

Lower Thames Crossing

9.8 Environmental Statement Addendum (Clean version)

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1 Introduction

1.1 Document purpose

- 1.1.1 This document has been prepared to outline updates to the following Application Documents submitted as part of the Development Consent Order (DCO) application for the A122 Lower Thames Crossing (the Project) in October 2022:
- a. 6.1 Environmental Statement [[APP-138](#) to [APP-155](#)]
 - b. 6.2 Environmental Statement - Figures [[APP-156](#) to [APP-331](#)]
 - c. 6.3 Environmental Statement - Appendices [[APP-332](#) to [APP-485](#)]
 - d. 6.4 Environmental Statement - Non-Technical Summary (NTS) [[APP-486](#)]
- 1.1.2 This document has been used as a live document throughout Examination to track updates and amendments to the Environmental Statement (ES) documents, when required. Amendments or points of clarification which have arisen through Issue Specific Hearings, Written Representations, Written Questions or other relevant elements of the Examination process, have been incorporated into this document accordingly. This document was updated and re-submitted for each of the Examination Deadlines.
- 1.1.3 This approach reflects the status of the ES chapters, figures and appendices as documents to be certified by the Secretary of State, as true copies, in accordance with Schedule 16 of the draft Development Consent Order [**Document Reference 3.1 (11)**]. This ES Addendum is identified in Schedule 16 as a document to be certified.

Update for Version 9 at Examination Deadline 9

- 1.1.4 The 9.8 Environmental Statement Addendum (Version 8) [[REP8-090](#)] has been updated and submitted at Deadline 9 as Version 9 to form a final record of the updates and amendments made to Environmental Statement documents during Examination.
- 1.1.5 This document has been restructured for Deadline 9 and presents the information on updates and amendments set out by chapter or environmental topic. All information provided previously up to Deadline 8 is presented in this revised structure.
- 1.1.6 Additional information is also presented at Deadline 9 to collate information presented within other documents during Examination. No new information is presented at Deadline 9. This additional information includes the following and is further explained below:
- a. Updates to ES documents reflecting the agreed changes and amendments to the Project, including:
 - i. Updates to Order Limits
 - ii. Updates to design and construction information
 - iii. Updates to calculations based on the area of land within Order Limits

- b. Alignment with updates made to other Application Documents (e.g. the latest version of 7.5 Design Principles and 6.3 Appendix 2.2 Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan)
- c. Updates to make sure that amendments to Chapters presented in previous versions of the ES Addendum are fully reflected in associated figures and appendices.

1.2 Document structure

- 1.2.1 Section 1 of this document provides the introduction to the documents, its purpose and how it should be read and used. It also provides background information on the evolution of ES documents during Examination.
- 1.2.2 Section 2 provides an index for all ES chapters, figures and appendices. The index (Table 2.1) identifies if a new version of a document has been submitted, or an update has been reported in the ES Addendum only. Alternatively, the index identifies where a document remains as submitted in October 2022 and no further updates have been made, for example, where information presented has not changed or changes to Order Limits are not shown on the pages presented in the document.
- 1.2.3 Information on the updates made to documents is provided in the record of updates in Section 3. This section provides tables collating the information presented in previous versions of the ES Addendum by chapter or environmental topic. No further amendments have been made to this information from previous deadlines, unless identified. The additional information included in this ES Addendum for Deadline 9 is included against the relevant chapter, figure or appendix and is identified in the final column of the tables.
- 1.2.4 This document should be used to understand how an individual ES chapter, figure or appendix has been updated. Reference to the index (Table 2.1) will identify new versions of documents and associated reference numbers, or updates made via the ES Addendum. The index provides a cross reference to the relevant part of the record of updates in Section 3 of the ES Addendum where further information on the updates can be found.
- 1.2.5 Five appendices were included within the ES Addendum to supplement information included within the ES chapters, figures and appendices. The appendices remain as published at the relevant deadline they were submitted, unless identified. Additional Appendices have been included at Deadline 9, as described in paragraph 1.3.12.

Document contents

- 1.2.6 Within the tables in the record of updates in Section 3, each row describes an amendment or update to the ES document. Each update is identified by a document reference, location within the document, reason for amendment, description of the update made and at which deadline. Where a document does not have a row included within the record of updates in Section 3, there has been no requirement for an update during Examination. This is as identified in the index (Table 2.1).

- 1.2.7 ES documents are updated, either as a new version and submitted to the Examining Authority, or the ES Addendum forms the record of the update by providing the detailed description of the revisions made. This is further explained in Section 1.4 of this ES Addendum.
- 1.2.8 Within the record of updates in Section 3, text shown in blue font with a strikethrough indicates text which is removed from the relevant section of the Environmental Statement. Text shown in green font indicates text which is updated or new. For documents that are updated as a new version and submitted, a summary of the update is provided within the tables in Section 3. Full detail of the updates made is available in the tracked changes version which is submitted alongside the clean version of each document. Document reference numbers are provided for both clean and tracked versions of each document.

Exceptions

- 1.2.9 The ES Addendum has tracked updates and amendments to all ES chapters, figures and appendices with some exceptions, as set out below.

Control Documents

- 1.2.10 Changes to control documents are not identified in the ES Addendum, as these are considered live documents and have been subject to more extensive change during Examination than could reasonably be tracked in the ES Addendum. The index in Table 2.1 provides the versions and relevant reference numbers, but no detail on the updates made is provided within the ES Addendum. Clean and tracked versions of submitted versions were provided to allow updates to be identified.
- 1.2.11 The control documents which sit within the ES but are not tracked within the ES Addendum are as follows:
- a. 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan (Version 9)
 - b. 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan – Annex A – Outline Site Waste Management Plan (Version 4)
 - c. 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan – Annex B – Outline Materials Handling Plan (Version 5)
 - d. 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, First iteration of Environmental Management Plan – Annex C – Preliminary Works Environmental Management Plan (Version 4)

- e. 6.3 Environmental Statement - Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan - Annex D – Community Liaison Group – Initial Terms of Reference (Version 1)
- f. 6.3 Environmental Statement - Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan - Annex E - Heat map (Version 2)

1.3 Evolution of the ES during examination

- 1.3.1 ES chapters, figures and appendices have been updated during Examination to reflect the changes to Project proposals, the engagement with the Examining Authority and stakeholders and other reasons as set out below.

Project changes and amendments

- 1.3.2 During Examination, a number of non-material changes and amendments have been proposed by the Applicant and accepted by the Examining Authority. These changes and amendments have been reflected in updates made to ES documents where required and are identified in Section 3 of this ES Addendum. An outline of these changes and amendments is provided below.
- 1.3.3 Changes MRC01, MRC02 and MRC03 were accepted by the Examining Authority on 29 August 2023 (Procedural Decision addressing proposed changes to the Application [[PD-031](#)]). A description of the changes and the potential for alteration of likely significant environmental effects was provided in 10.4 Change Application (August 2023) [[CR1-002](#)] and 10.4 Change Application Appendix A – Proposed amendments to Environmental Statement Chapter 2 Project Description [[CR1-003](#)]. Minor Refinements Consultation was held related to these changes during May and June 2023. The agreed changes are as follows:
- a. MRC01 – Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites
 - b. MRC02 – Limits of deviation on bored tunnel headwall
 - c. MRC03 – East Tilbury utilities relocations and Order Limits reduction
- 1.3.4 Changes EC01 and EC02 were accepted by the Examining Authority on 25 September 2023 (Procedural Decision [[PD-039](#)]). As set out in the relevant change application submissions (10.2 Second Notification of Proposed Changes to the Planning Inspectorate [[CR2-002](#)] and 10.4 Change Application (August 2023) [[CR1-002](#)]) these changes and amendments are not considered to result in materially new or different effects and no updates to ES documents were required. The agreed changes are as follows:
- a. EC01 – a request from the network utility supplier to realign Works No. G5 (shown on Sheet 28, Works Plans Volume C: Utilities [[REP7-034](#)]) east of Brentwood Road to reflect wider network operational changes and support the safe and timely delivery of utilities works

- b. EC02 – a need for access off Fen Lane, Ockendon for Statutory Undertakers to facilitate future maintenance and operation of utilities works constructed for the Project

1.3.5 Changes EC03 and EC04 were accepted by the Examining Authority in its procedural decision on 2 November 2023 [[PD-045](#)] and are described in Applicant's Change Application Cover Letter [[CR3-002](#)]. No updates to ES documents were required. The agreed changes are as follows:

- a. EC03 – a minor increase to the Limits of Deviation in relation to a proposed Walking, Cycling and Horse Riding (WCH) structure over the A127 to prevent any conflict with proposals for a new employment park (Brentwood Enterprise Park)
- b. 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

1.3.6 Project amendments EA01 to EA05 are described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [[CR2-002](#)] submitted to the Examining Authority in July 2023. The agreed amendments are as listed below. Updates were made to ES documents in response to amendments EA01, EA04 and EA05.

- a. EA01 – an amendment to the designation of open space land and associated replacement land requirements associated with Claylane Wood
- b. EA02 – an amendment to the location of the temporary drainage pipeline and outfall, required during the construction phase, from the North Portal work area
- c. EA03 – a reduction in the rights required over land plots 16-45 and 16-46 which are located on the northern embankment and within the River Thames
- d. EA04 – a reduction in the land required for construction of temporary utility works affecting the Condovers Scout Activity Centre ('Condovers')
- e. EA05 – a reduction in the land required for the construction of utility works by approximately 1.7 hectares south of the junction of Low Street Lane, Church Road and Station Road near Linford.

1.3.7 Project amendment EA06 was notified to the Examining Authority in 10.37 Tunnel subsoil drafting amendment [[AS-100](#)] in September 2023 and comprises a redrafting of article 33(7) and associated modifications to Schedule 10 of the draft Development Consent Order. No updates to ES documents were required.

1.3.8 Project amendment EA07 was notified to the Examining Authority via 9.107 Cover Letter and List of Submissions for Deadline 5 [[REP5-001](#)]. The amendment comprises removal of two areas of hardstanding and an adjacent building within plot 21-10 from the Order Limits. Updates to ES documents were made in response to the changes to Order Limits.

- 1.3.9 Project amendments EA08 to EA10 were notified to the Examining Authority via Notification of proposed amendments – November 2023 [[REP6A-023](#)]. The agreed amendments are as listed below. Updates were made to ES documents in response to amendments EA08 and EA10.
- a. EA08 – Thong Lane Car Park removal
 - b. EA09 – Reduction in tunnels limits of deviation
 - c. EA10 – Plot 13-03 Open Space which comprises the provision of additional replacement open space on a precautionary basis to compensate for the permanent acquisition of an informal recreational walking route (plot 13-09 on Sheet 13 of Land Plans Volume B [[REP7-008](#)]) to the rear of Gravesend Golf Centre

- 1.3.10 At the time that the changes and amendments were accepted by the Examining Authority, some updates were made to relevant ES Chapters, figures and appendices. For other ES documents, the updates were not made at that time, where it was not considered necessary. Relevant updates have now been identified and where required, the documents have been updated and re-issued as a new version. In other cases, the updates are reported via this ES Addendum, in line with the approach taken at previous deadlines. All updates to documents are noted in the index in Table 2.1, with further information provided in Section 3.

Examination-led updates

- 1.3.11 Where required, ES documents have been updated in response to the Examination process. Document updates have been made for reasons including the following:
- a. To provide points of clarification
 - b. To correct errata
 - c. To align with the development of design and mitigation in response to stakeholder engagement, for example, new and refined items in the Register of Environmental Actions and Commitments [**Document Reference 6.3 ES Appendix 2.2 (9)**]
 - d. To provide additional assessment information for receptors not previously identified
- 1.3.12 In addition to the updates to documents, additional information has been provided within appendices to the ES Addendum. The content of these appendices is set out below:
- a. Appendix A was prepared to present additional assessment information related to recreational pressure on designated sites. This appendix has been edited at Deadline 9 to reflect amendment EA08, which removed the Thong Lane car park from the proposals, as described in Notification of proposed amendments – November 2023 [[REP6A-023](#)].

- b. Appendix B provided an update to the cumulative inter-project effects assessment from the point in time used in the DCO application.
- c. Appendix C was prepared to provide clarification to the Examining Authority on the flexibility within the construction methodology regarding the use of tunnel boring machinery.
- d. Appendix D provided additional information to the Examining Authority on the environmental implications of the Ministerial Statement made by the Secretary of State for Transport in March 2023 in relation to the A122 Lower Thames Crossing (the Project). The Ministerial Statement revised the timing of construction and consequently the date for opening the Project to traffic.
- e. Appendix E provides an update on greenhouse gas emissions following the procurement of the three design and build contracts and the Applicant's accreditation under PAS 2080:2016. It provides an overview of the implications of both changes on the assessment conclusions presented in ES Chapter 15: Climate [[APP-153](#)].
- f. Appendix F has been added at Deadline 9 providing a table setting out the heritage assets that would experience less than substantial harm. This table was originally provided in Annex A of 9.89 Responses to the Examining Authority's ExQ1 Appendix H – 12. Physical Effects of Development & Operation [[REP4-200](#)] and has been included in the ES Addendum as information supplementing ES Chapter 6: Cultural Heritage [[REP4-116](#)].

1.4 Approach to ES document updates

- 1.4.1 The Environmental Statement was written for the DCO application submission in October 2022. It reflects the information available at the time of submission and the assessment conclusions reflect the parameters established to define the Project.
- 1.4.2 Where updates have been made to ES documents, consideration has been given to the implications of the update on the ongoing and future use of the ES. Updates have been made reflecting important information considered to be of relevance to decision making, for example, for use in the Examination process, when considering the application for consent, and as part of post-decision processes including detailed design and construction phases.
- 1.4.3 ES documents have been updated to reflect changes to assessment conclusions, new or altered mitigation measures and design and construction related commitments. ES figures and appendices have been updated to ensure that the information presented remains fit-for-purpose and supports the assessment conclusions presented in the ES chapters.

- 1.4.4 Due to the size and the level of detail of information presented in the ES, a proportionate approach has been followed and ES documents have not been updated paragraph-by-paragraph in response to all points raised during Examination and all Project changes and amendments agreed. For example, descriptions of study areas and baseline data have not been updated in response to changes to Order Limits where there would be no resulting change to the assessment conclusions, and these assessments continue to reflect a reasonable worst-case. This proportionate approach has been followed when identifying whether a document needs to be re-issued as a new version, or updates are made via this ES Addendum. Documents have been re-issued as a new version where the quantity of amendments has meant it is preferable to present them in this way, or where the updated information is considered to be more accessible or understandable in this format, for example, where figures are re-issued.

Presentation of updates

- 1.4.5 A proportionate approach has been taken to the presentation of the updates made to ES documents. In most cases the original chapter, figure or appendix has not been re-issued as a new version and the tables within Section 3 of this document form the record of the update made to that document. The index in Table 2.1 identifies how and when each ES document has been updated.
- 1.4.6 Where document updates could not be simply presented within the record of updates in Section 3, the relevant document has been updated and submitted as an updated version. The tables in Section 3 present a summary of the updates made, ensuring that this ES Addendum provides the full record of the evolution of the ES and reference to new versions of documents.

Updates in response to Project changes and amendments

- 1.4.7 Updates to ES documents have been made reflecting changes to Order Limits. Where Order Limits are presented as an important feature supporting the understanding of the figure or plate, these have been shown in a new version of the document and submitted into Examination. Where the Order Limits are considered to be of less importance to the information presented in the figure or plate, for example, providing context to the location shown, these documents are updated via the information presented in this ES Addendum. To aid the understanding of the changes to Order Limits, Figure 1: ES Addendum update to information in figures and plates included in this ES Addendum shows the original Order Limits as submitted in the DCO application in October 2022 and the final Order Limits as presented at Deadline 9. All figures and plates updated via the ES Addendum should be read with reference to Figure 1.
- 1.4.8 The changes to the proposed nitrogen deposition compensation areas are shown on a number of figures and plates. In many cases the nitrogen deposition compensation areas that have been removed from the proposals are discussed in chapters and appendices. These chapters and appendices may not have been updated where the information remains correct for the point in time of submission and supports the assessment conclusions presented. Where required, figures and plates have been updated and reissued to show the revised nitrogen deposition compensation proposals and also, the area previously proposed but subsequently removed. As for the Order Limits, not all

updates to nitrogen deposition compensation areas have been updated by the issue of a new version of the document, but are updated by reference to Figure 1 included in this ES Addendum. This shows the original nitrogen deposition compensation proposals and the final nitrogen deposition compensation areas as presented at Deadline 9. All figures and plates updated via the ES Addendum should be read with reference to Figure 1.

- 1.4.9 Similar to above, Figure 1 also shows the original and revised locations of the Muckingford Road and Low Street Lane Utility Logistics Hubs (ULH 11 and 12 respectively). As for the above, the record of updates in Section 3 identifies where documents containing this information should be read with reference to Figure 1.

2 Index of Environmental Statement documents

2.1 Index

2.1.1 Table 2.1 presents the index of all ES chapters, figures and appendices and when and how these have been updated. For each ES document, the versions and reference numbers are provided along with an indication of whether the document has been updated during Examination. The index provides a cross reference to the tables within the record of updates in Section 3 of this ES Addendum, where further information on the updates can be found. In cases where an update has not been required, the index records this, and no further information is provided within Section 3.

Table 2.1 Index of ES document updates

Application Document name and reference	Update description
6.1 Environmental Statement – Glossary and Acronyms for the Environmental Statement Version 1 [APP-138]	No updates required from Examination process.
ES chapters	
6.1 Environmental Statement – Chapter 1 – Introduction Version 1 [APP-139]	No updates to chapter required from Examination process.
6.1 Environmental Statement – Chapter 2 – Project Description Version 1 [APP-140] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.1
6.1 Environmental Statement – Chapter 3 – Assessment of Reasonable Alternatives Version 1 [APP-141]	No updates to chapter required from Examination process.
6.1 Environmental Statement – Chapter 4 – EIA Methodology Version 1 [APP-142]	No updates to chapter required from Examination process.
6.1 Environmental Statement - Chapter 5 - Air Quality Version 1 [APP-143] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	2.1.2 Description of updates identified in Table 3.2
6.1 Environmental Statement – Chapter 6 – Cultural Heritage Version 1 [APP-144] Version 2 [AS-044] Version 3 [REP4-116] Document revised since Version 3 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.3
6.1 Environmental Statement – Chapter 7 – Landscape and Visual Version 1 [APP-145]	Description of updates identified in Table 3.4

Application Document name and reference	Update description
Version 2 [Document Reference 6.1 ES Chapter 7 (2)] Document revised and re-issued at Deadline 9.	
6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity Version 1 [APP-146] Version 2 [Document Reference 6.1 ES Chapter 8 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.5
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity Version 1 [APP-147] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.6
6.1 Environmental Statement – Chapter 10 – Geology and Soils [APP-148] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.1 Environmental Statement - Chapter 11 – Material Assets and Waste Version 1 [APP-149] Version 2 [Document Reference 6.1 ES Chapter 11 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.8
6.1 Environmental Statement - Chapter 12 – Noise and Vibration Version 1 [APP-150] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.9
6.1 Environmental Statement – Chapter 13 – Population and Human Health Version 1 [APP-151] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.10
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment Version 1 [APP-152] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.1 Environmental Statement - Chapter 15 – Climate Version 1 [APP-153] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.12
6.1 Environmental Statement – Chapter 16 – Cumulative Effects Assessment Version 1 [APP-154] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.13
6.1 Environmental Statement – Chapter 17 – Summary Version 1 [APP-155] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.14

Application Document name and reference	Update description
ES figures	
6.2 Environmental Statement – Figure 2.1 – Route Alignment and Order Limits Version 1 [APP-156] Version 2 [REP3-096] Version 3 [REP4-118] Version 4 [Document Reference 6.2 ES Figure 2.1 (4)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.2 – Project Proposals Version 1 [APP-157] Version 2 [AS-046] Version 3 [REP4-120] Version 4 [Document Reference 6.2 ES Figure 2.2 (4)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan Version 1 [APP-158] Version 2 [REP4-122] Version 3 [Document Reference 6.2 ES Figure 2.3 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) Version 1 [APP-159] Version 2 [REP2-014] Version 3 [REP4-124] Version 4 [Document Reference 6.2 ES Figure 2.4 Sections 1 and 1a (4)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) Version 1 [APP-160] Version 2 [REP2-016] Version 3 [REP3-098] Version 4 [REP7-116] Version 5 [Document Reference 6.2 ES Figure 2.4 Section 2 (5)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) Version 1 [APP-161] Version 2 [REP2-018] Version 3 [REP7-118] Version 4 [Document Reference 6.2 ES Figure 2.4 Section 3 (4)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 4 (4 of 10) Version 1 [APP-162] Version 2 [Document Reference 6.2 ES Figure 2.4 Section 4 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1

Application Document name and reference	Update description
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) Version 1 [APP-163] Version 2 [REP2-020] Version 3 [REP3-100] Version 4 [REP4-127] Version 5 [REP7-120] Version 6 [Document Reference 6.2 ES Figure 2.4 Section 9 (6)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) Version 1 [APP-164] Version 2 [REP2-022] Version 3 [REP4-129] Version 4 [Document Reference 6.2 ES Figure 2.4 Section 10 (4)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) Version 1 [APP-165] Version 2 [REP2-024] Version 3 [Document Reference 6.2 ES Figure 2.4 Section 11 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) Version 1 [APP-166] Version 2 [REP2-026] Version 3 [Document Reference 6.2 ES Figure 2.4 Section 12 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) Version 1 [APP-167] Version 2 [REP2-028] Version 3 [Document Reference 6.2 ES Figure 2.4 Section 13 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) Version 1 [APP-168] Version 2 [REP2-031] Version 3 [Document Reference 6.2 ES Figure 2.4 Section 14 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 2.5 – Construction Information Version 1 [APP-169] Version 2 [REP4-130] Version 3 [Document Reference 6.2 ES Figure 2.5 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.1
6.2 Environmental Statement – Figure 5.1 – Construction Dust Study Area Version 1 [APP-170]	2.1.3 Description of updates

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	identified in Table 3.2
6.2 Environmental Statement – Figure 5.2 – Construction Traffic Study Area Version 1 [APP-171] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	2.1.4 Description of updates identified in Table 3.2
6.2 Environmental Statement – Figure 5.3 – Operational Study Area (1 of 3) Version 1 [APP-172] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	2.1.5 Description of updates identified in Table 3.2
6.2 Environmental Statement – Figure 5.3 – Operational Study Area (2 of 3) Version 1 [APP-173] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	2.1.6 Description of updates identified in Table 3.2
6.2 Environmental Statement – Figure 5.3 – Operational Study Area (3 of 3) Version 1 [APP-174]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 5.4 – Air Quality Monitoring Sites and 2016 Annual Mean Data (1 of 3) Version 1 [APP-175] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	2.1.7 Description of updates identified in Table 3.2
6.2 Environmental Statement – Figure 5.4 – Air Quality Monitoring Sites and 2016 Annual Mean Data (2 of 3) Version 1 [APP-176] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	2.1.8 Description of updates identified in Table 3.2
6.2 Environmental Statement – Figure 5.4 – Air Quality Monitoring Sites and 2016 Annual Mean Data (3 of 3) Version 1 [APP-177]	No updates to figure required from Examination process

Application Document name and reference	Update description	
<p>6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) Version 1 [APP-178] Version 2 [REP1-118] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.</p>	<p>2.1.9</p> <p>Table 3.2</p>	<p>Description of updates identified in</p>
<p>6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) Version 1 [APP-179] Version 2 [REP1-121] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.</p>	<p>2.1.10</p> <p>Table 3.2</p>	<p>Description of updates identified in</p>
<p>6.2 Environmental Statement – Figure 5.6 – Operational Phase receptors and Results (1 of 4) Version 1 [APP-180] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>2.1.11</p> <p>Table 3.2</p>	<p>Description of updates identified in</p>
<p>6.2 Environmental Statement – Figure 5.6 – Operational Phase receptors and Results (2 of 4) Version 1 [APP-181] Document not updated but clarification related to content provided.</p>	<p>2.1.12</p> <p>Table 3.2</p>	<p>Description of updates identified in</p>
<p>6.2 Environmental Statement – Figure 5.6 – Operational Phase receptors and Results (3 of 4) Version 1 [APP-182] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>2.1.13</p> <p>Table 3.2</p>	<p>Description of updates identified in</p>
<p>6.2 Environmental Statement – Figure 5.6 – Operational Phase receptors and Results (4 of 4) Version 1 [APP-183]</p>	<p>No updates to figure required from Examination process</p>	
<p>6.2 Environmental Statement – Figure 5.7 – PCM Links in Construction and Operational Study Area Version 1 [APP-184] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>2.1.14</p> <p>Table 3.2</p>	<p>Description of updates identified in</p>

Application Document name and reference	Update description
<p>6.2 Environmental Statement – Figure 6.1 – Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (1 of 3) Version 1 [APP-185] Version 2 [Document Reference 6.2 ES Figure 6.1 1 of 3 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.1 – Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (2 of 3) Version 1 [APP-186] Version 2 [Document Reference 6.2 ES Figure 6.1 2 of 3 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.1 – Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (3 of 3) Version 1 [APP-187] Version 2 [Document Reference 6.2 ES Figure 6.1 3 of 3 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.2 – Built Heritage Baseline and Assets Assessed as Likely to Experience an Effect Version 1 [APP-188] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.3 – Historic Landscape Version 1 [APP-189] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.4 – Geophysical and Aerial Mapping Survey Results Version 1 [APP-190] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.5 – Location of Representative Heritage Viewpoints Version 1 [APP-191] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) Version 1 [APP-192] Version 2 [REP1-123]</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) Version 1 [APP-193] Version 2 [REP1-125]</p>	<p>Description of updates identified in Table 3.3</p>
<p>6.2 Environmental Statement – Figure 6.7 – Archaeological Trial Trench Evaluation Carried Out by LTC Version 1 [APP-194]</p>	<p>Description of updates identified in Table 3.3</p>

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.2 Environmental Statement – Figure 6.8 – Archaeology and Geology Version 1 [APP-195] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.3
6.2 Environmental Statement – Figure 6.9 – Palaeolithic Archaeology Version 1 [APP-196] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.3
6.2 Environmental Statement – Figure 7.1 – National Landscape Character including Seascape Version 1 [APP-197] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.2 – Local Landscape Character Areas Version 1 [APP-198] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.3 – Environmental Lighting Zones Version 1 [APP-199] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.4 – Landscape Designations Version 1 [APP-200] Version 2 [REP1-126] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.5 – Tranquillity Campaign to Protect Rural England Version 1 [APP-201] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.6 – Landscape Tranquillity Baseline Noise Survey Locations Version 1 [APP-202] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.7 – Greenbelt and Settlement Boundaries Version 1 [APP-203] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.8 – ZTV – 5km DTM Analysis of Main Construction Compounds (1 of 2) Version 1 [APP-204] Version 2 [REP4-132]	Description of updates identified in Table 3.4

Application Document name and reference	Update description
Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	
6.2 Environmental Statement – Figure 7.8 – ZTV – 5km DTM Analysis of Main Construction Compounds (2 of 2) Version 1 [APP-205] Version 2 [REP4-132] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.9 – ZTV (5km) – Lower Thames Crossing Electricity Overhead Line (OHL) Diversions Analysis. Version 1 [APP-206] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.10 – ZTV (5km) – Lower Thames Crossing route Analysis Overview Version 1 [APP-207] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) – Lower Thames Crossing route Highway Section Analysis (1 of 6) Version 1 [APP-208] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) – Lower Thames Crossing route Highway Section Analysis (2 of 6) Version 1 [APP-209] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) – Lower Thames Crossing route Highway Section Analysis (3 of 6) Version 1 [APP-210] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) – Lower Thames Crossing route Highway Section Analysis (4 of 6) Version 1 [APP-211] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) – Lower Thames Crossing route Highway Section Analysis (5 of 6) Version 1 [APP-212] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) – Lower Thames Crossing route Highway Section Analysis (6 of 6) Version 1 [APP-213]	No updates to figure required from Examination process
6.2 Environmental Statement – Figure 7.12 – ZTV (2.5km) – Lower Thames Crossing route Analysis Overview (1 of 2)	Description of updates identified in Table 3.4

Application Document name and reference	Update description
Version 1 [APP-214] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.2 Environmental Statement – Figure 7.12 – ZTV (2.5km) – Lower Thames Crossing route Analysis Overview (2 of 2) Version 1 [APP-215]	No updates to figure required from Examination process
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) – Lower Thames Crossing route Highway Section Analysis (1 of 4) Version 1 [APP-216] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) – Lower Thames Crossing route Highway Section Analysis (2 of 4) Version 1 [APP-217] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) – Lower Thames Crossing route Highway Section Analysis (3 of 4) Version 1 [APP-218] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) – Lower Thames Crossing route Highway Section Analysis (4 of 4) Version 1 [APP-219] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.14 – ZTV (2.5km) – Lower Thames Crossing route Analysis with Earthwork Mitigation Overview (1 of 2). Version 1 [APP-220] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.14 – ZTV (2.5km) – Lower Thames Crossing route Analysis with Earthwork Mitigation Overview (2 of 2). Version 1 [APP-221]	No updates to figure required from Examination process
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (1 of 12) Version 1 [APP-222]	No updates to figure required from Examination process
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (2 of 12) Version 1 [APP-223]	No updates to figure required from Examination process
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (3 of 12) Version 1 [APP-224]	Description of updates identified in Table 3.4

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (4 of 12) Version 1 [APP-225] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (5 of 12) Version 1 [APP-226] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (6 of 12) Version 1 [APP-227] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (7 of 12) Version 1 [APP-228] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (8 of 12) Version 1 [APP-229] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (9 of 12) Version 1 [APP-230] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (10 of 12) Version 1 [APP-231] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (11 of 12)	No updates to figure required from Examination process

Application Document name and reference	Update description
Version 1 [APP-232]	
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) – Lower Thames Crossing route Highway Section with Earthwork Mitigation (12 of 12) Version 1 [APP-233]	No updates to figure required from Examination process
6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations Version 1 [APP-234] Version 2 [REP1-128] Version 3 [Document Reference 6.2 ES Figure 7.16 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (1 of 8) Version 1 [APP-235]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (2 of 8) Version 1 [APP-236]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (3 of 8) Version 1 [APP-237]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (4 of 8) Version 1 [APP-238]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (5 of 8) Version 1 [APP-239]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (6 of 8) Version 1 [APP-240]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (7 of 8) Version 1 [APP-241]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.17 – Representative Viewpoints - Winter and Summer Views (8 of 8) Version 1 [APP-242]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.18 – Representative Viewpoints - Night-time (inc. Winter) Views Version 1 [APP-243]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) Version 1 [APP-244] Version 2 [REP3-102] Version 3 [REP5-046] Version 4 [REP6-036] Version 5 [Document Reference 6.2 ES Figure 7.19 1 of 4 (5)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4

Application Document name and reference	Update description
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) Version 1 [APP-245] Version 2 [REP1-131] Version 3 [Document Reference 6.2 ES Figure 7.19 2 of 4 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (3 of 4) Version 1 [APP-246] Version 2 [Document Reference 6.2 ES Figure 7.19 3 of 4 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (4 of 4) Version 1 [APP-247] Version 2 [REP4-134] Version 3 [Document Reference 6.2 ES Figure 7.19 4 of 4 (3)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (1 of 6) Version 1 [APP-248] Version 2 [REP1-133]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (2 of 6) Version 1 [APP-249] Version 2 [REP1-135]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (3 of 6) Version 1 [APP-250] Version 2 [REP1-136]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (4 of 6) Version 1 [APP-251] Version 2 [REP1-138]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (5 of 6) Version 1 [APP-252] Version 2 [REP1-141]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 of 6) Version 1 [APP-253] Version 2 [REP1-143]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 Version 1 [APP-254] Version 2 [REP1-144]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.21.1 – Noise effects on Kent Downs AONB during construction Version 1 [APP-255]	No updates to figure required from Examination process.

