applicant has been inserted subject to the exception that a reference to “height above the railhead” has been substituted for “specified airspace of the land”, at the request of Network Rail. It is noted that the heights specified in the table have not been approved by Network Rail, but the Secretary of State is confident that these can be revised by agreement.
 - in Part 10, text agreed by the Applicant and Port of Tilbury London Limited has been inserted throughout; and
 - in Part 11, the drafting in paragraph 149 (design input and commencement) has been simplified.
- In Schedule 16 (documents to be certified), numbering in column (3) of the tables has been updated throughout.

LATE REPRESENTATIONS AND CONSULTATION RESPONSES

652. Following the close of the Examination, the Secretary of State received late representations and responses to her consultation questions (that were outside of the questions posed). The Secretary of State has treated these correspondence as late representations and has published them as such alongside this letter on the Planning Inspectorate website.

653. Unless addressed above, the Secretary of State considers that these late representations do not raise any new issues that are material to the decision on the Proposed Development. As such, the Secretary of State is satisfied that there is not any new evidence or matter of fact in these late representations that need to be referred again to Interested Parties under Rule 19(3) of the Infrastructure Planning (Examination Procedure) Rules 2010 before proceeding to a decision on the Application.

GENERAL CONSIDERATIONS

Public Sector Equality Duty

654. The Equality Act 2010 established the Public Sector Equality Duty, which requires public authorities to have due regard in the exercise of their functions to the need to eliminate unlawful discrimination, harassment and victimisation and any other

conduct prohibited under that Act; advance equality of opportunity between people who share a protected characteristic and those who do not; and foster good relations between people who share a protected characteristic and those who do not in respect of the following “protected characteristics”: age; gender; gender reassignment; disability; marriage and civil partnerships; pregnancy and maternity; religion and belief; and race.

655. The Secretary of State notes that the ExA, in coming to its conclusions in the Report, has had due regard to the duties under this legislation in the managing of the Examination [ER 24.2.16-20].

656. The Secretary of State is satisfied that the Public Sector Equality Duty has been complied with.

Natural Environment and Rural Communities Act 2006

657. The Secretary of State, in accordance with the duty in section 40(1) of the Natural Environment and Rural Communities Act 2006 has to consider what action she can properly take, consistently with the proper exercise of its functions, to further the general biodiversity objective and, in accordance with regulation 7 of the Decisions Regulations, have regard to conserving biodiversity and in particular to the United Nations Environmental Programme on Biological Diversity of 1992. She has had regard to both of these when deciding on whether to grant development consent. The Secretary of State notes that the ExA has had regard to the 2006 Act and biodiversity duty in the relevant sections of the Report [ER 24.3.2].

658. In reaching a decision to grant development consent, the Secretary of State has had due regard to conserving and enhancing biodiversity.

Human Rights Act 1998

659. The Secretary of State considers that the owners and occupiers of the property at or near the Proposed Development were provided with a fair opportunity to participate in the Examination. The Secretary of State considers that the ExA ensured a fair and public hearing and the requirements of Article 6 of the European Convention on Human Rights (“ECHR”), as incorporated in the Human Rights Act 1998 were met [ER 22.14.3].

660. The ExA considered the effects of the Proposed Development on the living conditions of local residents during the construction and operation, in accordance with Article of 8 of the ECHR [ER 22.14.4]. The ExA noted that Article 8 rights could be infringed in respect of the Whitecroft Care Home. As detailed elsewhere in this Decision Letter, this issue has now been addressed.

661. The proposed interference with persons’ rights in respect of their property would be lawful and justified, given the Proposed Development is in the public interest, in accordance with Article 1 of the First Protocol [ER 7.7.27].

SECRETARY OF STATE’S OVERALL CONCLUSION AND DECISION

662. For all the reasons set out in this letter, the Secretary of State has decided to grant development consent, subject to the changes in the Order mentioned above. The Secretary of State is satisfied that none of these changes constitutes a material change and is therefore satisfied that it is within the powers of section 114 of the PA2008 for the Secretary of State to make the Order as now proposed.

CHALLENGE TO DECISION

663. The circumstances in which the Secretary of State's decision may be challenged are set out in Annex A of this letter.

PUBLICITY FOR THE DECISION

664. The Secretary of State's decision on this Application is being publicised as required by section 116 of the PA2008 and regulation 31 of the 2017 Regulations.

Yours faithfully,

Gareth Leigh

ANNEX A

LEGAL CHALLENGES RELATING TO APPLICATIONS FOR DEVELOPMENT CONSENT ORDERS

Under section 118 of the Planning Act 2008, an Order granting development consent, or anything done, or omitted to be done, by the Secretary of State in relation to an application for such an Order, can be challenged only by means of a claim for judicial review. A claim for judicial review must be made to the High Court during the period of 6 weeks beginning with the day after the day on which the Order is published. Please also copy any claim that is made to the High Court to the address at the top of this letter.

The Lower Thames Crossing Development Consent Order 2025 (as made) is being published on the Planning Inspectorate website at the following address:

<https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/TR010032>

These notes are provided for guidance only. A person who thinks they may have grounds for challenging the decision to make the Order referred to in this letter is advised to seek legal advice before taking any action. If you require advice on the process for making any challenge you should contact the Administrative Court Office at the Royal Courts of Justice, Strand, London, WC2A 2LL (020 7947 6655).