Application Document name and reference	Update description
6.2 Environmental Statement – Figure 7.21.2 – Noise effects on Kent Downs AONB during operational year 2030 and 2045 Version 1 [APP-256]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.21.3 – Existing Tranquillity within Kent Downs AONB Version 1 [APP-257]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 7.22 – Tree Survey Dual Scope Layout Version 1 [APP-258] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) Version 1 [APP-259] Version 2 [REP1-147] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) Version 1 [APP-260] Version 2 [REP1-149]	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan Version 1 [APP-261] Version 2 [REP1-151] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.2 Environmental Statement – Figure 8.1 – Designated Sites Version 1 [APP-262] Version 2 [Document Reference 6.2 ES Figure 8.1 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.2 – Phase 1 Habitat Map Version 1 [APP-263] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.3 – Hedgerow Regulations Assessment Version 1 [APP-264] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.4 – NVC and Lower Plant Survey Locations Version 1 [APP-265] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.5 – Invasive Plant Species Locations Version 1 [APP-266]	Description of updates identified in Table 3.5

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.2 Environmental Statement – Figure 8.6 – Phase 1 field and desk based assessment coverage Version 1 [APP-267] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.7 – Invertebrate Survey Locations Version 1 [APP-268] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.8 – GCN Presence/Absence Results Version 1 [APP-269] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.9 – Reptile Survey Results Version 1 [APP-270] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.10 – Ornithology Survey Areas Version 1 [APP-271] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.11 – Ornithology Intertidal Vantage Point Results Version 1 [APP-272]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 8.12 – Ornithology Intertidal vantage point results - assemblages Version 1 [APP-273]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 8.13 – Functionally Linked Land Transects - Wintering Version 1 [APP-274] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.14 – Functionally linked land transect results - wintering (nocturnal) Version 1 [APP-275] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.15 – Functionally Linked Land Transects - Breeding Version 1 [APP-276] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5

Application Document name and reference	Update description
6.2 Environmental Statement – Figure 8.16 – Designated Woodland Transect Results - Wintering Version 1 [APP-277]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 8.17 – Designated Woodland Transect Results - Breeding Version 1 [APP-278]	No updates to figure required from Examination process.
6.2 Environmental Statement – Figure 8.18 – Ornithology Main Route Transects Results - Wintering Version 1 [APP-279] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.19 – Ornithology Main Route Transects Results - Breeding Version 1 [APP-280] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.20 – Ornithology Barn Owl Distribution and Breeding Sites (CONFIDENTIAL) Version 1 [APP-281] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.21 – Ornithology Marsh Harrier Distribution (CONFIDENTIAL) Version 1 [APP-282] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.22 – Ornithology Other Schedule 1 Species Distribution Version 1 [APP-283] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.23 – Woodland Assessment Locations and Bat Tree Survey Results Version 1 [APP-284] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.24 – Bat Building Survey Results Version 1 [APP-285] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.2 Environmental Statement – Figure 8.25 – Bat Transect and Crossing Point Locations Version 1 [APP-286] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5

Application Document name and reference	Update description
<p>6.2 Environmental Statement – Figure 8.26 – Dormouse Survey Locations and Results Version 1 [APP-287] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.27 – Otter and Water Vole Survey Results Version 1 [APP-288] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.28 – Tilbury 2 Water Vole Survey Results Version 1 [APP-289] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.29 – Badger Survey Results (CONFIDENTIAL) Version 1 [APP-290] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.30 – Badger Bait Marking Survey Results (CONFIDENTIAL) Version 1 [APP-291] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.31 – Other Mammals Survey Results Version 1 [APP-292] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.32 – Compensation area Phase 1 survey Version 1 [APP-293] Version 2 [Document Reference 6.2 ES Figure 8.32 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.33 – Ancient Woodland Impacts Version 1 [APP-294] Version 2 [Document Reference 6.2 ES Figure 8.33 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.5</p>
<p>6.2 Environmental Statement – Figure 8.34 – Badger Results (CONFIDENTIAL) Version 1 [APP-295]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 9.1 – Nationally and internationally designated sites within 11km of Order Limits Version 1 [APP-296] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.6</p>

Application Document name and reference	Update description
<p>6.2 Environmental Statement – Figure 9.2 – Comparison of common seal locations in the vicinity of the Thames Estuary over three surveys (2013-14) Version 1 [APP-297] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.6</p>
<p>6.2 Environmental Statement – Figure 9.3 – Comparison of grey seal locations in the vicinity of the Thames Estuary over three surveys (2013-14) Version 1 [APP-298] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.6</p>
<p>6.2 Environmental Statement – Figure 10.1 – Geology Site Walkover Version 1 [APP-299] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement - Figure 10.2 - Soil Scape Mapping Version 1 [APP-300] Version 2 [AS-047] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 10.3 – Provisional Agricultural Land Classification Mapping Version 1 [APP-301] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 10.4 – Agricultural Land Classification Mapping Version 1 [APP-302] Version 2 [Document Reference 6.2 ES Figure 10.4 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 10.5 – Refined Conceptual Site Model - Credible Contamination Sources Version 1 [APP-303] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 10.6 – Superficial Deposits Version 1 [APP-304] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 10.7 – Bedrock Geology Version 1 [APP-305] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 10.8 – Local Geological Sites Version 1 [APP-306] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>

Application Document name and reference	Update description
<p>6.2 Environmental Statement – Figure 10.9 – Unexploded Ordnance Map Version 1 [APP-307] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.7</p>
<p>6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment Version 1 [APP-308] Version 2 [REP1-152] Version 3 [Document Reference 6.2 ES Figure 11.1 (3)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.8</p>
<p>6.2 Environmental Statement – Figure 12.1 – Construction Noise and Vibration Study Area Version 1 [APP-309] Version 2 [Document Reference 6.2 ES Figure 12.1 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.9</p>
<p>6.2 Environmental Statement – Figure 12.2 – Construction Traffic Noise - Affected Links Version 1 [APP-310] Version 2 [Document Reference 6.2 ES Figure 12.2 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.9</p>
<p>6.2 Environmental Statement – Figure 12.3 – Operational Road Traffic Noise Study Area Version 1 [APP-311]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 12.4 – Operational Ventilation Noise Sensitive Receptors Version 1 [APP-312]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 12.5 – Baseline Noise Monitoring Locations Version 1 [APP-313]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 12.6 – Operational Road Traffic Noise Mitigation Version 1 [APP-314]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 12.7 – Opening Year Noise Change Contour (DSOY minus DMOY) Version 1 [APP-315]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 12.8 – Future Year Noise Change Contour (DSFY minus DMOY) Version 1 [APP-316]</p>	<p>No updates to figure required from Examination process.</p>
<p>6.2 Environmental Statement – Figure 13.1 – Population and Human Health Baseline – Private Property & Housing, Development Land & Businesses, Community Land & Asset Version 1 [APP-317] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.10</p>

Application Document name and reference	Update description
<p>6.2 Environmental Statement – Figure 13.2 – Population and Human Health Baseline – PRow and WCH routes Version 1 [APP-318] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.10</p>
<p>6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition Version 1 [APP-319] Version 2 [REP1-154] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.10</p>
<p>6.2 Environmental Statement – Figure 13.4 – Population and Human Health Assessment - Proposed WCH Links Version 1 [APP-320] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.10</p>
<p>6.2 Environmental Statement – Figure 13.5 – Agricultural Landowners Version 1 [APP-321] Version 2 [Document Reference 6.2 ES Figure 13.5 (2)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates identified in Table 3.10</p>
<p>6.2 Environmental Statement – Figure 14.1 – Surface Water Receptors and Resources Version 1 [APP-322] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.2 Environmental Statement – Figure 14.2 – Groundwater Receptors and Resources Version 1 [APP-323] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.2 Environmental Statement – Figure 14.3 – Superficial Aquifer Designations Version 1 [APP-324] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.2 Environmental Statement - Figure 14.4 - Bedrock Aquifer Designations Version 1 [APP-325] Version 2 [AS-048] Document revised since Version 2 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.2 Environmental Statement – Figure 14.5 – Water Framework Directive - Surface Water Bodies, Transitional Waterbodies and Current Status Version 1 [APP-326] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.2 Environmental Statement – Figure 14.6 – Water Framework Directive – Groundwater Bodies and Current Status</p>	<p>Description of updates identified in Table 3.11</p>

Application Document name and reference	Update description
Version 1 [APP-327] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.2 Environmental Statement – Figure 14.7 – Water Framework Directive – Protected Areas Version 1 [APP-328] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.2 Environmental Statement – Figure 16.1 – Cumulative Zones of Influence Version 1 [APP-329] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.13
6.2 Environmental Statement – Figure 16.2 – Developments in the Cumulative Shortlist Version 1 [APP-330] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.13
6.2 Environmental Statement – Figure 16.3 – Overview Map of Local Authorities and Wards Version 1 [APP-331] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.13
ES appendices	
6.3 Environmental Statement – Appendix 1.1 – Competent Expert Evidence Version 1 [APP-332]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 1.2 – Summary of Section 42 comments and National Highways responses Version 1 [APP-333]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 1.3 – Assessment of proposed gas pipeline works for the purposes of section 20 of the Planning Act 2008 Version 1 [APP-334]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information Version 1 [APP-335] Version 2 [AS-049] Document further revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.1
6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan Version 1 [APP-336] Version 2 [REP1-155] Version 3 [REP3-104] Version 4 [REP4-138] Version 5 [REP5-048] Version 6 [REP6-038]	Description of updates made is not recorded in the ES Addendum, see paragraphs 1.2.10 and 1.2.11.

Application Document name and reference	Update description
<p>Version 7 [REP7-122] Version 8 [REP8-044] Document renamed at Deadline 8 to: 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan. Version 9 [Document Reference 6.3 ES Appendix 2.2 (9)] Document revised and re-issued at Deadline 9.</p>	
<p>6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, First iteration of Environmental Management Plan - Annex A - Outline Site Waste Management Plan Version 1 [APP-337] Version 2 [REP6-040] Version 3 [REP7-124] Document renamed at Deadline 9 to: 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan - Annex A - Outline Site Waste Management Plan Version 4 [Document Reference 6.3 ES Appendix 2.2 Annex A (4)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates made is not recorded in the ES Addendum see paragraphs 1.2.10 and 1.2.11.</p>
<p>6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, First iteration of Environmental Management Plan - Annex B - Outline Materials Handling Plan Version 1 [APP-338] Version 2 [REP4-136] Version 3 [REP5-051] Version 4 [REP7-127] Document renamed at Deadline 9 to: 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan - Annex B - Outline Materials Handling Plan Version 5 [Document Reference 6.3 ES Appendix 2.2 Annex B (5)] Document revised and re-issued at Deadline 9.</p>	<p>Description of updates made is not recorded in the ES Addendum see paragraphs 1.2.10 and 1.2.11.</p>
<p>6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, First iteration of Environmental Management Plan - Annex C - Preliminary Works Environmental Management Plan Version 1 [APP-339] Version 2 [REP1-158] Version 3 [REP6-042] Document renamed at Deadline 9 to: 6.3 Environmental Statement – Appendix 2.2 – Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan - Annex C - Preliminary Works Environmental Management Plan</p>	<p>Description of updates made is not recorded in the ES Addendum see paragraphs 1.2.10 and 1.2.11.</p>

Application Document name and reference	Update description
Version 4 [Document Reference 6.3 ES Appendix 2.2 Annex C (4)] Document revised and re-issued at Deadline 9.	
6.3 Environmental Statement - Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan - Annex D – Community Liaison Group - Initial Terms of Reference Version 1 [Document Reference 6.3 ES Appendix 2.2 Annex D]	Description of updates made is not recorded in the ES Addendum see paragraphs 1.2.10 and 1.2.11.
6.3 Environmental Statement - Appendix 2.2 – Code of Construction Practice including Register of Environmental Actions and Commitments (REAC), First Iteration of Environmental Management Plan – Annex E – Heat map Version 1 [REP8-046] Version 2 [Document Reference 6.3 ES Appendix 2.2 Annex E (2)]	Description of updates made is not recorded in the ES Addendum see paragraphs 1.2.10 and 1.2.11.
6.3 Environmental Statement – Appendix 4.1 – The Inspectorate's Scoping Opinion and National Highways Response Version 1 [APP-340]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 4.2 – Major Accidents and Disasters Long List Version 1 [APP-341]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 4.3 – Major Accidents and Disasters Short List Version 1 [APP-342]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 4.4 – Traffic and Transport Version 1 [APP-343]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 4.5 – EIA Methodology Policy Version 1 [APP-344]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 5.1 – Air Quality Methodology Version 1 [APP-345]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 5.2 – Air Quality Baseline Conditions Version 1 [APP-346]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results Version 1 [APP-347] Version 2 [REP1-161]	2.1.15 Description of updates identified in Table 3.2
6.3 Environmental Statement – Appendix 5.4 – Air Quality Operational Phase Results Version 1 [APP-348]	No updates to appendix required from Examination process.

Application Document name and reference	Update description
6.3 Environmental Statement – Appendix 5.5 – Air Quality Legislation and Policy Version 1 [APP-349]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 5.6 – Project Air Quality Action Plan Version 1 [APP-350]	2.1.16 Description of updates identified in Table 3.2
6.3 Environmental Statement – Appendix 6.1 – Cultural Heritage Desk-based Assessment (1 of 4) Version 1 [APP-351]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.1 – Cultural Heritage Desk-based Assessment (2 of 4) Version 1 [APP-352]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.1 – Cultural Heritage Desk-based Assessment (3 of 4) Version 1 [APP-353]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.1 – Cultural Heritage Desk-based Assessment (4 of 4) Version 1 [APP-354]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.2 – Aerial Investigation and Mapping Report Version 1 [APP-355]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.3 – Archaeological Desk-Based Assessment of 20th century Military Archaeology Version 1 [APP-356]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.4 – Coastal Fortifications Statements of Significance Version 1 [APP-357]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.5 – Lower Thames Crossing - Palaeolithic and Quaternary Deposit Model (PQDM) and Desk-based Assessment of Palaeolithic Potential Version 1 [APP-358]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.6 – Lower Thames Crossing - Standalone Palaeolithic Archaeological Assessment and Research Framework (SPAA-&-RF) Version 1 [APP-359]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (1 of 2) Version 1 [APP-360] Version 2 [AS-051]	Description of updates identified in Table 3.3
6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (2 of 2) Version 1 [APP-361]	No updates to appendix required from Examination process.

Application Document name and reference	Update description
6.3 Environmental Statement – Appendix 6.8 – Trial Trenching Reports Volume A (1 of 5) Version 1 [APP-362]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.8 – Trial Trenching Reports Volume B (2 of 5) Version 1 [APP-363]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.8 – Trial Trenching Reports Volume C (3 of 5) Version 1 [APP-364]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.8 – Trial Trenching Reports Volume D (4 of 5) Version 1 [APP-365]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.8 – Trial Trenching Reports Volume E (5 of 5) Version 1 [APP-366]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation Version 1 [APP-367] Version 2 [REP5-052] Version 3 [REP6-044] Version 4 [REP7-128] Version 5 [REP8-047] Version 6 [Document Reference 6.3 ES Appendix 6.9 (6)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.3
6.3 Environmental Statement Appendix 6.10 – Assessment Tables Version 1 [APP-368] Version 2 [AS-052] Document further revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.3
6.3 Environmental Statement – Appendix 6.11 – Scheme-wide Written Scheme of Investigation for Trial Trenching south of the River Thames Version 1 [APP-369]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.12 – Scheme-wide Written Scheme of Investigation for Trial Trenching north of the River Thames Version 1 [APP-370]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.13 – Holocene Geoarchaeological Desk-based Assessment of the Route of the Lower Thames Crossing Version 1 [APP-371] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.3
6.3 Environmental Statement – Appendix 6.14 – Timeline Version 1 [APP-372]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.15 – Master Gazetteer of Heritage Assets Version 1 [APP-373]	No updates to appendix required from Examination process.

Application Document name and reference	Update description
6.3 Environmental Statement – Appendix 6.16 – Historic Buildings Recording Version 1 [APP-374]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 6.17 – Cultural Heritage Legislation and Policy Version 1 [APP-375]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.1 – Local Planning Policy of Relevance to Landscape and Visual Version 1 [APP-376]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.2 – Landscape and Visual Assessment Methodology Version 1 [APP-377]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.3 – Area of Search and Zone of Theoretical Visibility Analysis Version 1 [APP-378]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.4 – National Character Baseline including Seascape Character Version 1 [APP-379]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.5 – Local Landscape Character Baseline Version 1 [APP-380]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.6 – Kent Downs Area of Outstanding Natural Beauty Relevant Guidance Version 1 [APP-381]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity Version 1 [APP-382] Version 2 [Document Reference 6.3 ES Appendix 7.7 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies Version 1 [APP-383] Version 2 [AS-054]	Description of updates identified in Table 3.4
6.3 Environmental Statement – Appendix 7.9 – Schedule of Landscape Effects Version 1 [APP-384] Version 2 [Document Reference 6.3 ES Appendix 7.9 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects Version 1 [APP-385] Version 2 [Document Reference 6.3 ES Appendix 7.10 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.4
6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB Version 1 [APP-386] Version 2 [REP1-162]	Description of updates identified in Table 3.4

Application Document name and reference	Update description
6.3 Environmental Statement – Appendix 7.12 – Arboricultural Impact Assessment Version 1 [APP-387] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.4
6.3 Environmental Statement – Appendix 7.13 – Views from the Road Assessment Version 1 [APP-388]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 7.14 – Landscape and Visual Legislation and Policy Version 1 [APP-389]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.1 – Designated Sites Version 1 [APP-390]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.2 – Plants and Habitats Version 1 [APP-391]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.3 – Terrestrial Invertebrates Version 1 [APP-392]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.4 – Freshwater Ecology Version 1 [APP-393]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.5 – Amphibians Version 1 [APP-394]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.6 – Reptiles Version 1 [APP-395]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.7 – Ornithology Version 1 [APP-396]	No updates to appendix required from Examination process.
6.3 Environmental Statement - Appendix 8.8 – Bats Version 1 [APP-397] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.9 – Dormouse Version 1 [APP-398]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.10 – Water Vole Version 1 [APP-399]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.11 – Otter Version 1 [APP-400]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.12 – Badger (CONFIDENTIAL) Version 1 [APP-401]	No updates to appendix required from Examination process.

Application Document name and reference	Update description
6.3 Environmental Statement – Appendix 8.13 – Other Mammals Version 1 [APP-402]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (1 of 4) Version 1 [APP-403] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (2 of 4) Version 1 [APP-404] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (3 of 4) Version 1 [APP-405] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (4 of 4) Version 1 [APP-406] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.15 – Construction and Operational Light Spill Calculations Version 1 [APP-407]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.16 – Draft EPS mitigation licence application - bats Version 1 [APP-408] Version 2 (Parts 1 to 4) [REP8-049 to REP-055]	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.17 – Draft EPS mitigation licence application - great crested newts (1 to 5) Version 1 (1 to 5) [APP-409], [APP-410], [APP-411], [APP-412] and [APP-413] Version 2 (1 to 8) (Version 2) [REP8-057 to REP-071]	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.18 – Draft EPS mitigation licence application - dormouse Version 1 [APP-414] Version 2 [REP8-073]	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.19 – Draft badger development licence application (CONFIDENTIAL) Version 1 [APP-415] Version 2 [REP8-074]	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.20 – Draft water vole conservation licence application Version 1 [APP-416]	Description of updates identified in Table 3.5

Application Document name and reference	Update description
Version 2 [REP8-076]	
6.3 Environmental Statement – Appendix 8.21 – Biodiversity Metric Calculations Version 1 [APP-417]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 8.22 – Terrestrial Ecology Surveys at Nitrogen Deposition Compensation Sites Version 1 [APP-418] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.5
6.3 Environmental Statement – Appendix 8.23 – Terrestrial Biodiversity Legislation and Policy Version 1 [APP-419]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 9.1 – Assessment of Ground-Borne Noise and Vibration, and Underwater Noise from the Tunnel Boring Machine at Marine Receptors Version 1 [APP-420]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 9.2 – Marine Biodiversity Legislation and Policy Version 1 [APP-421]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 10.1 – Geology and Soils Legislation and Policy Version 1 [APP-422]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 10.2 – Stability Report Version 1 [APP-423]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 10.3 – Site Walkover Factual Report Version 1 [APP-424] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.3 Environmental Statement – Appendix 10.4 – Agricultural Land Classification Factual Report Version 1 [APP-425] Version 2 [Document Reference 6.3 ES Appendix 10.4 (2)] Document revised and re-issued at Deadline 9.	Description of updates identified in Table 3.7
6.3 Environmental Statement – Appendix 10.5 – Ground Model Version 1 [APP-426]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 10.6 – Preliminary Risk Assessment Report Version 1 [APP-427] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.3 Environmental Statement – Appendix 10.7 – East Tilbury Landfill Risk Assessment Version 1 [APP-428] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.3 Environmental Statement – Appendix 10.8 – Generic Quantitative Risk Assessment Report for the Phase 1 Investigation Version 1 [APP-429]	Description of updates identified in Table 3.7

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.3 Environmental Statement – Appendix 10.9 – Generic Quantitative Risk Assessment Report for the Phase 2 Investigation (1 of 3) Version 1 [APP-430]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 10.9 – Generic Quantitative Risk Assessment Report for the Phase 2 Investigation (2 of 3) Version 1 [APP-431] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.3 Environmental Statement – Appendix 10.9 – Generic Quantitative Risk Assessment Report for the Phase 2 Investigation (3 of 3) Version 1 [APP-432] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.3 Environmental Statement – Appendix 10.10 – Unexploded Ordnance (UXO) Desk Study & Risk Assessment Version 1 [APP-433]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy Version 1 [APP-434] Version 2 [REP1-165] Document further revised since Version 2 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.7
6.3 Environmental Statement - Appendix 11.1 – Excavated Materials Assessment Version 1 [APP-435] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.8
6.3 Environmental Statement – Appendix 11.2 – Mineral Safeguarding Assessment Version 1 [APP-436] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.8
6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors Version 1 [APP-437] Version 2 [REP1-166]	Description of updates identified in Table 3.8
6.3 Environmental Statement – Appendix 11.4 – Material Assets Assessment Supporting Data Version 1 [APP-438]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 11.5 – Waste Assessment Supporting Data Version 1 [APP-439]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 11.6 – Material Assets and Waste Legislation and Policy Version 1 [APP-440]	No updates to appendix required from Examination process.

Application Document name and reference	Update description
6.3 Environmental Statement – Appendix 12.1 – Noise and Vibration Legislation and Policy Version 1 [APP-441]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.2 – Operational Ventilation Noise Assessment South Portal Version 1 [APP-442]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.3 – Operational Ventilation Noise Assessment North Portal Version 1 [APP-443]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment Version 1 [APP-444] Version 2 [REP1-169]	Description of updates identified in Table 3.9
6.3 Environmental Statement – Appendix 12.5 – Baseline Noise Survey Information Version 1 [APP-445] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.9
6.3 Environmental Statement – Appendix 12.6 – Assessment of Ground-borne Noise and Vibration at land-based receptors Version 1 [APP-446]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.7 – Noise Insulation Regulations Assessment Version 1 [APP-447]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.8 – National Grid Electricity Transmission Network, Assessment for Audible Noise Version 1 [APP-448]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.9 – Effects of Vibration from Road Traffic (National Highways Ref. 1-457 Noise Support 2017-2021). Version 1 [APP-449]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 12.10 – Road Traffic Noise Mitigation and Cost Benefit Analysis Version 1 [APP-450]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 13.1 – Population and Human Health Legislation and Policy Version 1 [APP-451]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 13.2 – Ward Sensitivities Version 1 [APP-452]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.1 – Assessment Criteria Tables Version 1 [APP-453]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.2 – Water Features Survey Factual Report (1 of 2). Version 1 [APP-454]	Description of updates identified in Table 3.11

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.3 Environmental Statement – Appendix 14.2 – Water Features Survey Factual Report (2 of 2). Version 1 [APP-455]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.3 – Operational Surface Water Drainage Pollution Risk Assessment Version 1 [APP-456] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.4 – Hydromorphology Assessment Version 1 [APP-457]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 1 of 2) Version 1 [APP-458] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 2 of 2) – Annex Q Utilities assessment (groundwater) Version 1 [APP-459] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 1 Version 1 [APP-460] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 2 Version 1 [APP-461] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 3 Version 1 [APP-462] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 4 Version 1 [APP-463] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 5 Version 1 [APP-464]	Description of updates identified in Table 3.11

Application Document name and reference	Update description
Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 6 Version 1 [APP-465] Version 2 [REP1-171]	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 7 Version 1 [APP-466]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 8 Version 1 [APP-467] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Version 1 [APP-468]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex A Version 1 [APP-469] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex B Version 1 [APP-470] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex C Version 1 [APP-471] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex D Version 1 [APP-472]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex E Version 1 [APP-473]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex F Version 1 [APP-474]	No updates to appendix required from Examination process.
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex G Version 1 [APP-475] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Description of updates identified in Table 3.11

Application Document name and reference	Update description
<p>6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex H Version 1 [APP-476] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 10 Version 1 [APP-477] Version 2 [REP7-130]</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.3 Environmental Statement – Appendix 14.7 – Water Framework Directive Assessment Version 1 [APP-478] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.11</p>
<p>6.3 Environmental Statement – Appendix 14.8 – Road Drainage and the Water Environment Legislation and Policy Version 1 [APP-479]</p>	<p>No updates to appendix required from Examination process.</p>
<p>6.3 Environmental Statement – Appendix 15.1 – Climate Legislation and Policy Version 1 [APP-480]</p>	<p>No updates to appendix required from Examination process.</p>
<p>6.3 Environmental Statement – Appendix 15.2 – Climate Resilience Baseline Version 1 [APP-481]</p>	<p>No updates to appendix required from Examination process.</p>
<p>6.3 Environmental Statement – Appendix 15.3 – Climate Resilience Impacts and Effects Version 1 [APP-482]</p>	<p>No updates to appendix required from Examination process.</p>
<p>6.3 Environmental Statement – Appendix 16.1 – Long List of Developments Version 1 [APP-483]</p>	<p>No updates to appendix required from Examination process.</p>
<p>6.3 Environmental Statement – Appendix 16.2 – Short List of Developments Version 1 [APP-484] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.13</p>
<p>6.3 Environmental Statement – Appendix 16.3 – Cumulative Effects Assessment Legislation and Policy Version 1 [APP-485]</p>	<p>No updates to appendix required from Examination process.</p>
<p>ES Non-Technical Summary</p>	
<p>6.4 Environmental Statement - Non-Technical Summary (NTS) Version 1 [APP-486] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Description of updates identified in Table 3.15</p>

2.2 Summary of new information

2.2.1 Table 2.2 provides a collated summary of new information that has been issued as appendices to 9.8 Environmental Statement Addendum to provide further information to support the Examination process.

Table 2.2 Summary of new documents

Document name and reference	Date of update
Environmental Statement Addendum Figure 1 – ES Addendum update to information in figures and plates	Deadline 9 11 December 2023
Environmental Statement Addendum Figure 2 – Shorne and Ashenbank Woods SSSI boundary update	Deadline 9 11 December 2023
Environmental Statement Addendum Appendix A – Recreational pressure on designated sites	Deadline 1 18 July 2023 Further updated at Deadline 9 11 December 2023
Environmental Statement Addendum Appendix B – Cumulative inter-project effects update	Deadline 1 18 July 2023
Environmental Statement Addendum Appendix C – Review of a single TBM tunnelling methodology	Deadline 2 3 August 2023
Environmental Statement Addendum Appendix D – Appraisal of effects from the two-year rephasing of construction	Deadline 2 3 August 2023
Environmental Statement Addendum Appendix E – Chapter 15: Climate	Deadline 7 17 November 2023
Environmental Statement Addendum Appendix F Cultural Heritage – Assets experiencing less than substantial harm	Deadline 9 11 December 2023

3 Record of updates to Environmental Statement documents

3.1 Record of updates

- 3.1.1 Tables 3.1 to 3.15 provide the record of updates made to ES chapters, figures and appendices. Each row of the tables describes an amendment or update to the ES document. Each update is identified by a document reference, location within the document, reason for amendment, description of the update made and at which deadline. Each table presents the updates made to the chapter of the ES followed by the associated figures and appendices. All information previously presented in the ES Addendum from Deadlines 1 to 8 is collated into these tables. Information in each table is presented in the following order:
- Updates to chapter in deadline order
 - Updates to figures collated by figure reference number, and then presented in deadline order
 - Updates to appendices collated by appendix reference number, and then presented in deadline order

3.2 ES Chapter 1 Introduction

- 3.2.1 No revisions have been made throughout Examination to ES Chapter 1, associated figures or appendices.

3.3 ES Chapter 2 Project Description

- 3.3.1 The following changes have been made throughout Examination to ES Chapter 2, associated figures and appendices, as set out in Table 3.1.

Table 3.1 Updates to Chapter 2, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 2 - Project Description	Paragraph 2.2.39, bullet point b requires revision as it includes out of date REAC reference text.	Paragraph 2.2.39, bullet point b of ES Chapter 2 is amended to: A minimum of 30 individual specimen trees would be planted as replacement for 40 lost veteran trees (REAC Ref. LV032).	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
[APP-140] Document not re-issued. Updates identified in ES Addendum only.			
6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 2.4.206 requires revision to correct the reported number of properties requiring demolition from 26 to 31 north of the River Thames.	Paragraph 2.4.206 of ES Chapter 2 is amended to: North of the River Thames, there are 61 residential properties within the Order Limits, of which 26 31 would require demolition. There are seven commercial properties within the Order Limits north of the river, one of which would require demolition.	Deadline 1
6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.	Updates to text are required related to amendment EA01 Claylane Wood, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002] . Text related to the open space designation and proposed replacement public open space at Claylane Wood is amended.	Paragraph 2.3.51 of ES Chapter 2 is amended to: There are also six five other public open spaces in Section 2: Ashenbank Wood; Jeskyns Community Woodland; Claylane Wood ; open space at Roman Road; Cyclopark; and Michael Gardens Play Area. Paragraph 2.3.55 of ES Chapter 2 is deleted. Paragraph 2.4.214 of ES Chapter 2 is amended to: The Project's construction will have both temporary and permanent impacts on 44 ten open space sites and three common land sites. The Applicant is proposing the acquisition of seven six areas of land in order to provide replacement open space and common land within the Order Limits; in accordance with the requirements of sections 131 and 132 of the Planning Act 2008 and the NPSNN (DfT, 2014). In accordance with the Planning Act 2008, replacement land has not been included in all cases, for example because the acquisition of this land would be for a temporary but possibly long-lived process, or because it is only proposed to install and divert utilities through the land and would not affect its	Deadline 3

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		advantageousness once the rights were imposed. This means that its previous use can continue once the works are finished.	
<p>6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text are required related to amendment EA04 Condovers Scout Activity Centre Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002]. Text related to the Condovers Scout Activity Centre is removed.</p>	<p>Paragraph 2.3.113 of ES Chapter 2 is deleted.</p>	<p>Deadline 3</p>
<p>6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text are required related to MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August 2023) [CR1-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003].</p>	<p>Paragraph 2.3.213, bullet point a. of ES Chapter 2 is amended to: a. Creation of compensatory habitat to compensate for the effects of nitrogen deposition, located south-east of M2 junction 3, between Kit's Coty and Westfield Sole (Work number E1). This area of nitrogen deposition compensation planting (Site Reference: Blue Bell Hill) is located remotely from the Project road, approximately 9km south-east of Section 1, and comprises approximately 72.2ha 43ha of habitat creation, primarily of woodland. Paragraph 2.3.213, bullet point b. of ES Chapter 2 is amended to delete bullet point b. and all associated text as follows: b. Creation of compensatory habitat to compensate for the effects of nitrogen deposition, located south-west of M2 junction 3, north-west of Kit's Coty (Work number E2). This area of nitrogen deposition compensation planting (Site Reference: Burham) is located remotely from the Project road, approximately 8km south-east of Section 1, and comprises approximately 9.7ha of habitat creation, primarily of woodland. Paragraph 2.4.196 of ES Chapter 2 is amended to:</p>	<p>Deadline 4</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>As set out in Section 2.3 of this chapter and identified on Figure 2.4: Environmental Masterplan (Application Document 6.2), eight seven sites have been identified for the provision of compensatory habitat planting for the effects of nitrogen deposition on designated habitats, equating to approximately 246ha 205ha in total.</p> <p>Paragraph 2.4.196, bullet point h. of ES Chapter 2 is amended to delete bullet point h. and all associated text as follows:</p> <p>h. Burham</p>	
<p>6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text are required related to MRC02 Limits of deviation on bored tunnel headwall, as described in 10.4 Change Application (August 2023) [CR1-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003].</p>	<p>Paragraph 2.3.96 of ES Chapter 2 is amended to:</p> <p>The tunnel would rise to the north of the River Thames. The bored tunnel would end at a headwall and at this point the road would be at a depth of up to approximately 22m below ground level. The A122 would then continue through a short section of cut and cover up to 300m in length before exiting into an open retained structure open cutting.</p>	<p>Deadline 4</p>
<p>6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text, Tables 2.8 and 2.11, and to Plates 2.5 and 2.6 are required related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR1-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement</p>	<p>Paragraph 2.6.138, bullet point b. of ES Chapter 2 is amended to:</p> <p>b. Work number MUT6 is an approximately 3.18km 3.12km installation of water supply from Linford Borehole to the point of distribution for the tunnel boring machinery.</p> <p>The following two rows of Table 2.8 of ES Chapter 2 are amended to update the column for Approximate area (m²), as follows:</p> <p>Row for Low Street Lane ULH: 14,300m² 8,400m²</p> <p>Row for Muckingford Road ULH: 14,300m² 9,600m²</p> <p>The following two rows of Table 2.11 of ES Chapter 2 are amended to update the column for Approximate total area of compound (ha), as follows:</p>	<p>Deadline 4</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Chapter 2 Project Description [CR1-003].	Row for Low Street Lane ULH: 1.4ha 0.84ha Row for Muckingford Road ULH: 1.4ha 0.96ha Plate 2.5 and Plate 2.6 of ES Chapter 2 are to be amended to provide update to Order Limits reflecting these changes at the next re-issue of ES Chapter 2.	
6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.	Paragraphs: 2.3.26 bullet point p. 2.6.31 bullet point b. 2.6.34 bullet point d. 2.6.36 2.6.90 require revision to reflect amendment EA08 Thong Lane Car Park removal. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].	Paragraph 2.3.26 bullet point p. of ES Chapter 2 is deleted: p. Construction of a new car park to the west of the realigned Thong Lane over the A2 mainline, north of the new Thong Lane green bridge south. This would provide parking and access to Shorne Woods Country Park (Work number 1P). Construction of a private means of access to the new car is proposed as part of Work number 1H. Paragraph 2.6.31 bullet point b. of ES Chapter 2 is amended as follows: b. SS2 and SS3 - linked to the proposed Shorne Woods Country Park car park off Thong Lane. Paragraph 2.6.34 bullet point d. of ES Chapter 2 is amended as follows: d. Work number MU11 includes the installation of two new substations (SS2 and SS3) which would be linked to the proposed Shorne Woods Country Park car park off Thong Lane. Paragraph 2.6.36 of ES Chapter 2 is amended as follows: Temporary supplies of power, water, foul water and communications connections would be required for the A2 compound (Work numbers MUT1). These supplies may be left in place for use by the proposed car park. Paragraph 2.6.90 of ES Chapter 2 is deleted: It is proposed that, following the completion of construction, the A2 compound would be reused as a car park to allow the public to access the network of WCH routes and connections into Chalk Park, Shorne Woods Country Park and Jeskyns Community Woodland (via Thong Lane green bridge north). The Applicant would develop proposals with stakeholders, landowners and other developers to retain as much of the required	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>compound infrastructure in situ as practicable, to reduce adverse environmental and traffic related effects during the creation of the car park. The assessments presented in this ES have assumed that temporary utilities would be removed and the compound reinstated, reflective of a reasonable worst-case.</p>	
<p>6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraphs 2.3.71, bullet point m), 2.3.74 and 2.4.214 require revision to reflect amendment EA10 Plot 13-03 Open Space which comprises the provision of additional replacement open space on a precautionary basis to compensate for the permanent acquisition of an informal recreational walking route (plot 13-09 on Sheet 13 of Land Plans Volume B) to the rear of Gravesend Golf Centre. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].</p>	<p>Paragraph 2.3.71, bullet point m) of ES Chapter 2 is amended to: m. Construction of new landforms for public use and associated landscaping referred to as Chalk Park (Work number OSC4) to the east of Gravesend, around the South Portal. This new landscaped recreational area would cover approximately 45 ha and include areas of woodland and species-rich grassland planting typical of the local area. The proposed Chalk Park would feature a distinctive new wooded hilltop landform (13m to 17m above existing ground level based on the application of the LOD) between the South Portal and the edge of Gravesend and Chalk. The proposed Chalk Park would provide replacement open space.</p> <p>Paragraph 2.3.74 of ES Chapter 2 is amended to: No special category land would be affected in Section 3 and no replacement land is proposed. As outlined for Section 1, where the proposed Project road and its construction results in permanent impacts on common land and open space sites, the Applicant would provide replacement open space and common land parcels within the Order Limits in accordance with the requirements of sections 131 and 132 of the Planning Act 2008. For Section 3 this includes replacement land in response to the permanent acquisition of land to the rear of Gravesend Golf Centre used as an informal recreational walking route. The land is not identified as open space in the Gravesham Open Space Assessment (2016) and does not follow the alignment of any public right of way; however, the Applicant proposes to treat this land as a public open space on a precautionary basis in the event that the Secretary of State considers it to be a public open space. Appendix D of the Planning Statement</p>	<p>Deadline 7</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>(Application Document 7.2) provides further information. The replacement land is included within the proposed Chalk Park (Work number OSC4).</p> <p>Paragraph 2.4.214 of ES Chapter 2 (as amended at Deadline 3) is further amended to:</p> <p>The Project’s construction will have both temporary and permanent impacts on ten open space sites and three common land sites, and one further site considered as open space on a precautionary basis. The Applicant is proposing the acquisition of six seven areas of land in order to provide replacement open space and common land within the Order Limits; in accordance with the requirements of sections 131 and 132 of the Planning Act 2008 and the NPSNN (DfT, 2014). In accordance with the Planning Act 2008, replacement land has not been included in all cases, for example because the acquisition of this land would be for a temporary but possibly long-lived process, or because it is only proposed to install and divert utilities through the land and would not affect its advantageousness once the rights were imposed. This means that its previous use can continue once the works are finished.</p>	
<p>6.1 Environmental Statement - Chapter 2 - Project Description [APP-140] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Plates 2.5 and 2.6 require amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Plates 2.5 and 2.6 of ES Chapter 2 are amended as follows: Update to Order Limits. The chapter is not re-issued, Order Limits shown on these plates should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.1 Environmental Statement - Chapter 2 - Project Description</p>	<p>Paragraph 2.4.208 requires revision to reflect amendment of Agricultural Landholding data.</p>	<p>Paragraph 2.4.208 of ES Chapter 2 is amended to: Along the Project route, approximately 4,0771032ha of agricultural land would be permanently affected, with approximately 727701ha of land associated with agricultural landholdings required for construction being</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
[APP-140] Document not re-issued. Updates identified in ES Addendum only.		returned to agricultural use by the end of the construction phase. All agricultural land temporarily affected during the construction of the Project will be restored to the reasonable satisfaction of the owners of the land in accordance with article 35(5) of the draft DCO.	
ES Figures			
6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits [APP-156]	Updates to Order Limits are required related to amendments EA04 Condoverters Scout Activity Centre Order Limit reduction and EA05 South of Low Street Lane Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002] . Figure 2.1 also requires amendment to address presentational error of WCH routes around Tilbury.	Figure 2.1 Page 1 of 2 is amended to update Order Limits and correct WCH error. Page 1 of 2 resubmitted 24 August 2023 as: 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Clean) (Version 2) [REP3-096] 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Tracked) (Version 2) [REP3-097]	Deadline 3
6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits [REP3-096]	Figure 2.1 requires amendment related to MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August 2023) [CR2-002] and 10.4 Change	Page 1 of 2 of Figure 2.1 is amended to update <i>Order Limits</i> . Page 1 of 2 resubmitted 19 September 2023 as: 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Clean) (Version 3) [REP4-118] 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Tracked) (Version 3) [REP4-119]	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003] .		
6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits [REP3-096]	Figure 2.1 requires amendment related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR2-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003] .	Page 1 of 2 of Figure 2.1 is amended to update <i>Order Limits</i> . Page 1 of 2 resubmitted 19 September 2023 as: 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Clean) (Version 3) [REP4-118] 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Tracked) (Version 3) [REP4-119]	Deadline 4
6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits [REP4-118]	Figure 2.1 requires amendment to update Order Limits shown, in relation to amendment EA07 as notified to the Examining Authority via 9.107 Cover Letter and List of Submissions for Deadline 5 [REP5-001] .	Pages 1, and 2 of 2 of Figure 2.1 are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Clean) (Version 4) 6.2 Environmental Statement - Figure 2.1 - Route Alignment and Order Limits (Tracked) (Version 4)	Deadline 9
6.2 Environmental Statement - Figure 2.2 - Project Proposals [APP-157]	Figure 2.2 requires amendment to make corrections to legend	Figure 2.2 is amended as follows: The legend item 'Proposed nitrogen deposition compensation planting' has been amended to more accurately reflect the symbology used in the map.	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>The 'route alignment' and 'earthworks' legend items have been moved from the end (far right) of the legend to the front of the legend (far left) to be consistent with other ES figures.</p> <p>Resubmitted in December 2022 as:</p> <p>Additional Submission - 6.2 Environmental Statement - Figure 2.2 - Project Proposals (Version 2) - Accepted at the discretion of the Examining Authority [AS-046]</p>	
<p>6.2 Environmental Statement - Figure 2.2 - Project Proposals [AS-046]</p>	<p>Figure 2.2 requires amendment related to MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August 2023) [CR2-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003].</p>	<p>Page 1 of 11 of Figure 2.2 is amended as follows:</p> <p>Update to <i>Order Limits</i> reflecting changes.</p> <p>Update to extent of <i>Proposed Nitrogen deposition compensation planting</i>.</p> <p>Resubmitted 19 September 2023 as:</p> <p>6.2 Environmental Statement - Figure 2.2 - Project Proposals (Clean) (Version 3) [REP4-120]</p> <p>6.2 Environmental Statement - Figure 2.2 - Project Proposals (Tracked) (Version 3) [REP4-121]</p>	<p>Deadline 4</p>
<p>6.2 Environmental Statement - Figure 2.2 - Project Proposals [AS-046]</p>	<p>Figure 2.2 requires amendment related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR2-002] and 10.4 Change Application Appendix A - Proposed amendments to</p>	<p>Pages 5 and 6 of 11 of Figure 2.2 are amended as follows:</p> <p>Update to <i>Order Limits</i> reflecting changes.</p> <p>Resubmitted 19 September 2023 as:</p> <p>6.2 Environmental Statement - Figure 2.2 - Project Proposals (Clean) (Version 3) [REP4-120]</p> <p>6.2 Environmental Statement - Figure 2.2 - Project Proposals (Tracked) (Version 3) [REP4-121]</p>	<p>Deadline 4</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Environmental Statement Chapter 2 Project Description [CR1-003] .		
6.2 Environmental Statement - Figure 2.2 - Project Proposals [AS-046]	Figure 2.2 requires amendment to bring the figure up-to-date with previously identified changes, which had not been made to this figure.	Figure 2.2 is amended as follows: Page 5 of 11 is also updated to show changes to Order Limits related to amendments EA04 Condovers Scout Activity Centre Order Limit reduction and EA05 South of Low Street Lane Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002] . Resubmitted 19 September 2023 as: 6.2 Environmental Statement - Figure 2.2 - Project Proposals (Clean) (Version 3) [REP4-120] 6.2 Environmental Statement - Figure 2.2 - Project Proposals (Tracked) (Version 3) [REP4-121]	Deadline 4
6.2 Environmental Statement - Figure 2.2 - Project Proposals [REP4-120]	Figure 2.2 requires amendment to update Order Limits shown, in relation to amendment EA07 as notified to the Examining Authority via 9.107 Cover Letter and List of Submissions for Deadline 5 [REP5-001] .	Page 5 of 11 of Figure 2.2 is updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement - Figure 2.2 - Project Proposals (Clean) (Version 4) 6.2 Environmental Statement - Figure 2.2 - Project Proposals (Tracked) (Version 4)	Deadline 9
6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan [APP-158]	Figure 2.3 requires amendment related to MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August 2023) [CR2-002] 10.4 Change Application Appendix A -	Page 1 of 19 of Figure 2.3 is amended as follows: Update to <i>Order Limits</i> reflecting changes. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Clean) (Version 2) [REP4-122] 6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Tracked) (Version 2) [REP4-123]	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003] .		
6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan [APP-158]	Figure 2.3 requires amendment related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR1-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003] .	Pages 8 and 10 of 19 of Figure 2.3 are amended as follows: Update to <i>Order Limits</i> reflecting changes. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Clean) (Version 2) [REP4-122] 6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Tracked) (Version 2) [REP4-123]	Deadline 4
6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan [APP-158]	Figure 2.3 requires amendment to bring the figure up-to-date with previously identified changes, which had not been made to this figure. An error is also corrected, where an area of open access land was not shown.	Figure 2.3 is amended as follows: Page 8 of 19 is also updated to show changes to Order Limits related to amendments EA04 Condovers Scout Activity Centre Order Limit reduction and EA05 South of Low Street Lane Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002] . Page 6 of 19 is also updated to show the updated extent of the former Southern Valley Golf Club. Pages 1 and 15 of 19 are updated to correct an error where open access land was missing at Blue Bell Hill. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Clean) (Version 2) [REP4-122]	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Tracked) (Version 2) [REP4-123]	
6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan [REP4-122]	Figure 2.3 requires amendment to update Order Limits shown, in relation to amendment EA07 as notified to the Examining Authority via 9.107 Cover Letter and List of Submissions for Deadline 5 [REP5-001] .	<p>Page 9 of 19 of Figure 2.3 is updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as:</p> <p>6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Clean) (Version 3) 6.2 Environmental Statement – Figure 2.3 – Environmental Constraints Plan (Tracked) (Version 3)</p> <p>The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262], Figure 4.2.</p>	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) [APP-159]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	<p>Sheets 1, 2 and 3 of Section 1 of Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) are amended to show proposed retaining walls. There are no updates to Section 1A of the Environmental Masterplan. Resubmitted in August 2023 as:</p> <p>6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) (Clean) (Version 2) [REP2-014] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) (Tracked) (Version 2) [REP2-015]</p>	Deadline 2
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) [REP2-014]	Figure 2.4 – Environmental Masterplan requires amendment related to MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition	<p>Figure 2.4 – Environmental Masterplan is amended to reflect the removal of the nitrogen deposition compensation sites on the following sheets only: <u>South of River Thames</u></p> <ul style="list-style-type: none"> Section 1 and 1A: Scheme Overview, Overview Plan and Section 1A Sheets 1, 2 and 3 only. 	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	compensation sites, as described in 10.4 Change Application (August 2023) [CR1-002] .	Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) (Clean) (Version 3) [REP4-124] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) (Tracked) (Version 3) [REP4-125]	
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) [REP4-124]	Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) requires update to Order Limits shown in relation to: Amendment EA07 [REP5-001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.	Figure 2.4 – Environmental Masterplan Sections 1 & 1A (1 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan 1 & 1A (1 of 10) (Clean) (Version 4) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan 1 & 1A (1 of 10) (Tracked) (Version 4)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) [APP-160]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheets 1, 2, 3, 5 and 6 of Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) are amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Clean) (Version 2) [REP2-016] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Tracked) (Version 2) [REP2-017]	Deadline 2
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) [REP2-016]	Updates to remove the proposed replacement open space related to amendment EA01 Claylane Wood, as described in 10.2 Second Notification of Proposed	Figure 2.4 Environmental Masterplan Section 2 Sheets 5, 6 and 18 are amended to remove proposed replacement open space at Claylane Wood. Resubmitted 24 August 2023 as:	Deadline 3

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Changes to the Planning Inspectorate [CR2-002].	6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Clean) (Version 3) [REP3-098] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Tracked) (Version 3) [REP3-099]	
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) [REP3-098]	Figure 2.4 – Environmental Masterplan requires amendment to reflect amendment EA08 Thong Lane Car Park removal. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].	Figure 2.4 – Environmental Masterplan Section 2 Sheet 19 is amended to show the revised proposals at Thong Lane: Resubmitted 17 November 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Clean) (Version 4) [REP7-116] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Tracked) (Version 4) [REP7-117]	Deadline 7
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) [REP7-116]	Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) requires update for Deadline 9 to provide a final version at the request of the Examining Authority.	No change to content of Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) from Version 4 submitted at Deadline 7. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Clean) (Version 5) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 2 (2 of 10) (Tracked) (Version 5)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) [APP-161]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheets 1, 2 and 3 of Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) are amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) (Clean) (Version 2) [REP2-018] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) (Tracked) (Version 2) [REP2-019]	Deadline 2

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) [REP2-018]	Figure 2.4 – Environmental Masterplan requires revision to reflect amendment EA10 Plot 13-03 Open Space which comprises the provision of additional replacement open space on a precautionary basis to compensate for the permanent acquisition of an informal recreational walking route. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].	Figure 2.4 – Environmental Masterplan Section 3 Sheet 1 is amended to show additional replacement open space at Chalk Park: Resubmitted 17 November 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) (Clean) (Version 3) [REP7-118] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) (Tracked) (Version 3) [REP7-119]	Deadline 7
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) [REP7-118]	Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) requires update for Deadline 9 to provide a final version at the request of the Examining Authority.	No change to content of Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) from Version 3 submitted at Deadline 7. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) (Clean) (Version 4) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 3 (3 of 10) (Tracked) (Version 4)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 4 (4 of 10) [APP-162]	Figure 2.4 – Environmental Masterplan Section 4 (4 of 10) requires update to Order Limits shown in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Figure 2.4 – Environmental Masterplan Section 4 (4 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 4 (4 of 10) (Clean) (Version 2) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 4 (4 of 10) (Tracked) (Version 2)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Amendment EA07 [REP5-001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.		
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) [APP-163]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheets 1 & 2 of Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) are amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Clean) (Version 2) [REP2-020] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Tracked) (Version 2) [REP2-021]	Deadline 2
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) [REP2-020]	Updates to Order Limits are required related to amendments EA04 Condozers Scout Activity Centre Order Limit reduction and EA05 South of Low Street Lane Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002] .	Figure 2.4 Environmental Masterplan Section 9 Sheets 3, 4 and 8 are amended to update Order Limits. Resubmitted 24 August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Clean) (Version 3) [REP3-100] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Tracked) (Version 3) [REP3-101]	Deadline 3
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) [REP3-100]	Figure 2.4 – Environmental Masterplan requires amendment related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in	Figure 2.4 – Environmental Masterplan is amended to reflect the changes associated with MRC03 on the following sheet: <u>North of River Thames</u> <ul style="list-style-type: none"> Section 9: Scheme Overview, Overview Plan and Sheets 4 and 18 	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	10.4 Change Application (August 2023) [CR1-002].	Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Clean) (Version 4) [REP4-127] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Tracked) (Version 4) [REP4-126]	
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) [REP4-127]	Figure 2.4 – Environmental Masterplan requires revision to reflect amendment EA07 changes to Order Limits. This was notified to the Examining Authority via 9.107 Cover Letter and List of Submissions for Deadline 5 [REP5-001].	Figure 2.4 – Environmental Masterplan Section 9 Sheet 11 is amended to remove areas from the Order Limits: Resubmitted 17 November 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Clean) (Version 5) [REP7-120] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Tracked) (Version 5) [REP7-121]	Deadline 7
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) [REP7-120]	Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) requires update for Deadline 9 to provide a final version at the request of the Examining Authority. This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.	No change to content of Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) from Version 5 submitted at Deadline 7. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Clean) (Version 6) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 9 (5 of 10) (Tracked) (Version 6)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) [APP-164]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheets 4 ,5 and 16 of Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) are amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) (Clean) (Version 2) [REP2-022]	Deadline 2

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) (Tracked) (Version 2) [REP2-023]	
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) [REP2-022]	Figure 2.4 – Environmental Masterplan requires amendment related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR1-002] .	Figure 2.4 – Environmental Masterplan is amended to reflect the changes associated with MRC03 on the following sheet: <u>North of River Thames</u> <ul style="list-style-type: none"> Section 10: Scheme Overview, Overview Plan and Sheets 1, 2 and 11 Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) (Clean) (Version 3) [REP4-129] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) (Tracked) (Version 3) [REP4-128] 	Deadline 4
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) [REP4-129]	Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) requires update to Order Limits shown in relation to: Amendment EA07 [REP5 -001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.	Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) (Clean) (Version 4) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 10 (6 of 10) (Tracked) (Version 4)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) [APP-165]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheets 1, 2, 3, 4, 6, 7, 8 and 14 of Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) are amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) (Clean) (Version 2) [REP2-024] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) (Tracked) (Version 2) [REP2-025]	Deadline 2

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) [REP2-024]	Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) requires update to Order Limits shown in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.	Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) (Clean) (Version 3) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 11 (7 of 10) (Tracked) (Version 3)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) [APP--166]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheet 5 of Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) is amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) (Clean) (Version 2) [REP2-026] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) (Tracked) (Version 2) [REP2-027]	Deadline 2
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) [REP2-026]	Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) requires update to Order Limits shown in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) (Clean) (Version 3) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 12 (8 of 10) (Tracked) (Version 3)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Amendment EA07 [REP5-001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.		
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) [APP-167]	Figure 2.4 – Environmental Masterplan requires amendment to address omission of proposed retaining walls on Environmental Masterplan sheets.	Sheets 1, 2, 3, 4 and 5 of Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) are amended to show proposed retaining walls. Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) (Clean) (Version 2) [REP2-028] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) (Tracked) (Version 2) [REP2-029]	Deadline 2
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) [REP2-028]	Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) requires update Order Limits shown in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.	Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) (Clean) (Version 3) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 13 (9 of 10) (Tracked) (Version 3)	Deadline 9
6.2 Environmental Statement – Figure 2.4 – Environmental	Figure 2.4 – Environmental Masterplan requires amendment to address	Sheets 1, 2, 3, 4, 5 and 6 of Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) are amended to show proposed retaining walls.	Deadline 2

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Masterplan Section 14 (10 of 10) [APP-168]	omission of proposed retaining walls on Environmental Masterplan sheets.	Resubmitted in August 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) (Clean) (Version 2) [REP2-031] 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) (Tracked) (Version 2) [REP2-030]	
6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) [REP2-031]	Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) requires update Order Limits shown in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] This figure is also issued at Deadline 9 to provide a final version at the request of the Examining Authority.	Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) Scheme Overview and Overview Plan are updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) (Clean) (Version 3) 6.2 Environmental Statement – Figure 2.4 – Environmental Masterplan Section 14 (10 of 10) (Tracked) (Version 3)	Deadline 9
6.2 Environmental Statement – Figure 2.5 – Construction Information [APP-169]	Figure 2.5 requires amendment related to MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August 2023) [CR1-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement	Page 1 of 11 of Figure 2.5 is amended as follows: Update to <i>Order Limits</i> reflecting changes. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.5 – Construction Information (Clean) (Version 2) [REP4-130] 6.2 Environmental Statement – Figure 2.5 – Construction Information (Tracked) (Version 2) [REP4-131]	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	Chapter 2 Project Description [CR1-003] .		
6.2 Environmental Statement – Figure 2.5 – Construction Information [APP-169]	Figure 2.5 requires amendment related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR1-002] and 10.4 Change Application Appendix A - Proposed amendments to Environmental Statement Chapter 2 Project Description [CR1-003] .	Page 5 of 11 of Figure 2.5 is amended as follows: Update to <i>Order Limits</i> reflecting changes. Update to alignment of <i>Multi-utility works - temporary alignment</i> reflecting changes. Update to location of <i>Low Street Lane Utility Logistics Hub</i> reflecting changes. Update to location of <i>Muckingford Road Utility Logistics Hub</i> reflecting changes. Update to extent of <i>Utilities working areas</i> reflecting changes. Page 6 of 11 of Figure 2.5 is amended as follows: Update to <i>Order Limits</i> reflecting changes. Update to alignment of <i>Multi-utility works - temporary alignment</i> reflecting changes. Update to location of <i>Muckingford Road Utility Logistics Hub</i> . Update to extent of <i>Utilities working areas</i> reflecting changes. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 2.5 – Construction Information (Clean) (Version 2) [REP4-130] 6.2 Environmental Statement – Figure 2.5 – Construction Information (Tracked) (Version 2) [REP4-131]	Deadline 4
6.2 Environmental Statement – Figure 2.5 – Construction Information [APP-169]	Figure 2.5 requires amendment to bring the figure up-to-date with previously identified changes, which had not been made to this figure.	Figure 2.5 is amended as follows: Page 5 of 11 is updated to show changes to Order Limits as required related to amendments EA04 Condovers Scout Activity Centre Order Limit reduction and EA05 South of Low Street Lane Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002] . Pages 5, 6 and 7 of 11 are updated to correct an error in the presentation of WCH routes and route alignment. Resubmitted 19 September 2023 as:	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.2 Environmental Statement – Figure 2.5 – Construction Information (Clean) (Version 2) [REP4-130] 6.2 Environmental Statement – Figure 2.5 – Construction Information (Tracked) (Version 2) [REP4-131]	
6.2 Environmental Statement – Figure 2.5 – Construction Information [REP4-130]	Figure 2.5 requires amendment to update Order Limits shown, in relation to amendment EA07 as notified to the Examining Authority via 9.107 Cover Letter and List of Submissions for Deadline 5 [REP5-001] .	Page 5 of 11 of Figure 2.5 is updated as follows: Update to Order Limits. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 2.5 – Construction Information (Clean) (Version 3) 6.2 Environmental Statement – Figure 2.5 – Construction Information (Tracked) (Version 3)	Deadline 9
ES Appendices			
6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information [APP-335]	Plate 1.3 of Appendix 2.1 requires amendment to resolve inconsistency with Book of Plans Temporary Works Plans for the Southern tunnel entrance compound.	Plate 1.3 of ES Appendix 2.1 is amended to include revised compound layout. Resubmitted in December 2022 as: Additional Submission – 6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information – (Clean) (Version 2) – Accepted at the discretion of the Examining Authority [AS-049] Additional Submission – 6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information – (Tracked) (Version 2) – Accepted at the discretion of the Examining Authority [AS-050]	Section 51 submission December 2022
6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information [APP-335]	Table 1.2 of Appendix 2.1 requires amendment to address errata in relation to compound naming.	Table 1.2 of ES Appendix 2.1 is amended to replace the text 'Marlin Cross' with 'Marling Cross'. [AS-049] and [AS-050] as above. Document not re-issued with update included. Updates identified in ES Addendum only	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.3 Environmental Statement -Appendix 2.1 – Construction Supporting Information [APP-335]	Plate 1.3 of Appendix 2.1 requires amendment to resolve inconsistency with Book of Plans Temporary Works Plans for the Southern tunnel entrance compound.	Plate 1.3 of ES Appendix 2.1 is amended to include revised compound layout. Resubmitted in December 2022 as: Additional Submission – 6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information – (Clean) (Version 2) – Accepted at the discretion of the Examining Authority [AS-049] Additional Submission – 6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information – (Tracked) (Version 2) – Accepted at the discretion of the Examining Authority [AS-050]	Section 51 submission December 2022
6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information [APP-335]	Table 1.2 of Appendix 2.1 requires amendment to address errata in relation to compound naming.	Table 1.2 of ES Appendix 2.1 is amended to replace the text ' Marlin Cross ' with ' Marling Cross '. [AS-049] and [AS-050] as above. Document not re-issued with update included. Updates identified in ES Addendum only	Section 51 submission December 2022

3.4 ES Chapter 3 Assessment of Reasonable Alternatives

3.4.1 No revisions have been made throughout Examination to ES Chapter 3, associated figures and appendices.

3.5 ES Chapter 4 EIA Methodology

3.5.1 No revisions have been made throughout Examination to ES Chapter 4, associated figures and appendices.

3.6 ES Chapter 5 Air Quality

3.6.1 The following changes have been made throughout Examination to ES Chapter 5, associated figures and appendices, as set out in Table 3.2.

Table 3.2 Updates to Chapter 5, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
<p>6.1 Environmental Statement - Chapter 5 - Air Quality [APP-143] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text in paragraph 5.5.10 are required to update REAC AQ008 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 5) [REP5-050] in response to ExQ1 - the Examining Authority’s written questions and requests for information [PD-029].</p>	<p>Paragraph 5.5.10 subheading <i>Actions in case of air quality monitoring exceedance (REAC Ref. AQ008)</i> is amended to:</p> <p>a. If required during construction, continuous particulate monitoring for PM10, PM2.5 and TSP (total suspended particles) will be carried out using appropriate survey instruments at locations approved under REAC item AQ006, in consultation with the relevant local authority. Instruments will be set up at relevant sites to operate an alert system when a predetermined site action level approved by the Secretary of State in consultation with the relevant local authorities, is reached. If the alarm is triggered, the following actions will be taken:</p> <p>i. The Contractor, or a delegated representative, shall at the earliest reasonable opportunity, promptly investigate activities on the site to ascertain whether any visible dust is emanating from the site or activities are occurring that are not in line with dust control procedures. The specific time period shall be a matter which forms part of the air quality monitoring plan which is subject to consultation with the relevant local authorities under REAC item AQ006.</p> <p>ii. Actions taken to resolve the situation will be recorded in a site logbook and the relevant local authorities notified of the event and actions by telephone or email, as soon as is reasonably practicable, after or during the dust event.</p> <p>iii. If no source of the dust event is identified, other project sites and local authorities or Automatic Urban and Rural Network monitoring sites will be contacted to establish whether there is an increase in particulate concentrations in the wider area.</p> <p>iv. If the cause of the alert is not related to site operations, the outcome of any investigation will be recorded in a site logbook which would be made available to the relevant local authorities on request.</p>	<p>Deadline 5</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		v. Dust monitoring will continue until that part of the construction works has been completed, or earlier, if the site is deemed to be low risk in consultation with National Highways and the relevant local authorities.	
6.1 Environmental Statement - Chapter 5 - Air Quality [APP-143] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 5.5.10 are required to update REAC AQ007 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] in response to stakeholder engagement.	Paragraph 5.5.10 subheading <i>Baseline dust monitoring (REAC Ref. AQ007)</i> of ES Chapter 5 is amended to: a. Should dust monitoring be required in accordance with the requirements of AQ006, it would begin at least three six months prior to the commencement of the construction works to allow a suitable pre-construction baseline to be established unless otherwise agreed by National Highways following consultation with the relevant local authorities.	Deadline 6
6.1 Environmental Statement - Chapter 5 - Air Quality [APP-143] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 5.5.10 are required to update REAC AQ001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122] in response to the Examining Authority's Written Questions and Requests for Information (ExQ2) – Thurrock Council Responses [REP6-167].	Paragraph 5.5.8 subheading <i>Vehicle and plant emissions (REAC Ref. AQ001)</i> of ES Chapter 5 is amended at bullet point e. to: e. Use ultra-low sulphur fuels in plant and vehicles, where reasonably practicable .	Deadline 7
6.1 Environmental Statement - Chapter	Updates to text in paragraph 5.5.10 are required to update REAC AQ006 to remain	Paragraph 5.5.10 subheading <i>Air Quality monitoring during construction (REAC Ref. AQ006)</i> of ES Chapter 5 is amended to:	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
5 - Air Quality [APP-143] Document not re-issued. Updates identified in ES Addendum only.	consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122] in response to the Examining Authority's Written Questions and Requests for Information (ExQ2) – Thurrock Council Responses [REP6-167] .	The Contractors shall determine the level of any dust and particulate monitoring, including airborne asbestos, carried out on project construction sites by means of a risk based approach. This will identify the type of monitoring that is required on each worksite by looking at the details of the specific packages of work within the site boundaries and the location of receptors around the site. Should monitoring be required, the monitoring locations will be approved by the Secretary of State (SoS) in consultation with the relevant local authorities.	
ES Figures			
6.2 Environmental Statement – Figure 5.1 – Construction Dust Study Area [APP-170] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.1 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 11, and 12 of 25 of ES Figure 5.1 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9
6.2 Environmental Statement – Figure 5.2 – Construction Traffic Study Area [APP-171] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 2 and 3 of 6 of ES Figure 5.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 5.3 – Operational Study Area (1 of 3) [APP-172] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.3 (1 of 3) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 7 of 33 of Figure 5.3 (1 of 3) is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 5.3 – Operational Study Area (2 of 3) [APP-173] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.3 (2 of 3) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 23, 25, 28 and 30 of 33 of ES Figure 5.3 (2 of 3) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9
6.2 Environmental Statement – Figure 5.4 – Air Quality Monitoring Sites and 2016 Annual Mean Data (1 of 3) [APP-175] Document not re-issued. Updates	Figure 5.4 (1 of 3) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 15 of 33 of ES Figure 5.4 (1 of 3) is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 5.4 – Air Quality Monitoring Sites and 2016 Annual Mean Data (2 of 3) [APP-176] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.4 (2 of 3) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 20 and 23 of 33 of ES Figure 5.4 (2 of 3) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) [APP-178]	Figure 5.5 requires amendment to improve clarity of receptor LTC731 and its label away from the edge of the page. Specifically, this relates to pages 17, 40 and 63 of Figure 5.5 (1 of 2).	Figure 5.5 is amended to show location of receptor LTC731 clearly, this includes adjusting the scale from 1:10,000 to 1:15,000. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) (Clean) (Version 2) [REP1-118] 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) (Tracked) (Version 2) [REP1-119]	Deadline 1
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) [REP1-118] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.5 (1 of 2) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 2, 3, 4, 14, 15, 16, 37, 38, 39, 60, 61, 62 and 63 of 142 of ES Figure 5.5 (1 of 2) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262], Figure 4.2.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) [APP-179]	Figure 5.5 requires amendment to improve clarity of receptor LTC731 and its label away from the edge of the page. Specifically, this relates to pages 86, 109 and 132 of Figure 5.5 (2 of 2).	Figure 5.5 is amended to show location of receptor LTC731 clearly, this includes adjusting the scale from 1:10,000 to 1:15,000. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) (Clean) (Version 2) [REP1-121] 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) (Tracked) (Version 2) [REP1-120]	Deadline 1
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) [REP1-121] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.5 (2 of 2) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 83, 84, 85, 106, 107, 108, 129, 130 and 131 of 142 of ES Figure 5.5 (2 of 2) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9
6.2 Environmental Statement – Figure 5.6 – Operational Phase receptors and Results (1 of 4) [APP-180] Document not re-issued. Updates identified in ES Addendum only.	Figure 5.6 (1 of 4) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 10 and 11 of 83 of ES Figure 5.6 (1 of 4) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 5.6 – Operational	Figure 5.6 (2 of 4) is not updated as no information shown has changed, however	The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Phase receptors and Results (2 of 4) [APP-181] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>clarification is provided related to a SSSI boundary.</p>	<p>England in the Written Representation at Deadline 1 [REP1-262], Figure 4.2.</p>	
<p>6.2 Environmental Statement – Figure 5.6 – Operational Phase receptors and Results (3 of 4) [APP-182] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 5.6 (3 of 4) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 43 and 47 of 83 of ES Figure 5.6 (3 of 4) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 5.7 – PCM Links in Construction and Operational Study Area [APP-184] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 5.7 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 2 and 5 of 10 of ES Figure 5.7 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Appendices			
6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results [APP-347]	Tables 3.4, 3.5 and 3.6 of Appendix 5.3 included erroneous data for NO2 concentrations in 2028, 2029 and 2030.	Tables 3.4, 3.5 and 3.6 of ES Appendix 5.3 are amended to include the corrected NO2 data. Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results (Clean) (Version 2) [REP1-161] 6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results (Tracked) (Version 2) [REP1-160]	Deadline 1
6.3 Environmental Statement – Appendix 5.6 – Project Air Quality Action Plan [APP-350] Document not re-issued. Updates identified in ES Addendum only.	Paragraphs 1.5.3 bullet points g. and h., 7.4.59 and 8.1.5, Plates 7.17 and 7.18 and Table 7.7 of Appendix 5.6 requires amendment in response to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Paragraph 1.5.3 bullet point g. is amended and bullet point h. is deleted as follows: g. Blue Bell Hill (72.2 approximately 43ha) is privately owned agricultural land located south of M2 in Blue Bell hill. h. Burham (9.7ha) is privately owned agricultural land east of Burham. Paragraph 7.4.59 of ES Appendix 5.6 is amended as follows: The shape of Option B1 is least preferred from the landscape and visual perspective due to potential impacts on the views within the AONB as the southern field is currently relatively flat. As such option B1 was discounted in favour for Option B2. Option B2 was subsequently removed from the proposals, further information is available in 10.4 Change Application (August 2023) [CR1-002]. Paragraph 8.1.5 of ES Appendix 5.6 is amended as follows: Compensation (245.7 approximately 205ha) for the residual effects in the form of habitat creation on eight seven sites has been proposed. Plates 7.18 and 7.19 of ES Appendix 5.6 are amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition. The rows for Blue Bell Hill and Burham in Table 7.7 of ES Appendix 5.6 are amended as follows:	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date									
		Table 7.7 Proposed compensation										
		<table border="1"> <thead> <tr> <th>Compensation site name (location)</th> <th>Approximate Size (ha)</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>Blue Bell Hill</td> <td>72.243</td> <td>Privately owned site located south of M2 in Blue Bell hill.</td> </tr> <tr> <td>Burham</td> <td>9.7</td> <td>Privately owned site east of Burham.</td> </tr> </tbody> </table>	Compensation site name (location)	Approximate Size (ha)	Details	Blue Bell Hill	72.243	Privately owned site located south of M2 in Blue Bell hill.	Burham	9.7	Privately owned site east of Burham.	
Compensation site name (location)	Approximate Size (ha)	Details										
Blue Bell Hill	72.243	Privately owned site located south of M2 in Blue Bell hill.										
Burham	9.7	Privately owned site east of Burham.										

3.7 ES Chapter 6 Cultural Heritage

3.7.1 The following changes have been made throughout Examination to ES Chapter 6, associated figures and appendices, as set out in Table 3.3.

Table 3.3 Updates to Chapter 6, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 6 - Cultural Heritage [APP-144]	Chapter 6 requires revision to address errors in reported asset numbers and number counts following incorporation of archaeological trial trenching data.	ES Chapter 6 is amended to address errors in reported asset numbers and number counts. Resubmitted in December 2022 as: Additional Submission - 6.1 Environmental Statement - Chapter 6 - Cultural Heritage - (Clean) (Version 2) - Accepted at the discretion of the Examining Authority [AS-044] Additional Submission - 6.1 Environmental Statement - Chapter 6 - Cultural Heritage - (Tracked) (Version 2) - Accepted at the discretion of the Examining Authority [AS-045] The detail of the changes made to ES Chapter 6 are provided in Table A.1 of Appendix A to the Errata Report [AS-004] .	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date										
<p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage [AS-044] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Chapter 6 requires amendment to update the assessment of previously identified heritage assets, where the link between a Grade I listed building and non-designated built heritage asset had not previously been identified.</p>	<p>Section 6.4, Section 6.6, Table 6.4 and Table 6.8 of ES Chapter 6 are amended to:</p> <p style="text-align: center;">Table 6.4 Summary of cultural heritage assets</p> <table border="1" data-bbox="900 395 1870 600"> <thead> <tr> <th data-bbox="900 395 1093 507">Heritage assets</th> <th data-bbox="1093 395 1285 507">Value</th> <th data-bbox="1285 395 1478 507">South of the River Thames</th> <th data-bbox="1478 395 1671 507">River Thames</th> <th data-bbox="1671 395 1870 507">North of the River Thames</th> </tr> </thead> <tbody> <tr> <td data-bbox="900 507 1093 600">Built heritage</td> <td data-bbox="1093 507 1285 600">High</td> <td data-bbox="1285 507 1478 600">1 (RPG) 3 (CA) 405-106 (LB)</td> <td data-bbox="1478 507 1671 600">n/a</td> <td data-bbox="1671 507 1870 600">2 (RPG) 6 (CA) 177 (LB)</td> </tr> </tbody> </table> <p>Paragraph 6.4.110 is amended to delete bullet point c: e. Gadshill Place (LB241) which is located immediately to the south of the A226 and the Order Limits in Higham.</p> <p>The following new paragraph is added after paragraph 6.4.110 and before paragraph 6.4.111: Gadshill Place (LB241), the Grade I listed former home of Charles Dickens is located immediately to the south of the A266 and the Order Limits in Higham. However, within the curtilage a tunnel was constructed between 1857 and 1870 which extends into the Order Limits underneath the A226.</p> <p>Paragraph 6.4.112 is amended to: Outside the Order Limits and within the 1km study area and landscape study area south of the River Thames there are a total of 405 104 listed buildings of high value due to the varying combinations of their individual aesthetic, historic, evidential and communal values plus the contribution of their settings (LB1, LB2, LB3, LB4, LB12, LB13, LB14, LB15, LB16, LB17, LB18, LB19, LB20, LB21 LB22, LB23, LB24, LB25, LB26, LB27, LB28, LB29, LB30, LB31, LB78, LB79, LB99, LB100, LB101, LB102, LB103, LB104, LB105, LB106, LB112, LB114, LB117, LB118, LB122, LB123, LB124, LB125, B126, LB173, LB174, LB175, LB176, LB178, LB179,</p>	Heritage assets	Value	South of the River Thames	River Thames	North of the River Thames	Built heritage	High	1 (RPG) 3 (CA) 405-106 (LB)	n/a	2 (RPG) 6 (CA) 177 (LB)	<p>Deadline 1</p>
Heritage assets	Value	South of the River Thames	River Thames	North of the River Thames									
Built heritage	High	1 (RPG) 3 (CA) 405-106 (LB)	n/a	2 (RPG) 6 (CA) 177 (LB)									

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>LB180, LB182, LB183, LB184, LB185, LB186, LB187, LB190, LB191, LB192, LB193, LB194, LB195, LB196, LB197, LB198, LB199, LB200, LB201, LB202, LB218, LB219, LB220, LB221, LB222, LB223, LB224, LB225, LB227, LB230, LB236, LB241, LB242, LB247, LB248, LB252, LB254, LB263, LB264, LB265, LB266, LB302, LB306, LB307, LB310, LB311, LB312, LB313, LB321, LB323, LB324, LB326, LB333, LB334, LB335, LB337).</p> <p>The following new paragraph is added after paragraph 6.4.119 and before paragraph 6.4.120, under the ‘Baseline Details’ sub-heading:</p> <p>The high value Gadshill Place (LB241) is a Grade I listed building located on Gravesend Road in Higham. The house was constructed in 1779 by a former Mayor of Rochester and was owned and occupied by the author Charles Dickens from 1857 until his death in 1870. Dickens added a large conservatory to the house and internally, his study is still preserved. The house is set within its own grounds and has been used as a school since the 20th century. Additional school buildings have been added to the south of the house. The tunnel was used as an air raid wardens post during the Second World War (Heritage Asset 2461).</p> <p>Paragraph 6.6.91 is amended to:</p> <p>There are 59 58 low value non-designated archaeological assets recorded within the Order Limits (675, 677, 703, 779, 787, 788, 793, 796, 798, 804, 805, 1331, 1398, 1408, 1409, 1423, 1428, 1429, 1436, 1454, 1459, 1515, 1520, 1524, 1557, 1577, 1598, 1603, 1609, 1663, 1668, 1787, 1821, 1822, 2461, 2512, 3185, 3535, 3852, 3854, 3644, 3658, 3737, 3741, 3770, 3786, 3796, 3798, 3804, 3806, 4415, 4426, 4429, 4430, 4596, 4608, 4609, 4610, 4612), which would experience, following mitigation (REAC Ref. CH001; AMS-OWSI No. 4), a permanent impact of moderate adverse magnitude and a slight adverse effect, which is assessed as not significant.</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>Paragraph 6.6.92 is amended to:</p> <p>There are ten 11 low value non-designated archaeological assets recorded within the Order Limits (781, 1324, 1469, 1547, 2461, 3126, 3752, 3756 4180, 4425) which would experience following mitigation in the form of archaeological excavation and recording (REAC Ref. CH001; AMS-OWSI No.2 and No. 4) a permanent impact of minor adverse magnitude and a slight adverse effect, which is assessed as not significant.</p> <p>The following new paragraphs are added after paragraph 6.6.109 and before paragraph 6.6.110, under the 'Built Heritage: non-significant effects' sub-heading:</p> <p>The noise, visual intrusion and dust caused by construction activity would result in a temporary impact on the high value Grade I listed Gadshill Place (LB241). This would result in a temporary impact of minor adverse magnitude and a slight adverse effect, which is assessed as not significant.</p> <p>Construction traffic movement along the A266 could potentially cause harm to the tunnel (2461) below the road. This would result in a permanent impact of minor adverse magnitude and a slight adverse effect, which is assessed as not significant. To ensure that any minor damage to the tunnel is identified a buildings survey will take place prior to the start of construction traffic movements (REAC ref CH001; AMS-OWSI No. 2) and regular monitoring will take place. Reinforcement and remedial works will be provided if required post construction.</p> <p>Table 6.8 is amended to include the following additional row before the Grade II* Cobham Hall Registered Park and Garden (RPG1) row:</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date										
		<p style="text-align: center;">Table 6.8 Summary of cultural heritage assets</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="898 320 1155 392">Impact Description</th> <th data-bbox="1160 320 1317 392">Value</th> <th data-bbox="1321 320 1489 392">Impact Magnitude</th> <th data-bbox="1494 320 1677 392">Significance of effect</th> <th data-bbox="1682 320 1868 392">Significance</th> </tr> </thead> <tbody> <tr> <td data-bbox="898 395 1155 547">Permanent Impact to the curtilage of high value Grade I listed Gadshill Place (LB241)</td> <td data-bbox="1160 395 1317 547">High</td> <td data-bbox="1321 395 1489 547">Minor</td> <td data-bbox="1494 395 1677 547">Permanent slight adverse</td> <td data-bbox="1682 395 1868 547">Not significant</td> </tr> </tbody> </table>	Impact Description	Value	Impact Magnitude	Significance of effect	Significance	Permanent Impact to the curtilage of high value Grade I listed Gadshill Place (LB241)	High	Minor	Permanent slight adverse	Not significant	
Impact Description	Value	Impact Magnitude	Significance of effect	Significance									
Permanent Impact to the curtilage of high value Grade I listed Gadshill Place (LB241)	High	Minor	Permanent slight adverse	Not significant									
<p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage [AS-044]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>REAC item CH003 is updated in 6.3 Environmental Statement Appendices Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan (Version 2) [REP1-157] at Deadline 3 in response to stakeholder feedback. Reference to REAC item CH003 in paragraph 6.5.17 requires amendment for consistency.</p>	<p>Paragraph 6.5.17, bullet point c. of ES Chapter 6 is amended to:</p> <p>REAC Ref CH003 ensures that a detailed project design for the archaeological investigation of the cropmark complex at Orsett (SM1) and the associated non-designated area of cropmarks identified at Greygoose Farm (247) is prepared in line with the Management of Research Projects in the Historic Environment (MoRPHE) procedural model (Historic England, 2015)</p>	<p>Deadline 3</p>										
<p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage [AS-044]</p>	<p>Chapter 6 requires revision to address cross-referencing errors in response to Q12.1.3 in ExQ1 - the Examining Authority's written questions and requests for information [PD-029].</p>	<p>Various cross-references from ES Chapter 6 to tables presented within ES Chapter 4: EIA Methodology [APP-142] and ES Appendix 6.10 [AS-052] have been amended within ES Chapter 6 to remove inaccuracies noted in Q12.1.3.</p> <p>Paragraph 6.5.14, bullet point b. of ES Chapter 6 is amended to correct an additional errata item:</p>	<p>Deadline 4</p>										

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>b. 'Lighting will also be designed, positioned and directed to prevent or minimise light disturbance to nearby residents, ecological receptors, as well as motorists and rail and marine operations. This provision will apply particularly to sites where night working or security lighting will be required' (CoCP section 6.12.3 6.8.3).</p> <p>Resubmitted 19 September as:</p> <p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage - (Clean) (Version 3) [REP4-116]</p> <p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage - (Tracked) (Version 3) [REP4-117]</p> <p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage (Version 3) has also been updated to include the amendments presented in the ES Addendum at previous deadlines. Other minor errata items and typographical errors identified whilst updating the chapter have also been updated.</p>	
<p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage [REP4-116]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraph 6.3.74 requires revision to address a cross-referencing error.</p>	<p>Paragraph 6.3.74 of ES Chapter 6 is amended to:</p> <p>The significance of effect is determined in accordance with Table 4.3 of Chapter 4: EIA Methodology. An effect of moderate adverse significance or higher is considered to constitute a significant effect (Table 4.5 Paragraph 4.5.22 of Chapter 4: EIA Methodology). The assessment in Section 6.6 of this chapter identifies whether an effect is significant in EIA terms.</p>	<p>Deadline 6</p>
<p>6.1 Environmental Statement - Chapter 6 - Cultural Heritage [REP4-116]</p> <p>Document not re-issued. Updates</p>	<p>Paragraphs 6.6.68 and 6.6.302 and Table 6.7 are updated to reflect the removal of a significant adverse effect following the change to nitrogen deposition</p>	<p>Paragraph 6.6.68 of ES Chapter 6 is removed:</p> <p>The establishment of the nitrogen deposition compensation site at Burham, to the west of Kit's Coty, would result in the complete removal of the medium-value Great Culand (asset 4745, below ground remains of the former Medieval to Modern manor and farmstead). This impact is assessed based on the worst-case scenario and it is anticipated that it should be possible to preserve this asset in situ a woodland glade or</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	compensation areas in (Change MRC01 [CR1-002])	<p>similar open space. Assessing worst-case, which would be mitigated by archaeological excavation and recording (REAC Ref. CH001; AMS-OWSI No. 4), this would result in a permanent impact of moderate adverse magnitude and a moderate adverse effect, which is assessed as significant.</p> <p>Paragraph 6.6.302 of ES Chapter 6 is removed: Nitrogen deposition mitigation at a compensation site in Burham would adversely alter the landscape’s historic character from that of agricultural prairie fields (HLT ref. H) due to an estimated 70% of tree planting within the site.</p> <p>The row for permanent impacts to non-designated archaeological assets south of the River Thames during construction of Table 6.7 of ES Chapter 6 is updated as follows: Table 6.7 Cultural heritage significant effects summary table Construction South of the River Thames: <i>Permanent Impacts</i> Impact description - Permanent impacts to 443 non-designated archaeological assets (774, 775, 1302, 1306, 1362, 1372, 1396, 1474, 1579, 1584, 1595, 1599, 1600, 1604, 1606, 1607, 1608, 1620, 1622, 1813, 1820, 2291, 2308, 3640, 3642, 3643, 3655, 3663, 3667, 3740, 3742, 3743, 3745, 3749, 3751, 3773, 3774, 3793, 3802, 4427, 4428, 4558, 4595, 4745) Value - Medium Impact magnitude - Moderate Significance of effect - Moderate adverse Significance – Significant</p>	
6.1 Environmental Statement - Chapter 6 - Cultural Heritage	Environmental information supplementing ES Chapter 6.	No amendment to ES Chapter 6 [REP4-116] is proposed.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>[REP4-116] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>A table setting out the heritage assets that would experience less than substantial harm has been provided in Annex A of 9.89 Responses to the Examining Authority's ExQ1 Appendix H – 12. Physical Effects of Development & Operation [REP4-200]. These tables are replicated in Appendix F of this ES Addendum.</p>	<p>This supplementary information on heritage assets that would experience less than substantial harm is presented in Appendix F of this ES Addendum document.</p>	
ES Figures			
<p>6.2 Environmental Statement – Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (1 of 3) [APP-185]</p>	<p>Figure 6.1 (1 of 3) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] Figure 6.1 also requires amendments to update the information on the assets affected by the change to nitrogen deposition compensation areas in (Change MRC01 [CR1-002]). This reflects the update identified for ES Chapter 6.</p>	<p>Pages 1, 3, 4, 5, 7 and 9 of 103 of Figure 6.1 (1 of 3) are amended as follows: Update to Order Limits. Update to Assets Experiencing Effects Resubmitted 11 December 2023 as: 6.2 Environmental Statement - Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (Clean) (Version 2) 6.2 Environmental Statement - Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (Tracked) (Version 2)</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 6.1 – Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (2 of 3) [APP-186]	Figure 6.1 (2 of 3) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 49, 53, 58, of 103 of Figure 6.1 (2 of 3) are amended as follows: Update to Order Limits. Resubmitted 11 December 2023 as: Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (2 of 3) (Clean) (Version 2) Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (2 of 3) (Tracked) (Version 2)	Deadline 9
6.2 Environmental Statement – Figure 6.1 – Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (3 of 3) [APP-187]	Figure 6.1 (3 of 3) is updated alongside the amendments made to update Order Limits shown in Figure 6.1 (1 of 3 and 2 of 3), in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] This ensures consistent updates to Figure 6.1 as a whole.	Figure 6.1 (3 of 3) is updated alongside the amendments made to update Order Limits shown in Figure 6.1 (1 of 3 and 2 of 3). Resubmitted 11 December 2023 as: Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (3 of 3) (Clean) (Version 2) Figure 6.1 - Archaeological Baseline and Assets Assessed as Likely to Experience an Effect (3 of 3) (Tracked) (Version 2)	Deadline 9
6.2 Environmental Statement – Figure 6.2 – Built Heritage Baseline and Assets Assessed as Likely to Experience an Effect	Figure 6.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002]	Pages 1, 2, 14 and 18 of ES Figure 6.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
[APP-188] Document not re-issued. Updates identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]		
6.2 Environmental Statement – Figure 6.3 – Historic Landscape [APP-189] Document not re-issued. Updates identified in ES Addendum only.	Figure 6.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 3, 4, 16 and 20 of ES Figure 6.3 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 6.4 – Geophysical and Aerial Mapping Survey Results [APP-190] Document not re-issued. Updates identified in ES Addendum only.	Figure 6.4 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 12 and 14 of ES Figure 6.4 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 6.5 – Location of Representative Heritage Viewpoints	Figure 6.5 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002]	Pages 1, 12 and 14 of ES Figure 6.5 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
[APP-191] Document not re-issued. Updates identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]		
6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) [APP-192]	Figure 6.6 requires amendment to resolve the omission of a number of summer and winter heritage viewpoints.	Figure 6.6 is amended to include omitted summer and winter views. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) (Clean) (Version 2) [REP1-123] 6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) (Tracked) (Version 2) [REP1-122]	Deadline 1
6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) [APP-193]	Figure 6.6 requires amendment to resolve the omission of a number of summer and winter heritage viewpoints.	Figure 6.6 is amended to include omitted summer and winter views. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) (Clean) (Version 2) [REP1-125] 6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) (Tracked) (Version 2) [REP1-124]	Deadline 1
6.2 Environmental Statement – Figure 6.7 – Archaeological Trial Trench Evaluation Carried Out by LTC [APP-194] Document not re-issued. Updates identified in ES Addendum only.	Figure 6.7 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 3 and 4 of ES Figure 6.7 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 6.8 – Archaeology	Figure 6.8 requires amendment to update Order Limits shown, in relation to:	Pages 2, 13 and 14 of ES Figure 6.8 are amended as follows: Update to Order Limits.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
and Geology [APP-195] Document not re-issued. Updates identified in ES Addendum only.	Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	
6.2 Environmental Statement – Figure 6.9 – Palaeolithic Archaeology [APP-196] Document not re-issued. Updates identified in ES Addendum only.	Figure 6.9 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2 and 25 of ES Figure 6.9 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
ES Appendices			
6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (1 of 2) [APP-360]	Appendix 6.7 requires revision to include omitted appendix pages from page 9 onwards.	ES Appendix 6.7 is amended to include omitted pages. Resubmitted in December 2022 as: 6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (1 of 2) (Version 2) [AS-051]	Section 51 submission December 2022
6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written	Paragraph 6.3.17 requires revision to include omitted text in relation to the potential effects of Kit's Coty and Blue Bell Hill on heritage assets.	Paragraph 6.3.17 of ES Appendix 6.9 is amended to: These works will affect Heritage Assets 677, 762, 1331, 1398, 1454, 1599, 1998, 3535, 3640, 3642, 3643 and 3655. Additionally, the Nitrogen Deposition Compensation Site at Kit's Coty has the potential to affect Heritage Asset 4745. An appropriate mitigation technique has been identified for the sites affected and is set out in Table 9.1 and described in Chapter 7. Additionally, the nitrogen deposition compensation sites close	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Scheme of Investigation [APP-367]</p>		<p>to Kit's Coty, Burham and Blue Bell Hill, have the potential to affect Heritage Assets 4745, 4483, 4513, 4525, and 4760.</p> <p>This update is no longer required as a result of MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August 2023) [CR1-002]. The removal of this update was explained at Deadline 5.</p>	
<p>6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [APP-367]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraphs 7.1.14 and 7.3.127 of Appendix 6.9 require revision in response to the Examination Authority's Written Question 12.1.10 in ExQ1 - the Examining Authority's written questions and requests for information [PD-029].</p>	<p>Paragraph 7.1.14 of Appendix 6.9 is amended to:</p> <p>If unexpected finds (sites, artefacts, environmental remains or ecofacts, monuments or features) are made during the construction stage a site consultation meeting(s) will be convened between the Principal Contractor, National Highways' Historic Environment Manager, the Archaeological Contractor, the relevant local authority archaeological advisors and (if appropriate) Historic England or other key stakeholders to consider the significance of the find. In accordance with Requirement 9 of the Draft Development Consent Order (Application Document 3.1), any unexpected finds must be retained in situ and reported to the relevant planning authority as soon as reasonably practicable. No construction can take place for 14 days from the date of such finds being reported unless otherwise agreed in writing by the Secretary of State. If the relevant planning authority finds that further investigation is needed, no construction shall take place within 10 metres of the remains, or a minimum of 10 metres where unexpected waterlogged archaeological finds are present, until further investigation and recording including details to be agreed by the Secretary of State and approved by the relevant planning authority.</p> <p>Paragraph 7.3.127 of Appendix 6.9 is amended to:</p> <p>In the event of an unexpected discovery requiring further investigation (that is, a significant find that was not predicted as a result of the evaluation), the provisions set out above will apply. The area will be fenced off, cleaned archaeologically and recording works completed, in line with a revised SSWSI prepared by the National Highways Historic Environment Manager</p>	<p>Deadline 4</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																					
		<p>and the ACoW in consultation with the relevant Local Authority Archaeological Advisors and if appropriate, Historic England. In accordance with Requirement 9 of the Draft Development Consent Order (Application Document 3.1), any unexpected finds must be retained in situ and reported to the relevant planning authority as soon as reasonably practicable. No construction can take place for 14 days from the date of such finds being reported unless otherwise agreed in writing by the Secretary of State. If the relevant planning authority finds that further investigation is needed, no construction shall take place within 10 metres of the remains, or a minimum of 10 metres where unexpected waterlogged archaeological finds are present, until further investigation and recording including details to be agreed by the Secretary of State and approved by the relevant planning authority.</p>																						
<p>6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [APP-367]</p>	<p>Updates to Table 9.3 are required to change the level of mitigation proposed in response to Q12.1.16 in ExQ1 - the Examining Authority’s written questions and requests for information [PD-029].</p>	<p>Table 9.3 of Appendix 6.9 is updated as follows:</p> <p style="text-align: center;">Table 9.3 Proposed mitigation on standing heritage assets</p> <table border="1" data-bbox="904 815 1845 1319"> <thead> <tr> <th data-bbox="904 815 1205 895">Heritage Asset Number</th> <th data-bbox="1216 815 1563 895">Name</th> <th data-bbox="1574 815 1845 895">Mitigation Type</th> </tr> </thead> <tbody> <tr> <td data-bbox="904 903 1205 967">LB58</td> <td data-bbox="1216 903 1563 967">Thatched Cottage</td> <td data-bbox="1574 903 1845 967">Level 4 Historic Building Recording</td> </tr> <tr> <td data-bbox="904 975 1205 1038">LB89</td> <td data-bbox="1216 975 1563 1038">1 and 2 Grays Corner Cottage</td> <td data-bbox="1574 975 1845 1038">Level 4 Historic Building Recording</td> </tr> <tr> <td data-bbox="904 1046 1205 1110">LB96</td> <td data-bbox="1216 1046 1563 1110">Murrells Cottages</td> <td data-bbox="1574 1046 1845 1110">Level 4 Historic Building Recording</td> </tr> <tr> <td data-bbox="904 1118 1205 1182">LB57</td> <td data-bbox="1216 1118 1563 1182">Baker Street Windmill</td> <td data-bbox="1574 1118 1845 1182">Level 3 Historic Building Recording</td> </tr> <tr> <td data-bbox="904 1190 1205 1254">4153</td> <td data-bbox="1216 1190 1563 1254">Estate House, Ockendon Road</td> <td data-bbox="1574 1190 1845 1254">Level 34 Historic Building Recording</td> </tr> <tr> <td data-bbox="904 1262 1205 1319">4154</td> <td data-bbox="1216 1262 1563 1319">1 Bridge Cottages, Ockendon Road</td> <td data-bbox="1574 1262 1845 1319">Level 34 Historic Building Recording</td> </tr> </tbody> </table>	Heritage Asset Number	Name	Mitigation Type	LB58	Thatched Cottage	Level 4 Historic Building Recording	LB89	1 and 2 Grays Corner Cottage	Level 4 Historic Building Recording	LB96	Murrells Cottages	Level 4 Historic Building Recording	LB57	Baker Street Windmill	Level 3 Historic Building Recording	4153	Estate House, Ockendon Road	Level 3 4 Historic Building Recording	4154	1 Bridge Cottages, Ockendon Road	Level 3 4 Historic Building Recording	<p>Deadline 5</p>
Heritage Asset Number	Name	Mitigation Type																						
LB58	Thatched Cottage	Level 4 Historic Building Recording																						
LB89	1 and 2 Grays Corner Cottage	Level 4 Historic Building Recording																						
LB96	Murrells Cottages	Level 4 Historic Building Recording																						
LB57	Baker Street Windmill	Level 3 Historic Building Recording																						
4153	Estate House, Ockendon Road	Level 3 4 Historic Building Recording																						
4154	1 Bridge Cottages, Ockendon Road	Level 3 4 Historic Building Recording																						

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date
		4155	2 Bridge Cottages, Ockendon Road	Level 34 Historic Building Recording	
		4156	3 Bridge Cottages, Ockendon Road	Level 34 Historic Building Recording	
		4157	4 Bridge Cottages, Ockendon Road	Level 34 Historic Building Recording	
		4159	1 and 2 Whitfields Cottages	Level 3 Historic Building Recording	
		4775	Larwood Cottage, Ockendon Road, Ockendon Road	Level 34 Historic Building Recording	
		4776	The Rosery, Ockendon Road	Level 34 Historic Building Recording	
		n/a	1 and 2 Cherry Orchard Cottages, Ockendon Road	Level 4 Historic Building Recording	
6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of	Updates are required to respond to previously identified updates and correct formatting errors.	<p>Resubmitted in October 2023 as:</p> <p>6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 2) [REP5-052]</p> <p>6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 2) [REP5-053]</p> <p>Appendix 6.9 has also been updated to include the amendments presented in the ES Addendum at previous deadlines.</p> <p>Updates to Appendix 6.9 identified at the Section 51 submission in December 2022 related to the nitrogen deposition compensation sites are no longer required. This follows the agreement of change MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites, as described in 10.4 Change Application (August</p>			Deadline 5

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Investigation [APP-367]		2023) [CR1-002] . The update identified in the ES Addendum at for the Section 51 submission in December 2022 has now been struck through. Updates are required to correct Section 6.3 where a paragraph numbering error had occurred. Paragraph numbers now run continuously from 6.3.1 to 6.3.130 (previously 6.3.1 to 6.3.16 and then 6.3.1 again to 6.3.107). This update would not cause issues with cross-references from elsewhere. Resubmitted in October 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 2) [REP5-052] 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 2) [REP5-053]	
6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP5-052]	An additional paragraph 2.5.7 has been included related to archaeology in the non-terrestrial environment, in response to stakeholder engagement.	Paragraph 2.5.7 is added in Section 2 of Appendix 6.9. Resubmitted 31 October 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 3) [REP6-044] 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 3) [REP6-045]	Deadline 6
6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of	Table 3.1 and the sub-heading above paragraph 6.4.7 are updated to correct an error and ensure the text relates to below-ground heritage assets.	Table 3.1 and the sub-heading above paragraph 6.4.7 are updated. Resubmitted 31 October 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 3) [REP6-044] 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 3) [REP6-045]	Deadline 6

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Investigation [REP5-052]			
6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP5-052]	Paragraph 6.4.13 and Section 7.2 on Monitoring, communication and sign off are amended in response to stakeholder engagement.	Paragraph 6.4.13 and Section 7.2 on Monitoring, communication and sign off are amended in Appendix 6.9. Resubmitted 31 October 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 3) [REP6-044] 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 3) [REP6-045]	Deadline 6
6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP5-052]	Paragraphs 7.1.14, 7.3.36 and 7.3.127 are amended in response to requests raised in ExQ2 - The Examining Authority's written questions and requests for information [PD-040] .	Paragraphs 7.1.14, 7.3.36 and 7.3.127 are amended in Appendix 6.9. Resubmitted 31 October 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 3) [REP6-044] 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 3) [REP6-045]	Deadline 6
6.3 Environmental Statement - Appendix 6.9 - Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP6-044]	Appendix 6.9 requires amendment to provide further detail on proposed mitigation areas, following consultation with the Local Authority Archaeological Advisors.	Multiple amendments have been made to ES Appendix 6.9, including the following: New paragraphs have been added at the following places within ES Appendix 6.9: <ul style="list-style-type: none"> • 2.6.7 – related to Local Authority Historic Building Advisors. • 6.4.13-14 – covering the recording of setting and condition surveys. • 6.4.20 – covering geophysical survey. 	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> • 6.4.40-44 – covering Palaeolithic land surfaces and other significant deposits. • 7.2.5 – related to engagement with stakeholders. • 7.2.15-17 – related to monitoring of historic buildings dismantling and recording works. • 7.2.25-26 – covering Interim Statements, post-excavation reporting and publication. • 7.3.199-121 – covering the mitigation approach for Palaeolithic land surfaces and other significant deposits. <p>The following additions have been made to the list which follows paragraph 2.5.4:</p> <ul style="list-style-type: none"> i. REAC Ref CH009 ensures that a two stage approach, including deep 10m x 10m test pits, is taken to the mitigation of deeper Palaeolithic and Holocene deposits. j. REAC Ref CH010 ensures that Local Authority Archaeological and Historic Buildings Advisors have access to the Project to monitor and sign-off relevant work. <p>In addition the paragraphs 7.2.6 and 7.2.7 have been amended to make reference to Local Authority Historic Buildings Advisors.</p> <p>Section 5 Research Agenda has been updated to include information on the Lower Thames Crossing Heritage Research Group.</p> <p>Tables 3.1 and 9.3 have been amended:</p> <ul style="list-style-type: none"> • Table 3.1, reference 2.3 providing additional information on historic building recording • Table 3.1, reference 3.3 providing a new row on geophysical survey • Table 3.1, reference 4.6 amending text on Palaeolithic and Holocene intrusive investigation 	

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date																											
		<p style="text-align: center;">Table 9.3 has been amended with the addition of:</p> <table border="1" data-bbox="898 316 1845 1161"> <tbody> <tr> <td data-bbox="898 316 1014 408">LB37</td> <td data-bbox="1021 316 1429 408">Whitcroft's Farmhouse</td> <td data-bbox="1435 316 1845 408">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 413 1014 505">1561</td> <td data-bbox="1021 413 1429 505">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 413 1845 505">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 510 1014 603">4401</td> <td data-bbox="1021 510 1429 603">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 510 1845 603">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 608 1014 700">4402</td> <td data-bbox="1021 608 1429 700">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 608 1845 700">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 705 1014 798">4403</td> <td data-bbox="1021 705 1429 798">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 705 1845 798">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 802 1014 895">4597</td> <td data-bbox="1021 802 1429 895">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 802 1845 895">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 900 1014 992">4598</td> <td data-bbox="1021 900 1429 992">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 900 1845 992">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 997 1014 1090">4599</td> <td data-bbox="1021 997 1429 1090">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 997 1845 1090">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> <tr> <td data-bbox="898 1094 1014 1161">4600</td> <td data-bbox="1021 1094 1429 1161">WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham</td> <td data-bbox="1435 1094 1845 1161">Level 3 Historic Building Recording, with a particular emphasis on setting</td> </tr> </tbody> </table> <p data-bbox="898 1171 1861 1238">The amendments to ES Appendix 6.9 also include the addition of Annex B Table of Mitigation Sites and the correction of small grammatical errors.</p>			LB37	Whitcroft's Farmhouse	Level 3 Historic Building Recording, with a particular emphasis on setting	1561	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4401	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4402	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4403	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4597	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4598	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4599	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	4600	WW1 Homes for Heroes scheme houses, Thong Lane, Shorne, Gravesham	Level 3 Historic Building Recording, with a particular emphasis on setting	
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Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		Resubmitted 17 November 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 4) [REP7-128] 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 4) [REP7-129]	
6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP7-128]	Appendix 6.9 requires amendment to provide further detail on proposed mitigation methodology and other areas, following consultation with the Local Authority Archaeological Advisors.	Multiple amendments have been made to ES Appendix 6.9, including the following: <ul style="list-style-type: none"> • Update to the Executive Summary. • Additional information provided in paragraph 6.4.20 on mitigation through geophysical survey. • Clarification provided in paragraphs 6.4.41 and 6.4.42 on Palaeolithic land surfaces and other significant deposits. • Additional information provided in section 8.6 on archiving. • Additional information is inserted into Annex A at Section A.1 related to the development of the Public Archaeology and Community Engagement Strategy. • Additional information is provided in Annex B on consultation on archaeological mitigation and details of archaeological mitigation sites in Kent, Essex and Havering • Addition of Annex C: Outline Palaeolithic Written Scheme of Investigation. The amendments to ES Appendix 6.9 also includes minor editing points and the correction of small grammatical errors. Resubmitted 5 December 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 5) [REP8-047]	Deadline 8

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 5) [REP8-048]	
6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [REP8-047]	Appendix 6.9 requires amendment in relation to: Feedback from Kent County Council Feedback from Essex County Council Feedback from London Borough of Havering	Multiple amendments have been made to ES Appendix 6.9, including the following: Table 3.1 is updated with further information on mitigation Section 6.4 is updated related to Palaeolithic and Holocene intrusive fieldwork Section 7.3 is updated to clarify the involvement of Historic England in the development of SSWSIs and method statements Section 8.7 is updated with information related to use of digital data New tables 9.4 and 9.5 are included providing information on designated and non-designated heritage assets with potential to be affected by vibration. Annex B Table of mitigation site is updated to reflect the agreement of the dAMS-OWSI with the local authorities. Annex C Outline Palaeolithic Written Scheme of Investigation is updated with clarification on the approach to be followed. Annex D is added to present a series of plates showing the location of each mitigation site across the Project, sub-divided into Kent, Essex and the London Borough of Havering. The glossary has also been updated to reflect updates made to ES Appendix 6.9. Other minor updates have been made throughout the document, including the addition of text introducing the new tables and annex. Resubmitted 11 December 2023 as: 6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Clean) (Version 6)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (Tracked) (Version 6)	
6.3 Environmental Statement Appendix 6.10 – Assessment Tables [APP-368]	Tables 1.5 and 1.6 of Appendix 6.10 omitted to include rows of heritage asset data from appendix tables for submission as a result of a corruption issue.	ES Appendix 6.10 is amended to include multiple rows of missing heritage data. Resubmitted in December 2022 as: Additional Submission – 6.3 Environmental Statement – Appendix 6.10 – Assessment Tables – (Clean) (Version 2) – Accepted at the discretion of the Examining Authority [AS-052] Additional Submission – 6.3 Environmental Statement – Appendix 6.10 – Assessment Tables – (Tracked) (Version 2) – Accepted at the discretion of the Examining Authority [AS-053]	Section 51 submission December 2022
6.3 Environmental Statement – Appendix 6.10 – Assessment Tables (Version 2) [AS-052] and [AS-053] Document not re-issued. Updates identified in ES Addendum only.	Table 1.14 of Appendix 6.10 requires amendment to construction impact for Asset 2461.	Table 1.14 of ES Appendix 6.10 (Version 2) is amended as follows: Table 1.14: Non-designated archaeology within the Order Limits assessment table: South of the River Thames of Appendix 6.10 is amended to change the reported construction impact on Asset 2461 from Moderate to Minor .	Deadline 1
6.3 Environmental Statement Appendix 6.10 – Assessment Tables [AS-052] Document not re-issued. Updates identified in ES Addendum only.	Appendix 6.10 requires amendment to update Table 1.14, to reflect the removal of a significant adverse effect following the change to nitrogen deposition compensation areas in (Change MRC01 [CR1-002])	Page 318, Table 1.14 of ES Appendix 6.10 is amended as follows in relation to the row for Asset 4745: Construction physical impact: The establishment of the Nitrogen Deposition Compensation Area at Burham, to the west of Kit's Coty, would result in the complete removal of the medium value Great Culand (asset 4745, below ground remains of the former Medieval to Modern manor and farmstead) This impact is assessed base on the worst case scenario and it is anticipated that it should be possible to preserve this asset in situ a woodland glade or similar open space None	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>Construction setting impact: N/A due to physical removal during constructionNone</p> <p>Construction mitigation: Archaeological excavation and recordingNone</p> <p>Construction impact: ModerateNo change</p> <p>Construction effect: Permanent Moderate AdverseNeutral</p> <p>Operation setting impact: N/A due to physical removal during constructionNone</p> <p>Operation mitigation: N/A due to physical removal during constructionNone</p> <p>Operation impact: N/A due to physical removal during constructionNo change</p> <p>Operation effect: N/A due to physical removal during constructionNeutral</p> <p>Completely removed by project?: YN</p> <p>Utility impact only?: N</p> <p>Landscape impact only?: YN</p>	
<p>6.3 Environmental Statement – Appendix 6.13 – Holocene Geoarchaeological Desk-based Assessment of the Route of the Lower Thames Crossing [APP-371] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Appendix 6.13 requires amendment to correct the photograph referencing.</p>	<p>Figure 4 of ES Appendix 6.13 is amended to correct the photograph numbering as follows: B: C: Saxon mill, Ebbsfleet buried in alluvium; C: B: pottery and wood on Roman foreshore at Ebbsfleet;</p>	<p>Deadline 1</p>

3.8 ES Chapter 7 Landscape and Visual

3.8.1 The following changes have been made throughout Examination to ES Chapter 7, associated figures and appendices, as set out in Table 3.4.

Table 3.4 Updates to Chapter 7, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145] Document not re-issued. Updates identified in ES Addendum only.	Chapter 7 requires amendment to report the identification of four additional visual receptors since submission of the DCO application, that are likely to experience significant effects within the landscape study area.	Sections 7.6 and 7.9 of ES Chapter 7 are amended to report the additional visual receptors likely to experience significant effects. <u>Section 7.6 Assessment of likely significant effects – Construction phase</u> Addition to Table 7.22 Schedule of visual effects on visual receptors south of the River Thames during construction: <ul style="list-style-type: none"> • VR-S03-R-035 Polperro, A226 Rochester Road: <ul style="list-style-type: none"> – Visual sensitivity: High – Magnitude of visual effect: Major – Significance of effect: Very large adverse Additions to Table 7.24 Schedule of visual effects on visual receptors north of the River Thames during construction: <ul style="list-style-type: none"> • VR-S11-R-043 Five Chimney Cottages, A1013 Stanford Road: <ul style="list-style-type: none"> – Visual sensitivity: Moderate – Magnitude of visual effect: Major – Significance of effect: Large adverse • VR-S09-O-007 Condovers Scout Activity Centre, Church Road, West Tilbury: <ul style="list-style-type: none"> – Visual sensitivity: Moderate – Magnitude of visual effect: Moderate – Significance of effect: Moderate adverse • VR-S11-O-011 Orsett Heath Academy, Grays, adjacent to Thurrock Rugby Football Club: 	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> – Visual sensitivity: Moderate – Magnitude of visual effect: Moderate – Significance of effect: Moderate adverse <p><u>Section 7.6 Assessment of likely significant effects – Operational phase</u> Additions to Table 7.32 Schedule of visual effects on visual receptors north of the River Thames during operation:</p> <ul style="list-style-type: none"> • VR-S11-R-043 Five Chimney Cottages, A1013 Stanford Road: <ul style="list-style-type: none"> – Visual sensitivity: Moderate – Magnitude of visual effect in opening year (winter): Major – Significance of effect in opening year (winter): Large adverse – Magnitude of visual effect in design year (summer): Moderate – Significance of effect in design year (summer): Moderate adverse • VR-S11-O-011 Orsett Heath Academy, Grays, adjacent to Thurrock Rugby Football Club: <ul style="list-style-type: none"> – Visual sensitivity: Moderate – Magnitude of visual effect in opening year (winter): Moderate – Significance of effect in opening year (winter): Moderate adverse – Magnitude of visual effect in design year (summer): Minor – Significance of effect in design year (summer): Slight adverse <p><u>Section 7.9 – Summary</u> Modifications to Table 7.35 Visual impact table:</p> <ul style="list-style-type: none"> • Construction effect, south of the River Thames: <ul style="list-style-type: none"> – Very large adverse: 45 residential receptors or groups - Significant – Slight adverse: 1011 other receptors or groups - Not significant • Construction effect, north of the River Thames: <ul style="list-style-type: none"> – Large adverse: 2829 residential receptors or groups - Significant – Moderate adverse: 79 other receptors or groups - Significant • Operation effect, south of the River Thames: 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> – Slight adverse at opening year, slight adverse at design year: 17 18 residential receptors or groups - Not significant – Slight adverse at opening year, slight adverse at design year: 3 4 other receptors or groups - Not significant • Operation effect, north of the River Thames: <ul style="list-style-type: none"> – Large adverse at opening year, moderate adverse at design year: 8 9 residential receptors or groups - Significant – Moderate adverse at opening year, slight adverse at design year: 2 3 other receptors or groups – Significant <p>Slight adverse at opening year, slight adverse at design year: 4-5 other receptors or groups - Not significant</p>	
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Chapter 7 requires updates to report an amendment to the visual sensitivity of visitors to Tilbury Fort at Representative Viewpoint N-01 and Coalhouse Fort at Representative Viewpoint N-05 and subsequent changes in the level of significance o effect.</p>	<p><u>Section 7.4 Baseline conditions</u> Table 7.10 Visual – Representative Viewpoints of ES Chapter 7 is updated to amend the sensitivity of visitors to Tilbury Fort and Coalhouse Fort.</p> <ul style="list-style-type: none"> • Representative Viewpoint reference N-01: View from Grade I listed Tilbury Fort adjacent to NCN Route 13 and footpath 146/Thames Estuary Path/Two Forts Way (LLCA Tilbury Marshes). View centred north-north-east for recreational receptors. <ul style="list-style-type: none"> – Sensitivity: High Very High • Representative Viewpoint reference N-05: View from Coalhouse Fort Scheduled Monument, adjacent to Two Forts Way Coastal Path/bridleway 187 and NCN Route 13, looking towards the Kent Downs AONB (LLCA Mucking Marshes). View centred south-south-west for visitors. <ul style="list-style-type: none"> – Sensitivity: High Very High <p><u>Section 7.6 Assessment of likely significant effects – Construction phase</u> Table 7.23 Schedule of visual effects on Representative Viewpoints north of the River Thames during construction of ES Chapter 7 is updated to amend the sensitivity of visitors to Tilbury Fort and Coalhouse Fort and the resulting significance of effect.</p>	<p>Deadline 6</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> • Addition of assessment information for Representative Viewpoint reference N-01: View from Grade I listed Tilbury Fort adjacent to NCN Route 13 and footpath 146/Thames Estuary Path/Two Forts Way. <ul style="list-style-type: none"> – Sensitivity: Very High – Magnitude of visual effect: Minor – Significance of effect: Moderate adverse • Updates to assessment information for Representative Viewpoint reference N-05: View from Coalhouse Fort Scheduled Monument, adjacent to Two Forts Way Coastal Path/bridleway 187 and NCN Route 13, looking towards the Kent Downs AONB. <ul style="list-style-type: none"> – Sensitivity: High Very High – Magnitude of effect: Moderate – Significance of effect: Moderate Large adverse <p><u>Section 7.9 – Summary</u></p> <p>Table 7.35 Visual impact table of ES Chapter 7 is amended to update the number of significance of effect levels to reflect the amended assessments for Representative Viewpoint N-01 and Representative Viewpoint N-05.</p> <ul style="list-style-type: none"> • Construction effect, north of the River Thames: <ul style="list-style-type: none"> – Large adverse: 4 2 recreational area viewpoints – Significant Slight adverse: 3 2 recreational area viewpoints – Not significant 	
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145] Document not re-issued. Updates</p>	<p>Chapter 7 requires updates to report an amendment to the magnitude of effect and resulting significance of effect at Representative Viewpoint S-03 at opening year (winter) following a review of the photomontage produced at this Representative Viewpoint</p>	<p>ES Chapter 7, Section 7.6 and 7.9 are amended as follows: <u>Section 7.6 Assessment of likely significant effects – Construction phase</u> Addition to Table 7.22 Schedule of visual effects on visual receptors south of the River Thames during construction:</p> <ul style="list-style-type: none"> • VR-S03-R-036: View Point Place traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Sensitivity: High 	<p>Deadline 7</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>identified in ES Addendum only.</p>	<p>(Figure 7.19 as submitted into Examination at Deadline 5 [REP5-046]). Chapter 7 also requires update to report the identification of two additional visual receptors (VR-S03-R-036 and VR-S03-R-037) since submission of the DCO application, that are likely to experience significant effects within the landscape study area.</p>	<ul style="list-style-type: none"> – Magnitude of visual effect: Major – Significance of effect: Very large adverse • VR-S03-R-037: Horseshoe Meadow traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect: Major – Significance of effect: Large adverse <p><u>Section 7.6 – Assessment of likely significant effects – Operational phase</u> Update to Table 7.29 Schedule of visual effects on Representative Viewpoints south of the River Thames during operation:</p> <ul style="list-style-type: none"> • Representative Viewpoint reference S-03: View from the Kent Downs AONB on footpath NS161, located north of Park Pale, east of Shorne Woods Country Park <ul style="list-style-type: none"> – Sensitivity: Very high – Magnitude of visual effect, opening year (winter): Negligible Moderate – Significance of effect, opening year (winter): Slight adverse Large adverse <p><u>Section 7.9 – Summary is also amended as follows:</u> Table 7.35 Visual impact table of ES Chapter 7 is amended to update the number of significance of effect levels to reflect the amended assessment for Representative Viewpoint S-03 and the newly identified visual receptors.</p> <ul style="list-style-type: none"> • Construction effect, south of the River Thames: <ul style="list-style-type: none"> – Very large adverse: 5 6 residential receptors or groups – Significant – Large adverse: 8 9 residential receptors or groups – Significant • Operation effect, south of the River Thames: 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date						
		<ul style="list-style-type: none"> – Large adverse in opening year, moderate beneficial in design year: 1 recreational route viewpoint – Significant – Slight adverse in opening year, moderate beneficial in design year: 2 1 recreational route viewpoint – Not significant increasing to significant beneficial <p>Slight adverse in opening year, slight adverse in design year: 48 20 residential receptors or groups – Not significant</p>							
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text in Table 7.12 are required to update REAC LV008 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First Iteration of Environmental Management Plan (Version 7) [REP7-122] in response to comments made by Gravesham Borough Council in their Deadline 6 response [REP6-126].</p>	<p>Table 7.12 of ES Chapter 7 is updated in rows related to REAC LV008 as follows:</p> <p>Table 7.12 Landscape and visual – construction phase essential mitigation measures</p> <table border="1" data-bbox="898 679 1872 1350"> <thead> <tr> <th data-bbox="898 679 1223 727">Location</th> <th data-bbox="1223 679 1547 727">Mitigation measures</th> <th data-bbox="1547 679 1872 727">REAC Ref.</th> </tr> </thead> <tbody> <tr> <td data-bbox="898 727 1223 1350">Southern tunnel entrance compound</td> <td data-bbox="1223 727 1547 1350">‘Earth bunds of approximately 2-3m in height formed from material excavated onsite would be sited along the boundary of the compound, as material becomes available to facilitate visual screening for residential properties on Thong Lane and Rochester Road (A226) during construction. The phasing of the works would be planned so that the bunds are in place before the main compound activities commence, subject to</td> <td data-bbox="1547 727 1872 1350">LV008</td> </tr> </tbody> </table>	Location	Mitigation measures	REAC Ref.	Southern tunnel entrance compound	‘Earth bunds of approximately 2-3m in height formed from material excavated onsite would be sited along the boundary of the compound, as material becomes available to facilitate visual screening for residential properties on Thong Lane and Rochester Road (A226) during construction. The phasing of the works would be planned so that the bunds are in place before the main compound activities commence, subject to	LV008	<p>Deadline 7</p>
Location	Mitigation measures	REAC Ref.							
Southern tunnel entrance compound	‘Earth bunds of approximately 2-3m in height formed from material excavated onsite would be sited along the boundary of the compound, as material becomes available to facilitate visual screening for residential properties on Thong Lane and Rochester Road (A226) during construction. The phasing of the works would be planned so that the bunds are in place before the main compound activities commence, subject to	LV008							

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date						
			excavated material availability.'								
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in Table 7.14 are required to update REAC LV010 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First Iteration of Environmental Management Plan (Version 7) [REP7-122] in response to comments made by Gravesham Borough Council in their Deadline 6 response [REP6-126] .	<p>Table 7.14 of ES Chapter 7 is updated in rows related to REAC LV010 as follows:</p> <p style="text-align: center;">Table 7.14 Landscape and visual – construction phase essential mitigation measures</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Mitigation measures</th> <th>REAC Ref.</th> </tr> </thead> <tbody> <tr> <td>Southern tunnel entrance compound</td> <td>'Construction compound facilities greater than 6m in height would be located to maximise distance from residential areas of Chalk and adjoining Thong Lane, and Polperro, Horseshoe Meadow and Viewpoint Place on the Rochester Road (A226), together with Thamesview School, as far as reasonably practicable.'</td> <td>LV010</td> </tr> </tbody> </table>			Location	Mitigation measures	REAC Ref.	Southern tunnel entrance compound	'Construction compound facilities greater than 6m in height would be located to maximise distance from residential areas of Chalk and adjoining Thong Lane, and Polperro, Horseshoe Meadow and Viewpoint Place on the Rochester Road (A226), together with Thamesview School, as far as reasonably practicable.'	LV010	Deadline 7
Location	Mitigation measures	REAC Ref.									
Southern tunnel entrance compound	'Construction compound facilities greater than 6m in height would be located to maximise distance from residential areas of Chalk and adjoining Thong Lane, and Polperro, Horseshoe Meadow and Viewpoint Place on the Rochester Road (A226), together with Thamesview School, as far as reasonably practicable.'	LV010									
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]	Updates to text in Table 7.12 are required to update REAC LV024 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8)	<p>Table 7.12 of ES Chapter 7 is updated in rows related to REAC LV024 as follows:</p> <p style="text-align: center;">Table 7.12 Landscape and visual – construction phase good practice measures</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Mitigation measures</th> <th>REAC Ref.</th> </tr> </thead> <tbody> <tr> <td>M25 compound</td> <td>'A 2-3m high bund would be formed from excavated soil along the northern and eastern edges of the M25</td> <td>LV024</td> </tr> </tbody> </table>			Location	Mitigation measures	REAC Ref.	M25 compound	'A 2-3m high bund would be formed from excavated soil along the northern and eastern edges of the M25	LV024	Deadline 8
Location	Mitigation measures	REAC Ref.									
M25 compound	'A 2-3m high bund would be formed from excavated soil along the northern and eastern edges of the M25	LV024									

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date
	<p>[REP8-044] in response to comments made by London Borough of Havering.</p>		<p>compound, including around the soil storage area. The phasing of the works would be planned so that the bunds are in place before the main compound activities commence, subject to excavated material availability. The bund would be seeded with a grass mix suited to the local context. Where further soil is excavated and retained onsite temporarily, it would be stockpiled up to 6m high in the north-eastern part of the compound. as earth bunds on the north-eastern boundary of the compound to These measures would facilitate visual screening for the North Ockendon Conservation Area and local residents.'</p>		

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date						
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]	Updates to text in Table 7.14 are required to update REAC LV022 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8) [REP8-044] in response to comments made by London Borough of Havering and to more closely align with the current illustrative layout of the M25 compound.	<p>Table 7.14 of ES Chapter 7 is updated in rows related to REAC LV022 as follows:</p> <p style="text-align: center;">Table 7.14 Landscape and visual – construction phase essential mitigation measures</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Mitigation measures</th> <th>REAC Ref.</th> </tr> </thead> <tbody> <tr> <td>M25 compound</td> <td>'Construction compound facilities of greater than 6m in height would be located as westerly as reasonably practicable along the southern boundary of the compound to maximise the distance from the North Ockendon Conservation Area and local residents, as indicated on Page 43 of ES Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (2 of 2).'</td> <td>LV022</td> </tr> </tbody> </table>	Location	Mitigation measures	REAC Ref.	M25 compound	'Construction compound facilities of greater than 6m in height would be located as westerly as reasonably practicable along the southern boundary of the compound to maximise the distance from the North Ockendon Conservation Area and local residents, as indicated on Page 43 of ES Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (2 of 2).'	LV022	Deadline 8
Location	Mitigation measures	REAC Ref.							
M25 compound	'Construction compound facilities of greater than 6m in height would be located as westerly as reasonably practicable along the southern boundary of the compound to maximise the distance from the North Ockendon Conservation Area and local residents, as indicated on Page 43 of ES Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (2 of 2).'	LV022							
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]	Updates to text in Table 7.14 are required to update REAC LV023 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8)	<p>Table 7.14 of ES Chapter 7 is updated in rows related to REAC LV023 as follows:</p> <p style="text-align: center;">Table 7.14 Landscape and visual – construction phase essential mitigation measures</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Mitigation measures</th> <th>REAC Ref.</th> </tr> </thead> <tbody> <tr> <td>M25 compound, construction compound facilities</td> <td>'It is anticipated that a concrete batching plant would be located within this compound. This</td> <td>LV023</td> </tr> </tbody> </table>	Location	Mitigation measures	REAC Ref.	M25 compound, construction compound facilities	'It is anticipated that a concrete batching plant would be located within this compound. This	LV023	Deadline 8
Location	Mitigation measures	REAC Ref.							
M25 compound, construction compound facilities	'It is anticipated that a concrete batching plant would be located within this compound. This	LV023							

Document reference	Reason for amendment	Environmental Statement amendment		Amendment date									
	<p>[REP8-044] in response to comments made by London Borough of Havering and to more closely align with the current illustrative layout of the M25 compound.</p>		<p>facility would be located as south-westerly as reasonably practicable along the southern boundary of the compound, to maximise distance from the North Ockendon Conservation Area and local residents, as indicated on Page 44 of ES Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (2 of 2).'</p>										
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]</p>	<p>Updates to text in Table 7.14 are required to include new REAC commitments to remain consistent with the updates made at Deadline 7 in the Code of Construction Practice (CoCP), First iteration of Environmental Management Plan (Version 7) [REP7-122].</p>	<p>Table 7.14 of ES Chapter 7 is updated to include new rows related to REAC LV034, LV035, LV036 and LV037.</p> <p style="text-align: center;">Table 7.14 Landscape and visual – construction phase essential mitigation measures</p> <table border="1" data-bbox="898 903 1872 1366"> <thead> <tr> <th data-bbox="898 903 1093 983">Location</th> <th data-bbox="1093 903 1749 983">Mitigation measures</th> <th data-bbox="1749 903 1872 983">REAC Ref.</th> </tr> </thead> <tbody> <tr> <td data-bbox="898 983 1093 1126">Vegetation protection at The Wilderness</td> <td data-bbox="1093 983 1749 1126"><i>'No woodland within The Wilderness will be removed in connection with the installation of Work No MUT27'.</i></td> <td data-bbox="1749 983 1872 1126">LV034</td> </tr> <tr> <td data-bbox="898 1126 1093 1366">Southern tunnel entrance compound, phasing</td> <td data-bbox="1093 1126 1749 1366"> <i>'Reducing the impact on residential properties on Thong Lane and Rochester Road (A226) during construction, by phasing the works in the following order of preference:</i> <ul style="list-style-type: none"> • <i>Excavating material and then directly placing it in its permanent position within Chalk Park where reasonably practicable</i> </td> <td data-bbox="1749 1126 1872 1366">LV035</td> </tr> </tbody> </table>		Location	Mitigation measures	REAC Ref.	Vegetation protection at The Wilderness	<i>'No woodland within The Wilderness will be removed in connection with the installation of Work No MUT27'.</i>	LV034	Southern tunnel entrance compound, phasing	<i>'Reducing the impact on residential properties on Thong Lane and Rochester Road (A226) during construction, by phasing the works in the following order of preference:</i> <ul style="list-style-type: none"> • <i>Excavating material and then directly placing it in its permanent position within Chalk Park where reasonably practicable</i> 	LV035	<p>Deadline 8</p>
Location	Mitigation measures	REAC Ref.											
Vegetation protection at The Wilderness	<i>'No woodland within The Wilderness will be removed in connection with the installation of Work No MUT27'.</i>	LV034											
Southern tunnel entrance compound, phasing	<i>'Reducing the impact on residential properties on Thong Lane and Rochester Road (A226) during construction, by phasing the works in the following order of preference:</i> <ul style="list-style-type: none"> • <i>Excavating material and then directly placing it in its permanent position within Chalk Park where reasonably practicable</i> 	LV035											

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date
			<ul style="list-style-type: none"> Where direct placement is not reasonably practicable, using the central part of the western soil storage area shown on Plate 1.3 of Appendix 2.1 Construction Supporting Information to temporarily store material Where temporary storage in the central part of the western soil storage area shown on Plate 1.3 of Appendix 2.1 Construction Supporting Information is not reasonably practicable, extending material storage to the northern part of the soil storage area’. 		
		Southern tunnel portal compound, haul road	‘The route of the proposed haul road, which is intended to join the Rochester Road (A226) at points immediately to the west and east of the Horseshoe Meadow and Viewpoint Place traveller sites, shall be located as far from the traveller sites as is reasonably practicable, taking account of the need to ensure safety and having regard to the location of other sensitive receptors. So far as reasonably practicable, acoustic solid barriers will be provided between the Horseshoe Meadow and Viewpoint Place traveller sites and the haul road’.	LV036	
		Screening of views in Kent Downs AONB	‘In order to reduce visual effects in the opening year in the Kent Downs AONB to the north of Park Pale, the following mitigation measures would be implemented: Existing trees and hedgerow plants along the northern boundary of Park Pale (north-west of the Park Pale overbridge) would be retained as far as reasonably practicable during the installation of utilities associated with Work No. MU1. Existing trees and hedgerow plants situated south of the Harlex Haulage access track (Work No. 1C) and on both	LV037	

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date						
			<p><i>sides of the proposed diverted footpath NS161, extending up to the Park Pale overbridge and utility works (Work No. MU1), would also be retained as far as reasonably practicable. The protection of retained trees would be achieved through the implementation of an Arboricultural Method Statement (AMS) in accordance with LV028. The AMS will specify the tree protection measures which will be applied during construction. Protection measures may include access facilitation pruning, the erection of tree protection barriers and the arboricultural supervision of work that has the potential to cause damage to roots'</i></p>								
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]</p>	<p>Updates to text in Table 7.14 are required to include new REAC LV038 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8) [REP8-044] in response to comments made by London Borough of Havering.</p>	<p>Table 7.14 of ES Chapter 7 is updated adding a new row related to REAC LV038 as follows: Table 7.14 Landscape and visual – construction phase essential mitigation measures</p> <table border="1" data-bbox="898 842 1861 1216"> <thead> <tr> <th data-bbox="898 842 1070 922">Location</th> <th data-bbox="1070 842 1749 922">Mitigation measures</th> <th data-bbox="1749 842 1861 922">REAC Ref.</th> </tr> </thead> <tbody> <tr> <td data-bbox="898 922 1070 1216"> <p>M25 compound, phasing</p> </td> <td data-bbox="1070 922 1749 1216"> <p><i>'The management of stockpile operations within the soil storage area will be phased, with storage of materials starting in the southern part of the compound as far as reasonably practicable to maximise the distance from the North Ockendon Conservation Area and adjacent residents. If temporary material storage exceeds the capacity of the southern section of the soil storage area, the material storage would be extended to the northern part of the soil storage area.'</i></p> </td> <td data-bbox="1749 922 1861 1216"> <p>LV038</p> </td> </tr> </tbody> </table>			Location	Mitigation measures	REAC Ref.	<p>M25 compound, phasing</p>	<p><i>'The management of stockpile operations within the soil storage area will be phased, with storage of materials starting in the southern part of the compound as far as reasonably practicable to maximise the distance from the North Ockendon Conservation Area and adjacent residents. If temporary material storage exceeds the capacity of the southern section of the soil storage area, the material storage would be extended to the northern part of the soil storage area.'</i></p>	<p>LV038</p>	<p>Deadline 8</p>
Location	Mitigation measures	REAC Ref.									
<p>M25 compound, phasing</p>	<p><i>'The management of stockpile operations within the soil storage area will be phased, with storage of materials starting in the southern part of the compound as far as reasonably practicable to maximise the distance from the North Ockendon Conservation Area and adjacent residents. If temporary material storage exceeds the capacity of the southern section of the soil storage area, the material storage would be extended to the northern part of the soil storage area.'</i></p>	<p>LV038</p>									

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date						
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]</p>	<p>Updates to text in Table 7.15 are required to include a new REAC commitment to remain consistent with the updates made at Deadline 7 in the Code of Construction Practice (CoCP) First Iteration of Environmental Management Plan (Version 7) [REP7-122].</p>	<p>Table 7.15 of ES Chapter 7 is updated adding a new row related to REAC LV037 as follows:</p> <p style="text-align: center;">Table 7.15 Landscape and visual – operational phase essential mitigation measures</p> <table border="1" data-bbox="898 440 1861 1102"> <thead> <tr> <th data-bbox="898 440 1070 520">Location</th> <th data-bbox="1070 440 1733 520">Mitigation measures</th> <th data-bbox="1733 440 1861 520">REAC Ref.</th> </tr> </thead> <tbody> <tr> <td data-bbox="898 520 1070 1102">Section 1</td> <td data-bbox="1070 520 1733 1102"> <p>'In order to reduce visual effects in the opening year in the Kent Downs AONB to the north of Park Pale, the following mitigation measures would be implemented:</p> <ul style="list-style-type: none"> ...Proposed planting within the ancient woodland compensation site north of Park Pale and Harlex Haulage identified on the Environmental Masterplan (Sheet 2 and 4 of Section 1, Figure 2.4, Application Document 6.2) would be undertaken, in part, at the earliest practicable planting season following commencement of authorised development. Early planting would be outside of the land required for construction and would maximise early screening, as well as being in accordance with the LEMP. The early planting would not be in areas identified as being suitable for ancient woodland soil receptor sites where prior translocation of soil is required'. </td> <td data-bbox="1733 520 1861 1102">LV037</td> </tr> </tbody> </table>	Location	Mitigation measures	REAC Ref.	Section 1	<p>'In order to reduce visual effects in the opening year in the Kent Downs AONB to the north of Park Pale, the following mitigation measures would be implemented:</p> <ul style="list-style-type: none"> ...Proposed planting within the ancient woodland compensation site north of Park Pale and Harlex Haulage identified on the Environmental Masterplan (Sheet 2 and 4 of Section 1, Figure 2.4, Application Document 6.2) would be undertaken, in part, at the earliest practicable planting season following commencement of authorised development. Early planting would be outside of the land required for construction and would maximise early screening, as well as being in accordance with the LEMP. The early planting would not be in areas identified as being suitable for ancient woodland soil receptor sites where prior translocation of soil is required'. 	LV037	Deadline 9
Location	Mitigation measures	REAC Ref.							
Section 1	<p>'In order to reduce visual effects in the opening year in the Kent Downs AONB to the north of Park Pale, the following mitigation measures would be implemented:</p> <ul style="list-style-type: none"> ...Proposed planting within the ancient woodland compensation site north of Park Pale and Harlex Haulage identified on the Environmental Masterplan (Sheet 2 and 4 of Section 1, Figure 2.4, Application Document 6.2) would be undertaken, in part, at the earliest practicable planting season following commencement of authorised development. Early planting would be outside of the land required for construction and would maximise early screening, as well as being in accordance with the LEMP. The early planting would not be in areas identified as being suitable for ancient woodland soil receptor sites where prior translocation of soil is required'. 	LV037							
<p>6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]</p>	<p>Updates to text are required to align Chapter 7 with changes that have been made to Design Principles [REP4-146] at Deadline 4.</p>	<p>Table 7.15 of ES Chapter 7 is amended to remove reference to Design Principles S1.18 and S1.22. Resubmitted 11 December 2023 as: 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Clean) (Version 2) 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Tracked) (Version 2)</p>	Deadline 9						

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]	Updates to text are required to align Chapter 7 with changes that have been made to Design Principles [REP8-080] at Deadline 8.	Table 7.15 of ES Chapter 7 is amended to add Design Principles LST.04 and S1.24. Resubmitted 11 December 2023 as: 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Clean) (Version 2) 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Tracked) (Version 2)	Deadline 9
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]	Updates to text are required for Chapter 7 to report Change MRC01 [CR1-002] (Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites).	Sections 7.3, 7.4, 7.5, 7.6 and 7.9 of ES Chapter 7 are amended to reflect Change MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites. This update removes a moderate beneficial significant visual effect at design year (summer) from Representative Viewpoint N-Dep-RV-08. Resubmitted 11 December 2023 as: 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Clean) (Version 2) 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Tracked) (Version 2)	Deadline 9
6.1 Environmental Statement - Chapter 7 - Landscape and Visual [APP-145]	Updates to text are required to reflect the revision and publication of Kent Downs AONB Landscape Character Assessment Update 2020 (Kent Downs AONB Unit, revised and published 2023).	Throughout ES Chapter 7, all references to the Kent Downs AONB Landscape Character Assessment Update Draft (Kent Downs AONB Unit, 2020) [unpublished as of 15 September 2022] amended to: Kent Downs AONB Landscape Character Assessment Update 2020 (Kent Downs AONB Unit, revised and published 2023) Resubmitted 11 December 2023 as: 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Clean) (Version 2) 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Tracked) (Version 2)	Deadline 9
6.1 Environmental Statement - Chapter	Updates to text are required to include all previously	6.1 Environmental Statement - Chapter 7 – Landscape and Visual (Version 2) has also been updated to include all previously identified amendments	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
7 - Landscape and Visual [APP-145]	identified amendments (at earlier deadlines) set out within the ES Addendum document.	(at earlier deadlines) set out within the ES Addendum document. Other minor errata items and typographical errors identified whilst updating the chapter have also been updated. Resubmitted 11 December 2023 as: 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Clean) (Version 2) 6.1 Environmental Statement - Chapter 7 - Landscape and Visual (Tracked) (Version 2)	
ES Figures			
6.2 Environmental Statement – Figure 7.1 – National Landscape Character including Seascape [APP-197] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.1 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	ES Figure 7.1 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.2 – Local Landscape Character Areas [APP-198] Document not re-issued. Updates	Figure 7.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 4, 5 and 6 of 10 of ES Figure 7.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 7.3 – Environmental Lighting Zones [APP-199] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.3 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 3 and 4 of 8 of ES Figure 7.3 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.4 – Landscape Designations [APP-200]	Figure 7.4 requires amendment to remove the football pitches removed from the extent of Southern Valley Golf Club.	Figure 7.4 is amended to show the updated Southern Valley Golf Club extent and labelling. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.4 – Landscape Designations (Clean) (Version 2) [REP1-126] 6.2 Environmental Statement – Figure 7.4 – Landscape Designations (Tracked) (Version 2) [REP1-127]	Deadline 1
6.2 Environmental Statement – Figure 7.4 – Landscape Designations [REP1-126] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.4 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 4, 5 and 6 of 10 of ES Figure 7.4 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 7.5 – Tranquillity Campaign to Protect Rural England [APP-201] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.5 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	ES Figure 7.5 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.6 – Landscape Tranquillity Baseline Noise Survey Locations [APP-202] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.6 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 4 and 5 of 8 of ES Figure 7.6 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.7 – Greenbelt and Settlement Boundaries [APP-203] Document not re-issued. Updates	Figure 7.7 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 2 of 3 of ES Figure 7.7 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 7.8 – ZTV – 5km DTM Analysis of Main Construction Compounds (1 of 2) [APP-204]	Figure 7.8 requires amendment as the overview Zone of Theoretical Visibility (ZTV) for the Stanford Road compound on Page 20 of ES Figure 7.8 does not include the ZTV for the 15m high operations shown on Page 22. This has now been updated on the figure.	ES Figure 7.8 – ZTV – 5km DTM Analysis of Main Construction Compounds (1 of 2) is amended so that the ZTVs for both the 6m and 15m high operations are shown on the overview figure on Page 20. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (Clean) (Version 2) [REP4-132] 6.2 Environmental Statement – Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (Tracked) (Version 2) [REP4-133]	Deadline 4
6.2 Environmental Statement - Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (1 of 2) [REP4-132] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.8 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1 to 44 of 50 of ES Figure 7.8 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.8 – ZTV – 5km DTM Analysis of Main Construction Compounds (2 of 2)	Figure 7.8 requires amendment as the overview Zone of Theoretical Visibility (ZTV) for the Stanford Road compound on Page 20 of ES Figure 7.8 does not include the ZTV for the 15m high	ES Figure 7.8 is amended so that the ZTVs for both the 6m and 15m high operations are shown on the overview figure on Page 20. Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (Clean) (Version 2) [REP4-132]	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
[APP-204]	operations shown on Page 22. This has now been updated on the figure.	6.2 Environmental Statement – Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (Tracked) (Version 2) [REP4-133]	
6.2 Environmental Statement - Figure 7.8 - ZTV - 5km DTM Analysis of Main Construction Compounds (2 of 2) [REP4-132] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.8 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1 to 44 of 50 of ES Figure 7.8 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.9 – ZTV (5km) - Lower Thames Crossing Electricity Overhead Line (OHL) Diversions Analysis. [APP-206] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.9 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 2, 3 and 4 of 5 of ES Figure 7.9 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.10 – ZTV (5km) - Lower Thames	Figure 7.10 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	Page 2 of 3 of ES Figure 7.10 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Crossing route Analysis Overview [APP-207] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>		
<p>6.2 Environmental Statement – Figure 7.11 – ZTV (5km) - Lower Thames Crossing route Highway Section Analysis (1 of 6) [APP-208] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 7.11 (1 of 6) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 5, 6, 7, 8 and 9 of 36 of ES Figure 7.11 (1 of 6) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 7.11 – ZTV (5km) - Lower Thames Crossing route Highway Section Analysis (2 of 6) [APP-209] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 7.11 (2 of 6) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 10 to 16 of 36 of ES Figure 7.11 (2 of 6) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) - Lower Thames Crossing route Highway Section Analysis (3 of 6) [APP-210] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.11 (3 of 6) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 17 to 22 of 36 of ES Figure 7.11 (3 of 6) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) - Lower Thames Crossing route Highway Section Analysis (4 of 6) [APP-211] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.11 (4 of 6) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 23 to 28 of 36 of ES Figure 7.11 (4 of 6) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.11 – ZTV (5km) - Lower Thames Crossing route	Figure 7.11 (5 of 6) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	Pages 29 to 32 of 36 of ES Figure 7.11 (5 of 6) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Highway Section Analysis (5 of 6) [APP-212] Document not re-issued. Updates identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002]		
6.2 Environmental Statement – Figure 7.12 – ZTV (2.5km) - Lower Thames Crossing route Analysis Overview (1 of 2) [APP-214] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.12 (1 of 2) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2 and 3 of 5 of ES Figure 7.12 (1 of 2) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) - Lower Thames Crossing route Highway Section Analysis (1 of 4) [APP-216] Document not re-issued. Updates	Figure 7.13 (1 of 4) requires amendment to update Order Limits shown, in relation to: Amendment EA07 [REP5-001]	Page 9 of 36 of ES Figure 7.13 (1 of 4) is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) - Lower Thames Crossing route Highway Section Analysis (2 of 4) [APP-217] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.13 (2 of 4) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 10 to 18 of 36 of ES Figure 7.13 (2 of 4) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) - Lower Thames Crossing route Highway Section Analysis (3 of 4) [APP-218] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.13 (3 of 4) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 19 to 27 of 36 of ES Figure 7.13 (3 of 4) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.13 – ZTV (2.5km) - Lower Thames Crossing route	Figure 7.13 (4 of 4) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	Pages 28 of 36 of ES Figure 7.13 (4 of 4) is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Highway Section Analysis (4 of 4) [APP-219] Document not re-issued. Updates identified in ES Addendum only.</p>			
<p>6.2 Environmental Statement – Figure 7.14 – ZTV (2.5km) - Lower Thames Crossing route Analysis with Earthwork Mitigation Overview (1 of 2). [APP-220] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 7.14 (1 of 2) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 2 and 3 of 5 of ES Figure 7.14 (1 of 2) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (3 of 12) [APP-224] Document not re-issued. Updates</p>	<p>Figure 7.15 (3 of 12) requires amendment to update Order Limits shown, in relation to: Amendment EA07 [REP5-001]</p>	<p>Page 9 of 36 of ES Figure 7.15 (3 of 12) is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (4 of 12) [APP-225] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.15 (4 of 12) requires amendment to update Order Limits shown, in relation to: Amendment EA07 [REP5-001]	Pages 10 to 12 of 36 of ES Figure 7.15 (4 of 12) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (5 of 12) [APP-226] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.15 (5 of 12) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 13 to 15 of 36 of ES Figure 7.15 (5 of 12) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) -	Figure 7.15 (6 of 12) requires amendment to update Order Limits shown, in relation to:	Pages 16 to 18 of 36 of ES Figure 7.15 (6 of 12) are amended as follows: Update to Order Limits.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Lower Thames Crossing route Highway Section with Earthwork Mitigation (6 of 12) [APP-227] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	
<p>6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (7 of 12) [APP-228] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 7.15 (7 of 12) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 19 to 21 of 36 of ES Figure 7.15 (7 of 12) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (8 of 12)</p>	<p>Figure 7.15 (8 of 12) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]</p>	<p>Pages 22 to 24 of 36 of ES Figure 7.15 (8 of 12) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>[APP-229] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Amendment EA07 [REP5-001]</p>		
<p>6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (9 of 12) [APP-230] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 7.15 (9 of 12) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]</p>	<p>Pages 25 to 27 of 36 of ES Figure 7.15 (9 of 12) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9
<p>6.2 Environmental Statement – Figure 7.15 – ZTV (2.5km) - Lower Thames Crossing route Highway Section with Earthwork Mitigation (10 of 12) [APP-231] Document not re-issued. Updates</p>	<p>Figure 7.15 (10 of 12) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]</p>	<p>Page 28 of 36 of ES Figure 7.15 (10 of 12) is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations [APP-234]	Figure 7.16 requires amendment to show additional identified visual receptors and associated assessment scores.	ES Figure 7.16 is amended to include omitted visual receptors and visual impact assessment scores. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Clean) (Version 2) [REP1-128] 6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Tracked) (Version 2) [REP1-129]	Deadline 1
6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations [REP1-128]	Figure 7.16 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] Figure 7.16 also requires amendment to show additional identified visual receptors and associated assessment scores, remove Representative Viewpoints associated with the Burham nitrogen deposition compensation site, and	Pages 1, 2, 4, 5, 8, 9, 11 14, and 15 of ES Figure 7.16 is amended to show the amended Order Limits resulting from design changes proposed during Examination. ES Figure 7.16 is also amended to add two new visual receptors (VR-S03-R-036 and 037), remove Representative Viewpoints N-Dep-RV-05 and 06 associated with the Burham nitrogen deposition compensation site, and update Representative Viewpoints S-03 and S-11 as photomontage locations. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Clean) (Version 3) 6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Tracked) (Version 3)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	update Representative Viewpoints as photomontage locations.		
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) [APP-244]	Update to correct an error in the design year photomontage at Representative Viewpoint S-05a.	ES Figure 7.19 Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) design year photomontage for Representative Viewpoint S-05a is updated to remove some existing vegetation shown for removal at opening year which was incorrectly included in the design year photomontage. A note has also been added to the opening year photomontage at Representative Viewpoint S-05a to indicate the extent of increased visibility of the HS1 corridor as a result of vegetation removal. Resubmitted 24 August 2023 as: 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) (Clean) (Version 2) [REP3-102] 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) (Tracked) (Version 2) [REP3-103]	Deadline 3
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) [REP3-102]	Figure 7.19 requires amendment to include an additional photomontage at Representative Viewpoint S-03 in response to Q12.3.5 in ExQ1 - the Examining Authority's written questions and requests for information [PD-029] based on stakeholder feedback.	ES Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) is updated to include a photomontage for Representative Viewpoint S-03 - View from the Kent Downs AONB on footpath NS161, north of Park Pale, east of Shorne Woods Country Park. Resubmitted 3 October as: 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) (Clean) (Version 3) [REP5-046] 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) (Tracked) (Version 3) [REP5-047]	Deadline 5
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and	Figure 7.19 requires amendment to include an additional photomontage at Representative Viewpoint S-11 in response to Q12.3.5 in	ES Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) is updated to include a photomontage for Representative Viewpoint S-11 - View from the Kent Downs AONB on footpath NS179 within	Deadline 6

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Summer Year 15 (1 of 4) [REP5-046]	ExQ1 - the Examining Authority's written questions and requests for information [PD-029] based on stakeholder feedback.	Cobham Hall Grade II* Registered Park and Garden (LLCA West Kent Downs (sub area Cobham)). Resubmitted 31 October as: 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) (Clean) (Version 4) [REP6-036] 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) (Tracked) (Version 4) [REP6-037]	
6.2 Environmental Statement Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (1 of 4) [REP6-036]	Figure 7.19 requires amendment to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200] .	The photomontages at Representative Viewpoints S-05a, S-12, S-13, S-14, S-17, S-18, S-20a and S-22 within ES Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (1 of 4) are amended to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200] . Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (1 of 4) (Clean) (Version 5) 6.2 Environmental Statement – Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (1 of 4) (Tracked) (Version 5)	Deadline 9
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) [APP-245]	Figure 7.19 requires amendment to address discrepancies identified between the anticipated appearance of the Project based on the DCO design and the appearance of the Project presented on the DCO application version of ES Figure 7.19. This was in relation to:	ES Figure 7.19 is amended to address discrepancies in the photomontages for Representative Viewpoints S-33 and S-38b. Resubmitted in July 2023 as: 6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (2 of 4) (Clean) (Version 2) [REP1-131] 6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (2 of 4) (Tracked) (Version 2) [REP1-130]	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	<ul style="list-style-type: none"> • Topsoil cover and grass establishment across the Chalk Park hilltop landform • The chalk substrate along the upper edges of the South Portal approach road cutting • Vegetation removal at Southern Valley Golf Club and Gravesend Golf Centre • The form of proposed hedgerow and scrub planting <p>The alignment of the proposed recreational routes</p>		
<p>6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) [REP1-131]</p>	<p>Figure 7.19 requires amendment to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200].</p>	<p>The photomontages at Representative Viewpoints S-28, S-30 and S-31 within ES Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) are amended to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200].</p> <p>Resubmitted 11 December 2023 as:</p> <p>6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) (Clean) (Version 3)</p> <p>6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) (Tracked) (Version 3)</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and</p>	<p>Figure 7.19 requires amendment to correct the minor discrepancies identified in the photomontages in</p>	<p>The photomontages at Representative Viewpoints N-02, N-07, N-08, N-12, N-17 and N-19 within ES Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (3 of 4) are amended to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200].</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Summer Year 15 (3 of 4) [APP-246]</p>	<p>Annex C of the response to ExQ1 12.3.4 [REP4-200].</p>	<p>Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (3 of 4) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (3 of 4) (Tracked) (Version 2)</p>	
<p>6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) [APP-247]</p>	<p>Figure 7.19 requires amendment to photomontage at Representative Viewpoint N-25 to address inconsistency and correct errors.</p>	<p>ES Figure 7.19 Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) Year 1 photomontage for Representative Viewpoint N-25 is updated as follows:</p> <ul style="list-style-type: none"> • An inconsistency in design year photomontage has been corrected in relation to an extra overbridge railing visible behind the Woolings Close dwellings at Year 15 that was not shown at year 1. • The new Lower Thames Crossing to A13 eastbound slip road embankment near properties on Woolings Close differs in height between the year 1 and year 15 photomontages, with the year 15 photomontage better reflecting the Project design. This has been amended on the year 1 photomontage. • Some existing vegetation has been incorrectly shown removed in the fields in front of the new Lower Thames Crossing to A13 eastbound slip road embankment in the year 1 and year 15 photomontages. This has been amended on the year 1 photomontage. • A close board fence has been incorrectly shown along the edge of the Lower Thames Crossing to A13 eastbound slip road embankment in the year 1 and year 15 photomontages, rather than a standard highway boundary fence. This has been amended on the year 1 photomontage. <p>Resubmitted 19 September 2023 as: 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) (Clean) (Version 2) [REP4-134] 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) (Tracked) (Version 2) [REP4-135]</p>	<p>Deadline 4</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) [REP4-134]	Figure 7.19 requires amendment to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200] .	The photomontages at Representative Viewpoints N-23, N-25, N-27, N-29a, N-39 and N-42 within ES Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) are amended to correct the minor discrepancies identified in the photomontages in Annex C of the response to ExQ1 12.3.4 [REP4-200] . Resubmitted 11 December 2023 as: 6.2 Environmental Statement - Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) (Clean) (Version 3) 6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (4 of 4) (Tracked) (Version 3)	Deadline 9
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (1 of 6) [APP-248]	Figure 7.20.1 requires amendment to correct the predicted traffic flows shown along some roads.	ES Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (1 of 6) (Clean) (Version 2) [REP1-133] 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (1 of 6) (Tracked) (Version 2) [REP1-132]	Deadline 1
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (2 of 6) [APP-249]	Figure 7.20.1 requires amendment to correct the predicted traffic flows shown along some roads.	ES Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (2 of 6) (Clean) (Version 2) [REP1-135] 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (2 of 6) (Tracked) (Version 2) [REP1-134]	Deadline 1
6.2 Environmental Statement – Figure 7.20.1 – Traffic	Figure 7.20.1 requires amendment to correct the	ES Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads.	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
effects on Kent Downs AONB during construction (3 of 6) [APP-250]	predicted traffic flows shown along some roads.	Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (3 of 6) (Clean) (Version 2) [REP1-136] 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (3 of 6) (Tracked) (Version 2) [REP1-137]	
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (4 of 6) [APP-251]	Figure 7.20.1 requires amendment to correct the predicted traffic flows shown along some roads.	ES Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (4 of 6) (Clean) (Version 2) [REP1-138] 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (4 of 6) (Tracked) (Version 2) [REP1-139]	Deadline 1
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (5 of 6) [APP-252]	Figure 7.20.1 requires amendment to correct the predicted traffic flows shown along some roads.	Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (5 of 6) (Clean) (Version 2) [REP1-141] 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (5 of 6) (Tracked) (Version 2) [REP1-140]	Deadline 1
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 of 6) [APP-253]	Figure 7.20.1 requires amendment to correct the predicted traffic flows shown along some roads.	ES Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 of 6) (Clean) (Version 2) [REP1-143]	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 of 6) (Tracked) (Version 2) [REP1-142]	
6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 [APP-254]	Figure 7.20.2 requires amendment to correct the predicted traffic flows shown along some roads.	ES Figure 7.20.2 is amended to correct the predicted traffic flows shown along some roads. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 (Clean) (Version 2) [REP1-144] 6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 (Tracked) (Version 2) [REP1-145]	Deadline 1
6.2 Environmental Statement – Figure 7.22 – Tree Survey Dual Scope Layout [APP-258] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.22 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	ES Figure 7.22 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) [APP-259]	Figure 7.23 requires amendment to show potential veteran trees previously not shown.	ES Figure 7.23 is amended to include omitted potential veteran trees. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) (Clean) (Version 2) [REP1-147] 6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) (Tracked) (Version 2) [REP1-146]	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) [REP1-147] Document not re-issued. Updates identified in ES Addendum only.	Figure 7.23 (1 of 2) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 17, 19, 21, 22 and 23 of 51 of ES Figure 7.23 (1 of 2) are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) [APP-260]	Figure 7.23 (2 of 2) requires amendment to show potential veteran trees previously not shown.	Figure 7.23 (2 of 2) is amended to include omitted potential veteran trees. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) (Clean) (Version 2) [REP1-149] 6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) (Tracked) (Version 2) [REP1-148]	Deadline 1
6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan [APP-261]	Figure 7.24 requires amendment to show potential veteran trees previously not shown.	Figure 7.24 is amended to include omitted potential veteran trees. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan (Clean) (Version 2) [REP1-151] 6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan (Tracked) (Version 2) [REP1-150]	Deadline 1
6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan [REP1-151] Document not re-issued. Updates	Figure 7.24 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Pages 17, 19, 21, 22 and 23 of 51 of Figure 7.24 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	Amendment EA07 [REP5-001]		
ES Appendices			
<p>6.3 Environmental Statement – Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity [APP-382]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 3.1 and Table 3.2 of Appendix 7.7 require amendment to incorporate the identification of additional visual receptors since submission of the DCO application.</p>	<p>Table 3.1 and Table 3.2 of ES Appendix 7.7 are amended as follows: <u>Section 3 Visual receptor baseline descriptions and visual sensitivity</u> Additions to Table 3.1 (south of the River Thames):</p> <ul style="list-style-type: none"> • VR-S03-R-035 Polperro, A226 Rochester Road: <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.45km – Approximate number of residential receptors: 1 – Visual sensitivity: High – Winter baseline view commentary: Close-range to mid-range views west, south and east, partially filtered by boundary vegetation, look out across arable land and occasional hedgerows within the Order Limits. Tree belts at Gravesend Golf Centre are visible in the midground to the south, with the tops of pylons apparent to the south-east. There are long-range views south-east towards woodland at Shorne village and within Shorne Woods Country Park. – Summer baseline view commentary: Further filtering as a result of foreground boundary vegetation. • VR-S03-O-007 Thamesview School, Thong Lane, Gravesend: <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.8km – Approximate number of residential receptors: N/A – Visual sensitivity: Moderate – Winter baseline view commentary: Mid-range glimpses east and north-east, densely filtered by vegetation at the Thamesview School playing fields, to arable land within the Order Limits and tree belts at Gravesend Golf Centre. Narrow long-range views north-east towards the River Thames and north bank beyond. 	<p>Deadline 1</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> – Summer baseline view commentary: Further screening as a result of vegetation at the Thamesview School playing fields. <p>Additions to Table 3.2 (north of the River Thames):</p> <ul style="list-style-type: none"> • VR-S11-R-043 Five Chimney Cottages, A1013 Stanford Road: <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.4km – Approximate number of residential receptors: 4 – Visual sensitivity: Moderate – Winter baseline view commentary: Close-range views south and south-east to the A1013 Stanford Road within the Order Limits, with long-range views across fields towards pylons in the midground and high-rise buildings at the edge of Chadwell St Mary densely filtered by roadside vegetation. Mid-range, open views north and north-west to tree belts, highway infrastructure and moving vehicles along the A13 corridor and the A13 to A1089 slip road. The A13 embankment restricts long-range views. – Summer baseline view commentary: Further screening as a result of vegetation in the foreground to the south and the midground to the north. • VR-S09-O-007 Condovers Scout Activity Centre, Church Road, West Tilbury: <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.5km – Approximate number of residential receptors: N/A – Visual sensitivity: Moderate – Winter baseline view commentary: Close-range to long-range views south and south-east, generally enclosed by vegetation and buildings within the grounds and the adjoining landscape, to low-lying land on the north bank of the River Thames, including landform changes associated with restoration works at Ash Fields. Pylons and overhead lines associated with the Tilbury Loop railway line are prominent. From 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>parts of the activity centre, there are distant views south towards the River Thames estuary valley and rising ground beyond.</p> <ul style="list-style-type: none"> – Summer baseline view commentary: Further screening as a result of vegetation within the grounds of the activity centre and the adjoining landscape. • VR-S11-O-011 Orsett Heath Academy, Grays, adjacent to Thurrock Rugby Football Club: <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.6km – Approximate number of residential receptors: N/A – Visual sensitivity: Moderate – Winter baseline view commentary: Close-range to mid-range, open views north-east over rugby fields at Thurrock Rugby Club and arable land within the Order Limits. Pylons are prominent in the midground, with floodlights in the foreground at the rugby fields. There are also mid-range views east towards the A1013 Stanford Road within the Order Limits, screened by roadside planting, and Gammonfields Way. <p>Summer baseline view commentary: Further screening as a result of roadside vegetation in the midground to the east.</p>	
<p>6.3 Environmental Statement – Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity [APP-382] Document not re-issued. Updates</p>	<p>Table 2.2 of Appendix 7.7 requires updates to report an amendment to the visual sensitivity of visitors to Tilbury Fort at Representative Viewpoint N-01 and Coalhouse Fort at Representative Viewpoint N-05 in response to requests raised in ExQ2 - The Examining Authority’s written</p>	<p>Table 2.2 of ES Appendix 7.7 is amended as follows: Section 2 Representative Viewpoint baseline descriptions and visual sensitivity Updates to Table 2.2 (north of the River Thames):</p> <ul style="list-style-type: none"> • Representative Viewpoint reference N-01: View from Grade I listed Tilbury Fort adjacent to NCN Route 13 and footpath 146/Thames Estuary Path/Two Forts Way (LLCA Tilbury Marshes). View centred north-north-east for recreational receptors <ul style="list-style-type: none"> – Visual sensitivity: High Very High • Representative Viewpoint reference N-05: View from Coalhouse Fort Scheduled Monument, adjacent to Two Forts Way Coastal 	<p>Deadline 6</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	questions and requests for information [PD-040].	Path/bridleway 187 and NCN Route 13, looking towards the Kent Downs AONB (LLCA Mucking Marshes). View centred south-south-west for visitors. Visual sensitivity: High Very High	
6.3 Environmental Statement – Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity [APP-382] Document not re-issued. Updates identified in ES Addendum only.	Table 3.1 of Appendix 7.7 requires amendment to incorporate the identification of additional visual receptors (VR-S03-R-036 and VR-S03-R-037) since submission of the DCO application.	Table 3.1 of ES Appendix 7.7 is amended as follows: <u>Section 3 of ES Appendix 7.7 Visual receptor baseline descriptions and visual sensitivity</u> Additions to Table 3.1 (south of the River Thames): <ul style="list-style-type: none"> • VR-S03-R-036: View Point Place traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.13km – Approximate number of residential receptors: 4 static caravans – Sensitivity: High – Winter baseline view commentary: Close-range to mid-range views north towards the A226 Rochester Road within the Order Limits and residential properties in Chalk, with glimpsed long-range views across arable land to reclaimed marsh and the River Thames, partially screened by roadside vegetation along the northern boundary of the traveller site. Close-range to mid-range views west across gently rising arable land within the Order Limits towards residential properties along the eastern edge of Gravesend, partially screened by vegetation along the western boundary of the traveller site. Views east are largely screened by boundary vegetation. Close-range to mid-range views south across gently rising arable land within the Order Limits towards the former Southern Valley Golf Club and Gravesend Golf Centre, partially screened by vegetation along the southern boundary of the traveller site. 	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> – Summer baseline view commentary: Further screening as a result of boundary vegetation in foreground. • VR-S03-R-037: Horseshoe Meadow traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Approximate distance from the Project route centreline (km): 0.1km – Approximate number of residential receptors: 2 – 4 static caravans – Sensitivity: High – Winter baseline view commentary: Close-range to mid-range views north towards the A226 Rochester Road and arable land within the Order Limits, with long-range views to reclaimed marsh and the River Thames, partially screened by vegetation along both sides of the A226 Rochester Road. Views east, south and west are screened by a combination of boundary vegetation and adjacent buildings. <p>Summer baseline view commentary: Further screening as a result of boundary vegetation in foreground.</p>	
<p>6.3 Environmental Statement – Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity [APP-382]</p>	<p>Table 2.1 of ES Appendix 7.7 requires amendment to report Change MRC01 [CR1-002] (Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites) since submission of the DCO application.</p>	<p>ES Appendix 7.7 is amended to reflect the omission of Representative Viewpoints N-Dep-RV-05 and N-Dep-RV-06 due to design changes at the Burham nitrogen deposition compensation site.</p> <p>Resubmitted 11 December 2023 as:</p> <p>6.3 Environmental Statement - Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity (Clean) (Version 2)</p> <p>6.3 Environmental Statement - Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity (Tracked) (Version 2)</p> <p>6.3 Environmental Statement - Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity (Version</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		2) has also been updated to include all previously identified amendments (at earlier deadlines) set out within the ES Addendum document. Other minor errata items and typographical errors identified whilst updating the appendix have also been updated.	
6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies [APP-383]	Table 3.1 of Appendix 7.8 requires amendment to include entry for photomontage S-22 ‘View from Watling Street on the A2 overbridge’, which was omitted in error. In addition, entries in the ‘Photomontage view angle presentation’ column in Table 3.1 of Appendix 7.8 requires correcting.	Table 3.1 of ES Appendix 7.8 is amended to include omitted entry for photomontage S-22 and corrected photomontage view angle presentation entries. Resubmitted in December 2022 as: 6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies – (Clean) (Version 2) – Accepted at the discretion of the Examining Authority [AS-054] 6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies – (Tracked) (Version 2) – Accepted at the discretion of the Examining Authority [AS-055]	Section 51 submission December 2022
6.3 Environmental Statement – Appendix 7.9 – Schedule of Landscape Effects [APP-384]	ES Appendix 7.9 requires amendment to reflect the revision and publication of Kent Downs AONB Landscape Character Assessment Update 2020 (Kent Downs AONB Unit, revised and published 2023).	Throughout ES Appendix 7.9, all references to the Kent Downs AONB Landscape Character Assessment Update Draft (Kent Downs AONB Unit, 2020) [unpublished as of 15 September 2022] amended to: Kent Downs AONB Landscape Character Assessment Update 2020 (Kent Downs AONB Unit, revised and published 2023) Resubmitted 11 December 2023 as: 6.3 Environmental Statement - Appendix 7.9 – Schedule of Landscape Effects (Clean) (Version 2) 6.3 Environmental Statement - Appendix 7.9 – Schedule of Landscape Effects (Tracked) (Version 2)	Deadline 9
6.3 Environmental Statement – Appendix 7.9 –	Tables 1.3, 2.3, 3.1 and 3.3 of ES Appendix 7.9 require amendment to report Change	Tables 1.3, 2.3, 3.1 and 3.3 of ES Appendix 7.9 are amended to reflect Change MRC01 Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Schedule of Landscape Effects [APP-384]	MRC01 [CR1-002] (Order Limits reduction for Blue Bell Hill and Burham nitrogen deposition compensation sites).	Resubmitted 11 December 2023 as: 6.3 Environmental Statement - Appendix 7.9 – Schedule of Landscape Effects (Clean) (Version 2) 6.3 Environmental Statement - Appendix 7.9 – Schedule of Landscape Effects (Tracked) (Version 2)	
6.3 Environmental Statement – Appendix 7.9 – Schedule of Landscape Effects [APP-384]	Full reference to published Kent Downs AONB Landscape Character Assessment Update 2020 added to ES Appendix 7.9 references.	Reference to the Kent Downs AONB Landscape Character Assessment Update Draft (Kent Downs AONB Unit, 2020) [unpublished as of 15 September 2022] amended in the references section of ES Appendix 7.9. Resubmitted 11 December 2023 as: 6.3 Environmental Statement - Appendix 7.9 – Schedule of Landscape Effects (Clean) (Version 2) 6.3 Environmental Statement - Appendix 7.9 – Schedule of Landscape Effects (Tracked) (Version 2)	Deadline 9
6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects [APP-385] Document not re-issued. Updates identified in ES Addendum only.	Appendix 7.10 requires amendment to incorporate the identification of additional visual receptors since submission of the DCO application.	Table 2.2, Table 2.4, Table 3.2 and Table 3.4 of ES Appendix 7.10 are amended as follows: <u>Section 2 Construction</u> Additions to Table 2.2 Schedule of visual effects for visual receptors south of the River Thames during construction: <ul style="list-style-type: none"> • VR-S03-R-035 Polperro, A226 Rochester Road: <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect: Major – Significance of effect: Very large adverse effect • VR-S03-O-007 Thamesview School, Thong Lane, Gravesend: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect: Minor – Significance of effect: Slight adverse effect Additions to Table 2.4 Schedule of visual effects for visual receptors north of the River Thames during construction:	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> • VR-S11-R-043 Five Chimney Cottages, A1013 Stanford Road: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect: Major – Significance of effect: Large adverse effect • VR-S09-O-007 Condovers Scout Activity Centre, Church Road, West Tilbury: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect: Moderate – Significance of effect: Moderate adverse effect • VR-S11-O-011 Orsett Heath Academy, Grays, adjacent to Thurrock Rugby Football Club: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect: Moderate – Significance of effect: Moderate adverse effect <p><u>Section 3 Operation</u> Additions to Table 3.2 Schedule of visual effects for visual receptors south of the River Thames during operation:</p> <ul style="list-style-type: none"> • VR-S03-R-035 Polperro, A226 Rochester Road: <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect in opening year (winter): Minor – Significance of effect in opening year (winter): Slight adverse effect – Magnitude of visual effect in design year (summer): Minor – Significance of effect in design year (summer): Slight adverse effect – Figure 2.4 Environmental Masterplan reference: Highway Section 3 • VR-S03-O-007 Thamesview School, Thong Lane, Gravesend: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect in opening year (winter): Negligible – Significance of effect in opening year (winter): Slight adverse effect 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> – Magnitude of visual effect in design year (summer): Negligible – Significance of effect in design year (summer): Slight adverse effect – Figure 2.4 Environmental Masterplan reference: Highway Section 3 <p>Additions to Table 3.4 Schedule of visual effects for visual receptors north of the River Thames during operation:</p> <ul style="list-style-type: none"> • VR-S11-R-043 Five Chimney Cottages, A1013 Stanford Road: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect in opening year (winter): Major – Significance of effect in opening year (winter): Large adverse effect – Magnitude of visual effect in design year (summer): Moderate – Significance of effect in design year (summer): Moderate adverse effect – Figure 2.4 Environmental Masterplan reference: Highway Section 11 • VR-S09-O-007 Condovers Scout Activity Centre, Church Road, West Tilbury: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect in opening year (winter): Minor – Significance of effect in opening year (winter): Slight adverse effect – Magnitude of visual effect in design year (summer): Minor – Significance of effect in design year (summer): Slight adverse effect – Figure 2.4 Environmental Masterplan reference: Highway Section 9 • VR-S11-O-011 Orsett Heath Academy, Grays, adjacent to Thurrock Rugby Football Club: <ul style="list-style-type: none"> – Sensitivity: Moderate – Magnitude of visual effect in opening year (winter): Moderate – Significance of effect in opening year (winter): Moderate adverse effect – Magnitude of visual effect in design year (summer): Minor – Significance of effect in design year (summer): Slight adverse effect 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects [APP-385] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Appendix 7.10 requires an amendment to the visual sensitivity of visitors to Tilbury Fort at Representative Viewpoint N-01 and Coalhouse Fort at Representative Viewpoint N-05, and subsequent changes in the level of significance of effect, in response to requests raised in ExQ2 - The Examining Authority's written questions and requests for information [PD-040].</p>	<p>Figure 2.4 Environmental Masterplan reference: Highway Section 11</p> <p>Table 2.3 and Table 3.3 of Appendix 7.10 are amended as follows: Section 2 Construction Modifications to Table 2.3 Schedule of visual effects on Representative Viewpoints north of the River Thames during construction:</p> <ul style="list-style-type: none"> • Representative Viewpoint reference N-01: View from Grade I listed Tilbury Fort adjacent to NCN Route 13 and footpath 146/Thames Estuary Path/Two Forts Way (LLCA Tilbury Marshes). View centred north-north-east for recreational receptors <ul style="list-style-type: none"> – Sensitivity: High Very High – Magnitude of visual effect: Minor – Significance of effect: Slight Moderate adverse effect – Justification for significance level where two significance categories are given in LA 104: The significance of effect has been assessed as slight-moderate rather than moderate large due to construction works being viewed in the context of existing industrial buildings north of the River Thames. • Representative Viewpoint reference N-05: View from Coalhouse Fort Scheduled Monument, adjacent to Two Forts Way Coastal Path/bridleway 187 and NCN Route 13, looking towards the Kent Downs AONB (LLCA Mucking Marshes). View centred south-south-west for visitors. <ul style="list-style-type: none"> – Sensitivity: High Very High – Magnitude of visual effect: Moderate – Significance of effect: Moderate Large adverse effect – Justification for significance level where two significance categories are given in LA 104: The significance of effect has been assessed as moderate large rather than large very large due to the retention of 	<p>Deadline 6</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>existing vegetation at the fort reducing the extent of construction works visible.</p> <p>Section 3 Operation</p> <p>Additions to Table 3.3 Schedule of visual effects on Representative Viewpoints north of the River Thames during operation:</p> <ul style="list-style-type: none"> • Representative Viewpoint reference N-01: View from Grade I listed Tilbury Fort adjacent to NCN Route 13 and footpath 146/Thames Estuary Path/Two Forts Way (LLCA Tilbury Marshes). View centred north-north-east for recreational receptors. <ul style="list-style-type: none"> – Sensitivity: High Very High – Magnitude of visual effect in opening year (winter): Negligible – Significance of effect in opening year (winter): Slight adverse effect – Magnitude of visual effect in design year (summer): Negligible – Significance of effect in design year (summer): Slight adverse effect • Representative Viewpoint reference N-05: View from Coalhouse Fort Scheduled Monument, adjacent to Two Forts Way Coastal Path/bridleway 187 and NCN Route 13, looking towards the Kent Downs AONB (LLCA Mucking Marshes). View centred south-south-west for visitors. <ul style="list-style-type: none"> – Sensitivity: High Very High – Magnitude of visual effect in opening year (winter): Negligible – Significance of effect in opening year (winter): Slight adverse effect – Magnitude of visual effect in design year (summer): Negligible – Significance of effect in design year (summer): Slight adverse effect 	
6.3 Environmental Statement –	Appendix 7.10 requires update to report an	Table 2.2, Table 3.1 and Table 3.2 of ES Appendix 7.10 are amended as follows:	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Appendix 7.10 – Schedule of Visual Effects [APP-385] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>amendment to the magnitude of effect and resulting significance of effect at Representative Viewpoint S-03 at opening year (winter) following a review of the photomontage produced at this Representative Viewpoint (Figure 7.19 as submitted into Examination at Deadline 5 [REP5-046]). Appendix 7.10 also requires amendment to incorporate the identification of additional visual receptors (VR-S03-R-036 and VR-S03-R-037) since submission of the DCO application. Updates to Appendix 7.10 reflect the responses provided in Applicant’s comments on Interested Parties’ submissions at Deadline 6 [REP7-187].</p>	<p><u>Section 2 of ES Appendix 7.10 Construction</u> Additions to Table 2.2 Schedule of visual effects for visual receptors south of the River Thames during construction:</p> <ul style="list-style-type: none"> • VR-S03-R-036: View Point Place traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect: Major – Significance of effect: Very large adverse • VR-S03-R-037: Horseshoe Meadow traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect: Major – Significance of effect: Large adverse <p><u>Section 3 of ES Appendix 7.10 Operation</u> Amendment to Table 3.1 Schedule of visual effects on Representative Viewpoints south of the River Thames during operation:</p> <ul style="list-style-type: none"> • Representative Viewpoint reference S-03: View from the Kent Downs AONB on footpath NS161, located north of Park Pale, east of Shorne Woods Country Park <ul style="list-style-type: none"> – Sensitivity: Very High – Magnitude of visual effect in opening year (winter): Moderate – Significance of effect in opening year (winter): Large adverse effect – Commentary: Overall, it is considered that the modified A2 corridor would be perceptibly noticeably more visible in the view at opening year, compared with the existing view. – Magnitude of visual effect in design year (summer): Minor – Significance of effect in design year (summer): Moderate beneficial effect 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> – Environmental Masterplan references: Figure 2.4 (Application Document 6.2): Highway Section 1 Additions to Table 3.2 Schedule of visual effects for visual receptors south of the River Thames during operation: <ul style="list-style-type: none"> • VR-S03-R-036: View Point Place traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect in opening year (winter): Minor – Significance of effect in opening year (winter): Slight adverse effect – Magnitude of visual effect in design year (summer): Minor – Significance of effect in design year (summer): Slight adverse effect – Environmental Masterplan references: Figure 2.4 (Application Document 6.2): Highway Section 3 • VR-S03-R-037: Horseshoe Meadow traveller site, A226 Rochester Road, south-east of Chalk <ul style="list-style-type: none"> – Sensitivity: High – Magnitude of visual effect in opening year (winter): Minor – Significance of effect in opening year (winter): Slight adverse effect – Magnitude of visual effect in design year (summer): Negligible – Significance of effect in design year (summer): Slight adverse effect Environmental Masterplan references: Figure 2.4 (Application Document 6.2): Highway Section 3 	
<p>6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects [APP-385]</p>	<p>Tables 2.1 and 3.1 of ES Appendix 7.10 require amendment to report Change MRC01 [CR1-002] (Order Limits reduction for Blue Bell Hill and Burham nitrogen</p>	<p>Tables 2.1 and 3.1 of ES Appendix 7.10 are amended to reflect the omission of Representative Viewpoints N-Dep-RV-05 and N-Dep-RV-06 due to design changes at the Burham nitrogen deposition compensation site. Table 3.1 (N-Dep-RV-08) is also amended to reflect the design changes at the Blue Bell Hill nitrogen deposition compensation site. Resubmitted 11 December 2023 as:</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	deposition compensation sites).	6.3 Environmental Statement - Appendix 7.10 – Schedule of Visual Effects (Clean) (Version 2) 6.3 Environmental Statement - Appendix 7.10 – Schedule of Visual Effects (Tracked) (Version 2) 6.3 Environmental Statement - Appendix 7.10 – Schedule of Visual Effects (Version 2) has also been updated to include all previously identified amendments (at earlier deadlines) set out within the ES Addendum document. Other minor errata items and typographical errors identified whilst updating the appendix have also been updated.	
6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects [APP-385]	Table 2.2 of ES Appendix 7.10 requires amendment to report Change MRC03 (East Tilbury utilities relocations and Order Limits reduction).	Table 2.2 of ES Appendix 7.10 is amended in the commentary for Representative Viewpoints N-08, N-09, N-11 and N-12 to reflect changes in the locations of the Low Street Lane and Muckingford Road Utilities Logistics Hubs. Resubmitted 11 December 2023 as: 6.3 Environmental Statement - Appendix 7.10 – Schedule of Visual Effects (Clean) (Version 2) 6.3 Environmental Statement - Appendix 7.10 – Schedule of Visual Effects (Tracked) (Version 2)	Deadline 9
6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB [APP-386]	Assessment in Appendix 7.11 requires amendment to reflect corrections to some predicted traffic flows shown on traffic maps in supporting figures (Figure 7.20.1 & 7.20.2).	Assessment in ES Appendix 7.11 is amended to reflect revised supporting figures . Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB (Clean) (Version 2) [REP1-162] 6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB (Tracked) (Version 2) [REP1-163]	Deadline 1
6.3 Environmental Statement – Appendix 7.12 – Arboricultural Impact Assessment [APP-387]	Updates to text in ES Appendix 7.12 are required to refer to a new REAC commitment made at Deadline 7 in the Code of Construction Practice (CoCP)	The Impact column of Tree ID number 559 in Table E.1 of Annex E Tree Survey Schedule within ES Appendix 7.12 is updated to include reference to the new REAC commitment LV034 as follows:	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment		Amendment date
Document not re-issued. Updates identified in ES Addendum only.	First Iteration of Environmental Management Plan (Version 7) [REP7-122] in relation to The Wilderness woodland block.	Tree ID	Impact	
		559	Part remove The Register of Environmental Actions and Commitments measure LV034 within Environmental Statement Appendix 2.2 Code of Construction Practice, First Iteration of the Environmental Management Plan [REP8-044] requires vegetation to be protected at The Wilderness woodland block (Tree ID 559) as follows: <i>'No woodland within The Wilderness will be removed in connection with the installation of Work No MUT27'.</i>	

3.9 ES Chapter 8 Terrestrial Biodiversity

3.9.1 The following changes have been made throughout Examination to ES Chapter 8, associated figures and appendices, as set out in Table 3.5.

Table 3.5 Updates to Chapter 8, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 8.3.33 requires revision to resolve incomplete sentence.	Paragraph 8.3.33 of ES Chapter 8 is amended to: The existing and future baseline conditions for terrestrial biodiversity are outlined in Section 8.4.	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p> <p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraph 8.6.448 references assessment detailed in Chapter 13 in relation to recreational pressure at Shorne Woods Country Park as a result of the proposed Thong Lane car park.</p> <p>Chapter 13 omitted to include a detailed assessment of changes in recreational pressure as a result of the new car park as referenced in Chapter 8.</p>	<p>No amendment to ES Chapter 8 [APP-146] or ES Chapter 13 [APP-151] is proposed.</p> <p>A technical note has been prepared to report on this assessment topic and respond to specific comments raised by Natural England. This technical note is presented in Appendix A of this ES Addendum.</p> <p>Update at Deadline 9: As a result of amendment EA08 Thong Lane Car Park removal [REP6A-023] the information presented in Appendix A related to the proposed car park has been updated.</p>	<p>Deadline 1</p>
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 8.35 and paragraph 8.6.267 require revision to amend value error for loss of acid grassland.</p>	<p>Paragraph 8.6.267 of ES Chapter 8 is amended to:</p> <p>The Project would result in the irreversible loss of 0.53ha 1.14ha of unimproved and semi-improved acid grassland located within Low Street Pit LWS and Blackshots Nature Reserve LWS, and which is of county importance. To compensate for this loss, 5.03ha of acid grassland habitat would be created within close proximity to the existing grassland. This would be achieved through soil translocations and targeted management to encourage the establishment of acidic species (see Figure 2.4: Environmental Masterplan (Application Document 6.2), the Design Principles (Application Document 7.5) Clause no. LSP.22, PRO.04, PLA.05, LSP.02, LSP.04 and LSP.09, and REAC Ref. TB019). The level of impact on acid grassland as a result of the Project would be permanent minor adverse, resulting in a slight adverse effect which is considered not significant.</p>	<p>Deadline 1</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date												
		<p>The following row in Table 8.35 of ES Chapter 8 is amended to:</p> <p>Table 8.35 Habitat losses and gains associated with the Project to the north of the River Thames</p> <table border="1"> <thead> <tr> <th>Existing habitat</th> <th>Importance</th> <th>Habitat loss</th> <th>New semi-natural habitat (from EMP)</th> <th>Habitat permanent gain</th> <th>Net permanent gain (gain – loss)</th> </tr> </thead> <tbody> <tr> <td>Acid grassland</td> <td>County</td> <td>0.53ha 1.14ha</td> <td>Translocated acid grassland (LE8.6)</td> <td>5.03ha</td> <td>4.5ha 3.98ha</td> </tr> </tbody> </table>	Existing habitat	Importance	Habitat loss	New semi-natural habitat (from EMP)	Habitat permanent gain	Net permanent gain (gain – loss)	Acid grassland	County	0.53ha 1.14ha	Translocated acid grassland (LE8.6)	5.03ha	4.5ha 3.98ha	
Existing habitat	Importance	Habitat loss	New semi-natural habitat (from EMP)	Habitat permanent gain	Net permanent gain (gain – loss)										
Acid grassland	County	0.53ha 1.14ha	Translocated acid grassland (LE8.6)	5.03ha	4.5ha 3.98ha										
<p>Environmental Statement - Chapter 8 - Terrestrial Biodiversity</p> <p>[APP-146]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraphs 8.4.54 and 8.4.59 require revision to remove reference to a record of a barbastelle bat which has been reassessed and determined to have been identified inaccurately. The call associated with this bat has now been attributed to common pipistrelle.</p>	<p>Paragraph 8.4.54 of ES Chapter 8 is amended to:</p> <p>Bat surveys recorded a minimum of seven six species within the Zol. The confirmation of barbastelle <i>Barbastella barbastellus</i> onsite was from a single pass during a transect survey in Brewers Wood and is considered to be a single individual foraging or commuting and is not expected to regularly occur within the study area given the single record. This is the only Annex II species recorded onsite.</p> <p>Paragraph 8.4.59 of ES Chapter 8 is amended to:</p> <p>Over 90% of bat activity onsite was from common species with the remaining being rarer species. No maternity roosts were identified onsite and the hibernation roosts onsite only contained low numbers of bats. Although barbastelle was recorded, this was a single pass. The hibernation roost of small <i>Myotis</i> species was considered likely to be the more widespread and common whiskered <i>Myotis mystacinus</i> or Brandt's bats <i>Myotis brandti</i>. The bat population within the Zol to the south of the River Thames could form a critical part of the county population, and as such is of county importance.</p>	Deadline 1												
6.1 Environmental Statement - Chapter 8	Table 8.19 requires amendment to correct the distance of Mucking Flats	The first row in Table 8.19 of ES Chapter 8 is amended to:	Deadline 1												

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date								
<p>- Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>and Marshes SSSI from the Order Limits.</p>	<p>Table 8.19 Statutory designated sites within the study area north of the River Thames</p> <table border="1" data-bbox="902 347 1854 715"> <thead> <tr> <th data-bbox="902 347 1093 480">Designated site</th> <th data-bbox="1097 347 1435 480">Interest features, citation lists and reasons for designation</th> <th data-bbox="1440 347 1621 480">Level of importance</th> <th data-bbox="1626 347 1854 480">Approximate distance from Order Limits</th> </tr> </thead> <tbody> <tr> <td data-bbox="902 483 1093 715">Mucking Flats and Marshes SSSI</td> <td data-bbox="1097 483 1435 715">Mudflats, saltmarsh and grassland supporting important populations of wintering wildfowl and waders and invertebrates.</td> <td data-bbox="1440 483 1621 715">National</td> <td data-bbox="1626 483 1854 715">0m (within Order Limits) Adjacent to Order Limits</td> </tr> </tbody> </table>	Designated site	Interest features, citation lists and reasons for designation	Level of importance	Approximate distance from Order Limits	Mucking Flats and Marshes SSSI	Mudflats, saltmarsh and grassland supporting important populations of wintering wildfowl and waders and invertebrates.	National	0m (within Order Limits) Adjacent to Order Limits	
Designated site	Interest features, citation lists and reasons for designation	Level of importance	Approximate distance from Order Limits								
Mucking Flats and Marshes SSSI	Mudflats, saltmarsh and grassland supporting important populations of wintering wildfowl and waders and invertebrates.	National	0m (within Order Limits) Adjacent to Order Limits								
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraphs 8.4.54 and 8.4.59 require revision to remove reference to a record of a barbastelle bat which has been reassessed and determined to have been identified inaccurately. The call associated with this bat has now been attributed to common pipistrelle.</p>	<p>Paragraph 8.4.54 of ES Chapter 8 is amended to: Bat surveys recorded a minimum of seven six species within the Zol. The confirmation of barbastelle <i>Barbastella barbastellus</i> onsite was from a single pass during a transect survey in Brewers Wood and is considered to be a single individual foraging or commuting and is not expected to regularly occur within the study area given the single record. This is the only Annex II species recorded onsite.</p> <p>Paragraph 8.4.59 of ES Chapter 8 is amended to: Over 90% of bat activity onsite was from common species with the remaining being rarer species. No maternity roosts were identified onsite and the hibernation roosts onsite only contained low numbers of bats. Although barbastelle was recorded, this was a single pass. The hibernation roost of small Myotis species was considered likely to be the more widespread and common whiskered <i>Myotis mystacinus</i> or Brandt's bats <i>Myotis brandti</i>. The bat population within the Zol to the south of the River Thames could form a critical part of the county population, and as such is of county importance.</p>	<p>Deadline 2</p>								

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date								
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 8.9.3 requires revision to correct an error in the figure quoted for the extent of ancient woodland loss. It says 7.62ha which is wrong and inconsistent with other figures in the chapter that report the extent of this loss.	Paragraph 8.9.3 of ES Chapter 8 is amended to: Potential significant effects as a result of construction include habitat loss within statutory and non-statutory designated sites, including the loss of 7.62ha 6.92ha of ancient woodland, permanent loss of ancient and veteran trees and habitat loss and mortality of terrestrial invertebrate assemblages. During the operational phase of the Project, the significant effects are associated with the increase in nitrogen deposition on designated sites which has the potential to result in a degradation of habitat condition. Twenty-nine designated sites have been predicted to experience impacts which could lead to an effect on the site's integrity, and would be considered significant. These consist of four SSSI, 22 ancient woodlands, two LWS and one SINC.	Deadline 2								
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Updates to Table 8.8 are required to correct an error related to the level of importance recorded for Boxley Warren Local Nature Reserve (LNR). The level is reported as county whereas it should be recorded as national due to the presence of ancient woodland. This is the only place in the chapter where this error in relation to Boxley Warren LNR is made. The correct national value is reported and used during the assessment of likely significant effects.	The first row of Table 8.8 is updated as follows: Table 8.8 Statutory designated sites and associated ancient woodland within the study area south of the River Thames <table border="1" data-bbox="898 826 1845 1264"> <thead> <tr> <th>Designated site</th> <th>Interest features, citation lists and reasons for designation</th> <th>Level of importance</th> <th>Approximate distance from Order Limits</th> </tr> </thead> <tbody> <tr> <td>Boxley Warren LNR</td> <td>The site is noted for its ancient woodland and internationally scarce yew woodland. The Warren supports a fascinating range of flora and fauna.</td> <td>CountyNational</td> <td>0m</td> </tr> </tbody> </table>	Designated site	Interest features, citation lists and reasons for designation	Level of importance	Approximate distance from Order Limits	Boxley Warren LNR	The site is noted for its ancient woodland and internationally scarce yew woodland. The Warren supports a fascinating range of flora and fauna.	County National	0m	Deadline 6
Designated site	Interest features, citation lists and reasons for designation	Level of importance	Approximate distance from Order Limits								
Boxley Warren LNR	The site is noted for its ancient woodland and internationally scarce yew woodland. The Warren supports a fascinating range of flora and fauna.	County National	0m								

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																				
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Updates to Table 8.39 are required to correct an error related to the level of importance reported for the effects of nitrogen deposition on irreplaceable habitats south of the River Thames during construction. The level is reported as county whereas it should be recorded as national. This is the only place in the chapter where this error related to the identified irreplaceable habitat is made. The correct national value is reported and used during the assessment of likely significant effects.	<p>Row 6 of Table 8.39 is updated as follows:</p> <p style="text-align: center;">Table 8.39 Terrestrial ecology impact summary table</p> <table border="1"> <thead> <tr> <th>Impact description</th> <th>Importance</th> <th>Level of impact</th> <th>Effect</th> <th>Significance</th> </tr> </thead> <tbody> <tr> <td colspan="5">Construction</td> </tr> <tr> <td colspan="5">South of the River Thames</td> </tr> <tr> <td>Effects of nitrogen deposition on irreplaceable habitat: Three ancient woodland sites Three veteran trees</td> <td>CountyNational</td> <td>No change to negligible</td> <td>Neutral to slight adverse</td> <td>Not significant</td> </tr> </tbody> </table>	Impact description	Importance	Level of impact	Effect	Significance	Construction					South of the River Thames					Effects of nitrogen deposition on irreplaceable habitat: Three ancient woodland sites Three veteran trees	CountyNational	No change to negligible	Neutral to slight adverse	Not significant	Deadline 6
Impact description	Importance	Level of impact	Effect	Significance																			
Construction																							
South of the River Thames																							
Effects of nitrogen deposition on irreplaceable habitat: Three ancient woodland sites Three veteran trees	CountyNational	No change to negligible	Neutral to slight adverse	Not significant																			
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 8.6.526 are required to correct an error related to the name of one of the proposed green bridges.	<p>Paragraph 8.6.526 of ES Chapter 8 is amended to:</p> <p>Disturbance: During the operational phase of the Project, it is feasible that light, noise and visual disturbance of foraging and commuting bats could occur. The operation phase lighting would be designed as part of the Project design and mitigation measures to preserve nocturnal character and habitats, and maintain dark corridors for wildlife (Design Principles (Application Document 7.5) Clause no. LST.02; LST.03). The lighting assessment shows that within 30m the lux levels would fall to 0.5 lux (refer to Appendix 8.15 (Application Document 6.3)). Large areas within this section would be unlit, in particular around the green bridges at Hoford Road and Mardyke Green Lane. The remaining sections that are lit would include downlighting and a range of different sized columns to reduce light</p>	Deadline 6																				

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		spill (see Design Principles (Application Document 7.5) Clause no. LST.02).	
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 8.4.98 refers to woodlands at The Wilderness and Codham Hall Woods as supporting terrestrial invertebrate assemblages of local value whereas they are actually of county value. This is the only place within the chapter where this error related to The Wilderness and Codham Hall Woods is made so the rest of the assessment, including its conclusions, is robust.	Paragraph 8.4.98 of ES Chapter 8 is amended to: Woodland invertebrate assemblages were represented within woodland habitat at the Wilderness and Codham Hall Wood. These assemblages were considered of local county biodiversity importance since they would only be likely to appreciably enrich the habitat resource in a local county context and support species and features of importance for migration, dispersal, or genetic exchange at that scale.	Deadline 6
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 8.6.448 requires revision to reflect amendment EA08 Thong Lane Car Park removal. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].	Paragraph 8.6.448 of ES Chapter 8 is amended as follows: Habitat degradation and disturbance of species present within statutory and non-statutory designated sites from increased visitor pressure has been considered as part of the assessment of likely operational phase effects. Chapter 13: Population and Human Health includes a review of how the Project might alter the use of specific sites by visitors, including sites that are designated for their biodiversity importance. This demonstrates that although the specific locations at which some sites will be accessed would change as a result of the Project, for example the proposed Shorne Woods car park west of Shorne Woods Country Park, the numbers of recreational users of the sites would be unlikely to change considerably. Therefore, likely significant effects on the biodiversity resources within the sites are not predicted. This is considered further in Chapter 13: Population and Human Health. In addition, sites such as Chalk Park have been designed to offer recreational space for the general	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>public. Further detail on these sites is given in the Planning Statement Appendix D (Application Document 7.2).</p> <p>Update at Deadline 9 - ES Addendum Appendix A - Recreational Pressure on Designated Sites was prepared and submitted to the Examining Authority at Deadline 1. This has been updated to reflect the removal of the Thong Lane car park from the proposals.</p>	
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p>	<p>Updates to text in paragraph 8.5.26 are required to update REAC commitment TB005 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8) [REP8-044] in response to Question 11.1.11 in ExQ3 - The Examining Authority's written questions and requests for information [PD-046].</p>	<p>Paragraph 8.5.26 of ES Chapter 8 is amended to: Invasive species would be identified prior to construction and, if recorded during the construction phase, would be removed or treated to prevent their spread, following the Construction Industry Research and Information Association's (CIRIA) guidance in Wade et al. (Invasive Species Management for Infrastructure Managers and the Construction Industry, 2008) (REAC Ref. TB005).</p>	<p>Deadline 8</p>
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p>	<p>Updates to text are required to align Chapter 8 with changes that have been made to Design Principles [Document Reference 7.5 (7)] throughout Examination.</p>	<p>Paragraph 8.5.35, bullet point f. of ES Chapter 8 is amended as follows: f. Low nutrient, free-draining grassland: 50% coverage (PFA to provide a minimum 20% 40% overall area substrate, left to regenerate naturally). Resubmitted 11 December 2023 as: 6.1 Environmental Statement – Chapter 8 - Terrestrial Biodiversity (Clean) (Version 2) 6.1 Environmental Statement – Chapter 8 - Terrestrial Biodiversity (Tracked) (Version 2)</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]	Tables 8.1, 8.21, 8.31, 8.35, 8.39 and paragraphs 8.6.55, 8.6.57, 8.6.59, 8.6.60, 8.6.61, 8.6.64, 8.6.102, 8.6.133, 8.6.135, 8.6.155, 8.6.255, 8.6.264, 8.6.266, 8.6.267, 8.6.268, 8.6.269, 8.6.275, 8.6.276, 8.6.280, 8.6.281, 8.6.330, 8.6.366, 8.6.367 and 8.9.3 require amendment to present the revised figures for habitat gains and losses. These figures have been updated due to the reduction in the area of land within Order Limits as a result of: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] These updates do not alter the significance of effects reported in ES Chapter 8.	Tables 8.1, 8.21, 8.31, 8.35, 8.39 and paragraphs 8.6.55, 8.6.57, 8.6.59, 8.6.60, 8.6.61, 8.6.64, 8.6.102, 8.6.133, 8.6.135, 8.6.155, 8.6.255, 8.6.264, 8.6.266, 8.6.267, 8.6.268, 8.6.269, 8.6.275, 8.6.276, 8.6.280, 8.6.281, 8.6.330, 8.6.366, 8.6.367 and 8.9.3 of ES Chapter 8 are amended to reflect revised figures for habitat gains and losses associated with the changes to Order Limits. Resubmitted 11 December 2023 as: 6.1 Environmental Statement – Chapter 8 - Terrestrial Biodiversity (Clean) (Version 2) 6.1 Environmental Statement – Chapter 8 - Terrestrial Biodiversity (Tracked) (Version 2) 6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity (Version 2) has also been updated to include the amendments presented in the ES Addendum at previous deadlines. Other minor errata items and typographical errors identified whilst updating the chapter have also been updated.	Deadline 9
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]	Tables 8.20, 8.33 and 8.39 require amendment to include The Wilderness as ancient semi-natural woodland. This amendment is due to Natural England	Tables 8.20, 8.33 and 8.39 of ES Chapter 8 have been amended to include The Wilderness as ancient semi-natural woodland due to Natural England designating this site as ancient woodland. Resubmitted 11 December 2023 as: 6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity (Clean) (Version 2)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	designating this site as ancient semi-natural woodland. These updates add a further significant impact from construction of the Project north of the River Thames.	6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity (Tracked) (Version 2)	
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]	Paragraphs 8.6.446 and 8.6.493 have been amended to show the reduction in the amount of Nitrogen Deposition compensation sites and the total area of these sites. This amendment is due to post-submission notification of impacts on a farm business and an area of newly agreed Countryside Stewardship Scheme. These updates do not alter the significance of effects reported in ES Chapter 8.	The first line of both paragraphs 8.6.446 and 8.6.493 of Chapter 8 are amended as follows: The compensation strategy proposed consists of landscape scale habitat creation across five four Nitrogen Deposition Compensation Sites located south of the river, and three north of the river, totalling an area of approximately 240 205ha. Resubmitted 11 December 2023 as: 6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity (Clean) (Version 2) 6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity (Tracked) (Version 2)	Deadline 9
6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]	Paragraph 8.9.3 has been amended to include the new ancient woodland loss total. This amendment is due to Natural England designating an extra area of ancient semi-natural woodland.	The first line of paragraph 8.9.3 of Chapter 8, as previously updated at Deadline 2, is amended as follows: Potential significant effects as a result of construction include habitat loss within statutory and non-statutory designated sites, including the loss of 6.927.36 ha of ancient woodland, permanent loss of ancient and veteran trees and habitat loss and mortality of terrestrial invertebrate assemblages. Resubmitted 11 December 2023 as: 6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity (Clean) (Version 2)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	These updates do not alter the significance of effects reported in ES Chapter 8.	6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity (Tracked) (Version 2)	
ES Figures			
6.2 Environmental Statement – Figure 8.1 – Designated Sites [APP-262]	Figure 8.1 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 3, and 4 of 6 of ES Figure 8.1 are amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 8.1 – Designated Sites (Clean) (Version 2) 6.2 Environmental Statement – Figure 8.1 – Designated Sites (Tracked) (Version 2) The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9
6.2 Environmental Statement – Figure 8.1 – Designated Sites [APP-262]	Figure 8.1 requires amendment to include a new area of ancient woodland at The Wilderness, reflecting new information provided by Natural England. Due to an error Rainbow Shaw woodland was not correctly shaded as ancient woodland. This has been corrected.	Page 5 of 6 of ES Figure 8.1 is amended to include the new and corrected areas of ancient semi-natural woodland. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 8.1 – Designated Sites (Clean) (Version 2) 6.2 Environmental Statement – Figure 8.1 – Designated Sites (Tracked) (Version 2)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 8.2 – Phase 1 Habitat Map [APP-263] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.2 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2, 5, 7 and 8 of 16 of ES Figure 8.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.3 – Hedgerow Regulations Assessment [APP-264] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.3 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 6 and 7 of 14 of ES Figure 8.3 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.4 – NVC and Lower Plant Survey Locations [APP-265] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.4 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 7 and 9 of 13 of ES Figure 8.4 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 8.5 – Invasive Plant Species Locations [APP-266] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.5 requires amendment to update Order Limits, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2 and 3 of 5 of ES Figure 8.5 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.6 – Phase 1 field and desk based assessment coverage [APP-267] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.6 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2, and 3 of 5 of ES Figure 8.6 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.7 – Invertebrate Survey Locations [APP-268] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.7 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2, and 3 of 5 of ES Figure 8.7 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 8.8 – GCN Presence/Absence Results [APP-269] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.8 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 7 and 9 of 20 of ES Figure 8.8 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.9 – Reptile Survey Results [APP-270] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.9 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 2 of 4 of ES Figure 8.9 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.10 – Ornithology Survey Areas [APP-271] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.10 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 6, 7, 8, 9 and 10 of 18 of ES Figure 8.10 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 8.13 – Functionally Linked Land Transects - Wintering [APP-274] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.13 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	Pages 7 of 29 of ES Figure 8.13 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.14 – Functionally linked land transect results - wintering (nocturnal) [APP-275] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.14 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Pages 7 and 10 of 23 of ES Figure 8.14 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.15 – Functionally Linked Land Transects - Breeding [APP-276] Document not re-issued. Updates	Figure 8.15 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 6, 7 and 8 of 30 of ES Figure 8.15 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 8.18 – Ornithology Main Route Transects Results - Wintering [APP-279] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.18 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 26 and 27 of 32 of ES Figure 8.18 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.19 – Ornithology Main Route Transects Results - Breeding [APP-280] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.19 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Pages 26 and 27 of 36 of ES Figure 8.19 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.20 – Ornithology Barn Owl Distribution and Breeding Sites (CONFIDENTIAL) [APP-281]	Figure 8.20 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Pages 5, 6 and 7 of 15 of ES Figure 8.20 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	Amendment EA07 [REP5-001]		
6.2 Environmental Statement – Figure 8.21 – Ornithology Marsh Harrier Distribution (CONFIDENTIAL) [APP-282] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.21 requires amendment to update Order Limits shown, in relation to: Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 3 and 4 of 5 of ES Figure 8.21 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.22 – Ornithology Other Schedule 1 Species Distribution [APP-283] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.22 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Page 3 of 6 of ES Figure 8.22 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.23 – Woodland Assessment	Figure 8.23 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	Pages 6, 7, and 8 of 16 of ES Figure 8.23 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Locations and Bat Tree Survey Results [APP-284] Document not re-issued. Updates identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]		
6.2 Environmental Statement – Figure 8.24 – Bat Building Survey Results [APP-285] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.24 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 6, 7 and 8 of 16 of ES Figure 8.24 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.25 – Bat Transect and Crossing Point Locations [APP-286] Document not re-issued. Updates identified in ES Addendum only.	Figure 8.25 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2 and 3 of 5 of ES Figure 8.25 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 8.26 – Dormouse	Figure 8.26 requires amendment to update Order Limits shown, in relation to:	Page 4 of 9 of ES Figure 8.26 is amended as follows: Update to Order Limits.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Survey Locations and Results [APP-287] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]</p>	<p>The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	
<p>6.2 Environmental Statement – Figure 8.27 – Otter and Water Vole Survey Results [APP-288] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 8.27 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 3, 4 and 5 of 10 of ES Figure 8.27 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9
<p>6.2 Environmental Statement – Figure 8.28 – Tilbury 2 Water Vole Survey Results [APP-289] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 8.28 requires amendment to update Order Limits shown, in relation to: Amendment EA07 [REP5-001]</p>	<p>Page 1 of 1 of ES Figure 8.28 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9
<p>6.2 Environmental Statement – Figure 8.29 – Badger Survey</p>	<p>Figure 8.29 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]</p>	<p>Pages 5 and 6 of 13 of ES Figure 8.29 are amended as follows: Update to Order Limits.</p>	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Results (CONFIDENTIAL) [APP-290] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	
<p>6.2 Environmental Statement – Figure 8.30 – Badger Bait Marking Survey Results (CONFIDENTIAL) [APP-291] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 8.30 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Page 2 of 5 of ES Figure 8.30 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 8.31 – Other Mammals Survey Results [APP-292] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 8.31 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 4 and 5 of 9 of ES Figure 8.31 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.2 Environmental Statement – Figure 8.32 – Compensation area Phase 1 survey [APP-293]	Figure 8.32 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 5 of 5 of ES Figure 8.32 is amended as follows: Update to Order Limits. Update to NDep Compensation Areas. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 8.32 - Compensation Area Phase 1 Survey (Clean) (Version 2) 6.2 Environmental Statement – Figure 8.32 - Compensation Area Phase 1 Survey (Tracked) (Version 2)	Deadline 9
6.2 Environmental Statement – Figure 8.33 – Ancient Woodland Impacts [APP-294]	Figure 8.33 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 3 and 4 of 6 of ES Figure 8.33 are amended as follows: Update to Order Limits. Update to Nitrogen deposition compensation sites - woodland and grassland planting. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 8.33 - Ancient Woodland Impacts (Clean) (Version 2) 6.2 Environmental Statement – Figure 8.33 - Ancient Woodland Impacts (Tracked) (Version 2)	Deadline 9
6.2 Environmental Statement – Figure 8.33 – Ancient Woodland Impacts [APP-294]	Figure 8.33 requires amendment to include a new area of ancient woodland at The Wilderness, reflecting new information provided by Natural England. Due to an error Rainbow Shaw woodland was not	Page 5 of 6 of ES Figure 8.33 is amended to include the new and corrected areas of ancient woodland. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 8.33 – Ancient Woodland Impacts (Clean) (Version 2) 6.2 Environmental Statement – Figure 8.33 – Ancient Woodland Impacts (Tracked) (Version 2)	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	correctly shaded. This has been corrected.		
ES Appendices			
6.3 Environmental Statement - Appendix 8.8 – Bats [APP-397] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 4.2.15 and 4.2.40 and Table 4.4 require revision to remove reference to a record of a barbastelle bat which has been reassessed and determined to have been identified inaccurately. The call associated with this bat has now been attributed to common pipistrelle.	Paragraph 4.2.15 of Appendix 8.8 is amended to: At least seven six species (common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, noctule, brown long-eared bat, and a Myotis spp. and Barbastelle bats) were recorded during the surveys. A single Barbastelle bat recording was identified from the walked survey of Transect 4 in October 2018, with no other recordings of this species identified. Paragraph 4.2.40 of Appendix 8.8 is amended to: The transect point activity surveys for Brewers Wood recorded a mean number of passes per night of 367 from the Pipistrelle species group, 61 from the Big bat species group and 24 from the Woodland bat species group. Common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, <i>Nyctalus/Eptesicus</i> spp., Barbastelle and <i>Myotis</i> spp. were recorded on the walked transect activity surveys. Table 4.4 of Appendix 8.8 is amended to remove the reference to barbastelle bat. This removal would not significantly alter the remaining data presented in this table.	Deadline 2
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (1 of 4) Version 1 [APP-403] Document not re-issued. Updates	Appendix 8.14 (1 of 4) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Figure 1 of ES Appendix 8.14 (1 of 4) is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented on Figure 4 for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	Amendment EA07 [REP5-001]	England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (2 of 4) Version 1 [APP-404] Document not re-issued. Updates identified in ES Addendum only.	Appendix 8.14 (2 of 4) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Figure 2 – Pages 1, 3, 11, 12 and 16 of 89 of ES Appendix 8.14 (2 of 4) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (3 of 4) Version 1 [APP-405] Document not re-issued. Updates identified in ES Addendum only.	Appendix 8.14 (3 of 4) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Figure 2 – Page 87 of 89 and Figure 3 – Page 2 of 19 of ES Appendix 8.14 (3 of 4) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9
6.3 Environmental Statement – Appendix 8.14 – Designated Sites Air Quality Assessment (4 of 4) Version 1 [APP-406]	Appendix 8.14 (4 of 4) does not require amendment, however should be read with reference to Figure 2 in this ES Addendum	Figure 4 of ES Appendix 8.14 (4 of 4) does not require amendment, however should be read with reference to the note below. The appendix is not re-issued. The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.			
6.3 Environmental Statement – Appendix 8.16 - Draft EPS Mitigation Licence Application – Bats [APP-408]	Appendix 8.16 is updated presenting the latest version of the draft protected species licence, as discussed with Natural England and supported by the letters of no impediment, which are appended to the Statement of Common Ground between National Highways and Natural England [REP8-012]	ES Appendix 8.16 - Draft EPS Mitigation Licence Application – Bats is amended to present the latest version of the draft protected species licence. Resubmitted 5 December 2023 as: 6.3 Environmental Statement - Appendix 8.16 - Draft EPS Mitigation Licence Application – Bats (Clean) (Parts 1 to 4) (Version 2) [REP8-049 to REP-055] 6.3 Environmental Statement - Appendix 8.16 - Draft EPS Mitigation Licence Application – Bats (Tracked) (Parts 1 to 4) (Version 2) [REP8-050 to REP-056]	Deadline 8
6.3 Environmental Statement – Appendix 8.17 – Draft EPS mitigation licence application - great crested newts (1 to 5) [APP-409], [APP-410], [APP-411], [APP-412] and [APP-413]	Appendix 8.17 is updated presenting the latest version of the draft protected species licence, as discussed with Natural England and supported by the letters of no impediment, which are appended to the Statement of Common Ground between National Highways and Natural England [REP8-012]	ES Appendix 8.17 - Draft EPS Mitigation Licence Application - Great Crested Newts (Parts 1 to 5 of 5) is amended to present the latest version of the draft protected species licence. Resubmitted 5 December 2023 as: 6.3 Environmental Statement - Appendix 8.17 - Draft EPS Mitigation Licence Application - Great Crested Newts (1 to 8) (Clean) (Version 2) [REP8-057 to REP-071] 6.3 Environmental Statement - Appendix 8.17 - Draft EPS Mitigation Licence Application - Great Crested Newts (1 to 8) (Tracked) (Version 2) [REP8-058 to REP-072]	Deadline 8
6.3 Environmental Statement – Appendix 8.18 – Draft EPS mitigation licence	Appendix 8.18 is updated presenting the latest version of the draft protected species licence, as discussed with Natural England and	ES Appendix 8.18 - Draft EPS Mitigation Licence Application – Dormouse is amended to present the latest version of the draft protected species licence. Resubmitted 5 December 2023 as:	Deadline 8

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
application - dormouse [APP-414]	supported by the letters of no impediment, which are appended to the Statement of Common Ground between National Highways and Natural England [REP8-012]	6.3 Environmental Statement - Appendix 8.18 - Draft EPS Mitigation Licence Application – Dormouse (Clean) (Version 2) 6.3 Environmental Statement - Appendix 8.18 - Draft EPS Mitigation Licence Application – Dormouse (Tracked) (Version 2) [REP8-073]	
6.3 Environmental Statement – Appendix 8.19 – Draft badger development licence application (CONFIDENTIAL) [APP-415]	Appendix 8.19 is updated presenting the latest version of the draft protected species licence, as discussed with Natural England and supported by the letters of no impediment, which are appended to the Statement of Common Ground between National Highways and Natural England [REP8-012]	ES Appendix 8.19 - Draft Badger Development Licence Application is amended to present the latest version of the draft protected species licence. Resubmitted 5 December 2023 as: 6.3 Environmental Statement - Appendix 8.19 - Draft Badger Development Licence Application (CONFIDENTIAL) (Clean) (Version 2) [REP8-074] 6.3 Environmental Statement - Appendix 8.19 - Draft Badger Development Licence Application (CONFIDENTIAL) (Tracked) (Version 2) [REP8-075]	Deadline 8
6.3 Environmental Statement – Appendix 8.20 – Draft water vole conservation licence application [APP-416]	Appendix 8.20 is updated presenting the latest version of the draft protected species licence, as discussed with Natural England and supported by the letters of no impediment, which are appended to the Statement of Common Ground between National Highways and Natural England [REP8-012]	ES Appendix 8.20 - Draft Water Vole Conservation Licence Application is amended to present the latest version of the draft protected species licence. Resubmitted 5 December 2023 as: 6.3 Environmental Statement - Appendix 8.20 - Draft Water Vole Conservation Licence Application (Clean) (Version 2) [REP8-076] 6.3 Environmental Statement - Appendix 8.20 - Draft Water Vole Conservation Licence Application (Tracked) (Version 2) [REP8-077]	Deadline 8

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.3 Environmental Statement – Appendix 8.22 – Terrestrial Ecology Surveys at Nitrogen Deposition Compensation Sites Version 1 [APP-418]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Appendix 8.22 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Change MRC01 [CR1-002]</p>	<p>Figure 1, Figure 2 - Pages 7 and 8 of 8, Figure 3 - Pages 7 and 8 of 8, Figure 4 - Pages 7 and 8 of 8 and Figure 5 - Pages 7 and 8 of 8 of ES Appendix 8.22 are amended as follows:</p> <p>Update to Order Limits.</p> <p>Update to Nitrogen Deposition Compensation Areas.</p> <p>The appendix is not re-issued, Order Limits and Nitrogen Deposition Compensation Areas shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

3.10 ES Chapter 9 Marine Biodiversity

3.10.1 The following changes have been made throughout Examination to ES Chapter 9, associated figures and appendices, as set out in Table 3.6.

Table 3.6 Updates to Chapter 9, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Chapter 9 requires revision at paragraph 9.5.6 bullet point a. to ensure that the wording is interpreted that the proposed tunnel depth is at the absolute limit to avoid riverbed works, such as requirement for scour protection and the tunnel design provides flexibility in its depth without impacting river use and the ability to dredge the river to an agreed deeper depth in the future.	Paragraph 9.5.6, bullet point a. of ES Chapter 9 is amended to: Construction phase embedded mitigation of relevance to marine biodiversity is as follows: a. Construction of the m Main tunnels would be constructed with adequate cover and in line with the River Restriction Plan (Application Document 2.14) and draft DCO (Application Document 3.1). These controls and constraints on the Limits of Deviation ensure that the tunnel would be constructed to a depth to allow 12.5m of river depth below chart datum and with sufficient capacity to allow for 0.5m of over dredge. This sufficiently avoids the need for any construction or operational remedial works within the River Thames. a layer of cover above of at least 0.9 tunnel diameter (14.4m). This avoids the need for works within the River Thames to provide additional scour protection, which would have otherwise required modelling and mitigation to reduce effects on a number of marine ecological receptors. The cross references from the new text is to the following documents River Restriction Plan (Application Document 2.14 [APP-045]) and draft DCO (Application Document 3.1 [AS-038]).	Deadline 1
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147]	Updates to text in paragraph 9.5.11 bullet point d. are required to update REAC MB001 to remain consistent with the changes made in the Code of Construction	Paragraph 9.5.11 bullet point d. of ES Chapter 9 is updated to: d. Works to construct the northern tunnel entrance compound temporary drainage pipeline and outfall from the northern tunnel entrance compound, including any piling, must not be undertaken when the work area is either fully submerged, or partially covered by water where this would result in the transmission through the water column of noise and vibration or the	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122] in response to stakeholder engagement.	generation of suspended sediments where reasonably practicable be undertaken in the dry in accordance with the conditions set out by the MMO in the Deemed Marine Licence. (DCO Schedule 15) (REAC Ref. MB001).	
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 9.5.11 bullet point d. are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)] in response to stakeholder engagement.	Paragraph 9.5.11 bullet point d. of ES Chapter 9 is further updated to: d. Works to construct the temporary drainage pipeline and outfall from the northern tunnel entrance compound, including any piling, would where reasonably practicable, be undertaken in the dry to minimise the transmission through the water column of noise and vibration or the generation of suspended sediments. Where works cannot be undertaken in the dry or where such works are required in areas that are submerged or partially covered by water, then they would be undertaken in accordance with the conditions set out by the Marine Management Organisation (MMO) in the Deemed Marine Licence (DCO Schedule 15) (REAC Ref. MB001/MB002). must where reasonably practicable be undertaken in the dry in accordance with the conditions set out by the MMO in the Deemed Marine Licence. (DCO Schedule 15) (REAC Ref. MB001). Additional control measures would include:	Deadline 9
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 9.5.11 bullet point e. are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)]	Paragraph 9.5.11 bullet point e. of ES Chapter 9 is updated to: e. The permanent Coalhouse Point HRA and ecology mitigation water inlet with self-regulating valve structure would be constructed and operational in advance of the excavation of the North Portal and tunnelling works, and would be used as a source of water for the HRA and ecology mitigation area. Works to construct the cofferdam, including any piling, would where reasonably practicable, be undertaken in the dry to minimise the transmission through the water column of noise and vibration or the generation of suspended sediments. Where works cannot be undertaken in the dry or where such works are required in areas that are submerged or partially covered by water, then they would be undertaken in accordance with the conditions set out by the Marine Management	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	in response to stakeholder engagement.	Organisation (MMO) in the Deemed Marine Licence (DCO Schedule 15) (REAC Ref. MB001/MB002). must not be undertaken when the work area is either fully submerged, or partially covered by water where this would result in the transmission through the water column of noise and vibration or the generation of suspended sediments in accordance with the conditions set out by the MMO in the Deemed Marine Licence. (DCO Schedule 15) (REAC Ref. MB001). Additional control measures would include:	
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 9.6.157 are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)] in response to stakeholder engagement.	Paragraph 9.6.157 of ES Chapter 9 is updated to: Installation of the northern tunnel entrance compound drainage pipeline and outfall on the northern shore of the River Thames would require sheet piling to facilitate excavation of the pipeline trench. Installation of the outfall structure may require the construction of a minor cofferdam, and the structure itself may be placed on top of small mono-piles for support or be connected to longer piles used for the cofferdam. Construction of the water inlet with self-regulating valve structure would also require sheet piling to construct a cofferdam. The gate structure itself may also require piling dependent on ground conditions. These operations would take place at low water at which point the transfer of noise into the water column would be minimal (MB001). Where reasonably practicable, works would be undertaken in the dry. Where works cannot be undertaken in the dry or where such works are required in areas that are submerged or partially covered by water, then they would be undertaken in accordance with the conditions set out by the Marine Management Organisation (MMO) in the Deemed Marine Licence (MB001) to minimise the transfer of noise into the water column. In addition to this, piling operations would use vibro-piling techniques which are recognised as generating lower noise levels (MB002). The piling operations for the pipeline trench would also be completed over a relatively short, 3-4 week programme, assuming seven-day working. Piling for the cofferdams would be completed over a few days.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 9.6.159 are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)] in response to stakeholder engagement.	Paragraph 9.6.159 of ES Chapter 9 is updated to: As a result of the higher levels of background noise, and the restrictions of using commitment to utilising vibro-piling and soft start procedures (MB002) limiting piling operations to low water , the level of impact from underwater noise on marine fish (including those of conservation importance) is negligible. Impacts identified on fish species are considered temporary as the works are short-term and species are already habituated to elevated noise levels, and the integrity of the resource will not be affected. It is therefore considered that there would be neutral to slight adverse effects that are not significant, on the fish community which includes species of European, national and local importance.	Deadline 9
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 9.6.176 are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)] in response to stakeholder engagement.	Paragraph 9.6.176 of ES Chapter 9 is updated to: As a result of the higher levels of background noise, and the restrictions of using commitment to utilising vibro-piling and soft start procedures (MB002) piling operations at low water , the level of impact from underwater noise from piling on marine mammals of international importance is negligible, and it is considered that the effects from underwater noise would be slight adverse and not significant.	Deadline 9
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147]	Updates to text in Table 9.13 are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of	Table 9.13 of ES Chapter 9 is updated to: Impact pathway: underwater noise Fish (including those of conservation importance) Where reasonably practicable, Piling piling operations for the northern tunnel entrance compound drainage pipeline and outfall will be completed	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)] in response to stakeholder engagement.	at low water to minimise transfer or noise undertaken in the dry. Where works cannot be undertaken in the dry or where such works are required in areas that are submerged or partially covered by water, then vibro-piling and soft start procedures will be implemented (MB002). Good practice techniques and vibro-piling will be used. Modelled noise levels for TBM below TTS thresholds for fish, however localised avoidance may be observed.	
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in Table 9.13 are required to ensure alignment with an update to REAC MB001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 9) [Document Reference 6.3 ES Appendix 2.2 (9)] in response to stakeholder engagement.	Table 9.13 of ES Chapter 9 is updated to: Impact pathway: underwater noise Marine mammals Where reasonably practicable, Piling piling operations for the northern tunnel entrance compound drainage pipeline and outfall will be completed at low water to minimise transfer or noise undertaken in the dry. Where works cannot be undertaken in the dry or where such works are required in areas that are submerged or partially covered by water, then vibro-piling and soft start procedures will be implemented (MB002). Good practice techniques and vibro-piling will be used. Modelled noise levels for TBM at lower end of hearing frequencies and below TTS thresholds, however localised avoidance may be observed.	Deadline 9
ES Figures			
6.2 Environmental Statement – Figure 9.1 – Nationally and internationally designated sites within 11km of Order Limits [APP-296]	Figure 9.1 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	ES Figure 9.1 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.			
6.2 Environmental Statement – Figure 9.2 – Comparison of common seal locations in the vicinity of the Thames Estuary over three surveys (2013-14) [APP-297] Document not re-issued. Updates identified in ES Addendum only.	Figure 9.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	ES Figure 9.2 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 9.3 – Comparison of grey seal locations in the vicinity of the Thames Estuary over three surveys (2013-14) [APP-298] Document not re-issued. Updates identified in ES Addendum only.	Figure 9.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	ES Figure 9.3 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

3.11 ES Chapter 10 Geology and Soils

3.11.1 The following changes have been made throughout Examination to ES Chapter 10, associated figures and appendices, as set out in Table 3.7.

Table 3.7 Updates to Chapter 10, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 10.5.8 bullet point u. requires revision to match the wording of commitment GS028 of the REAC and explain the alignment with the Remediation Options Appraisal and Outline Remediation Strategy.	Paragraph 10.5.8 bullet point u. of ES Chapter 10 is amended to: u. The construction works would include the removal of vegetation, stripping of topsoil, excavation and earth movements. These activities could cause the spreading and mobilisation of contaminants. Unforeseen contamination has the potential to be discovered during the construction of the Project: (REAC Ref. GS028). <ul style="list-style-type: none">• During earth movement works, a watching brief protocol would be implemented under the supervision of an Environmental Clerk of Works in accordance with the Remediation Options Appraisal and Outline Remediation Strategy (ES Appendix 10.11, Application Document 6.3).• Site workers would be vigilant to ensure visual or olfactory signs of contamination are noted and that contaminated soil is kept separate from other materials. Appropriate analysis and assessment would be undertaken by a suitably qualified person on suspected contaminated soils to establish the action required	Deadline 2
6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148]	Updates to text in paragraph 10.5.8 bullet point a) are required to update REAC GS001 to remain consistent with the changes made in the CoCP (Version 5)	Paragraph 10.5.8 bullet point a) is amended to: a. Supplementary ground investigations would be undertaken to assess residual contamination risks as detailed in the Remediation Options Appraisal and Outline Remediation Strategy (Application Document 6.3, Appendix 10.11). The Contractors would provide a scheme of ground investigation design for acceptance of National Highways in consultation	Deadline 5

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	[REP5-050] in response to a stakeholder request.	with the Environment Agency and relevant Local Authorities prior to commencement of the works. If, during further intrusive ground investigations, drilling is required in areas underlain with contaminated soils, drilling and excavation techniques in line with the latest versions of BS 5930:2015 Code of practice for ground investigations (British Standards Institution, 2020) and BS 10175:2011 Investigation of potentially contaminated sites – Code of Practice (British Standards Institution, 2017) would be adopted (for example, environmental seals) to reduce the risk of creating pollutant pathways. The Contractors would provide ground investigation method statements for acceptance of National Highways in consultation with the Environment Agency and relevant Local Authorities prior to commencement of the works (REAC Ref. GS001).	
6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 10.5.8 bullet point t) are required to update REAC GS027 to remain consistent with the changes made in the CoCP (Version 5) [REP5-050] in response to a stakeholder request.	Paragraph 10.5.8 bullet point t) is amended to: t. Where supplementary investigation is undertaken to assess residual contamination risks in accordance with GS001, appropriate assessment in accordance with LCRM (Environment Agency, 2021) would be undertaken and the reports provided to the relevant Local Authorities, and w Where unacceptable risks are identified taking into account any representations received following the provision of the reports , the Contractors would develop proposals for site-specific remediation strategies and implementation plans in consultation with the relevant local authorities prior to implementation. The Contractors would have regard for ES Appendix 10.11, Remediation Options Appraisal and Outline Remediation Strategy (Application Document 6.3), which identifies techniques that could be implemented by the Contractors for the remediation of contamination (REAC Ref. GS027).	Deadline 5
6.1 Environmental Statement - Chapter 10 - Geology and	Paragraph 10.6.19 requires revision to correct errata. This revision correlates with the slight adverse effect	Paragraph 10.6.19 of ES Chapter 10 is amended to: This quarry is a general geological site due to the fine exposures of the sands of the Woolwich Beds (now Woolwich Formation) which are capped by the Orsett Heath Gravel (now known as Boyn Hill Gravel). The Essex	Deadline 6

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>reported in Table 10.24 of ES Chapter 10.</p>	<p>Field Club has identified the northern boundary of the quarry site as the geological feature of interest, which runs adjacent to the highway boundary of the A1013. The exposure follows the northern boundary of the quarry in a south-westerly direction. The Dansand Quarry general geological site is considered to be of low value due to its regional interest and limited potential for replacement. Although the Project works associated with the A1013 realignment and A13 junction are likely to take place adjacent to a small part of the exposure, the works are only likely to result in minor loss or alteration to the feature and would not cause the loss of the integrity of the resource. Therefore, the magnitude is negligible. The significance of effect is neutral-slight adverse which is considered to be not significant.</p>	
<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text in paragraph 10.5.8 bullet point a) are required to update REAC GS001 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] in response to stakeholder engagement.</p>	<p>Paragraph 10.5.8 bullet point a) of ES Chapter 10 is amended to: a. Supplementary ground investigations would be undertaken to assess residual contamination risks as detailed in the Remediation Options Appraisal and Outline Remediation Strategy (Application Document 6.3, Appendix 10.11). If, during further intrusive ground investigations, drilling is required in areas underlain with contaminated soils, drilling and excavation techniques Where supplementary intrusive ground investigations are required in areas underlain with contaminated soils, these shall be undertaken in line with the latest versions of BS 5930:2015 Code of practice for ground investigations (British Standards Institution, 2020) and BS 10175:2011 Investigation of potentially contaminated sites – Code of Practice (British Standards Institution, 2017) would be adopted (for example, environmental seals) to reduce the risk of creating pollutant pathways. The Contractors would provide ground investigation method statements for acceptance of National Highways in consultation with the Environment Agency and relevant Local Authorities prior to commencement of the works (REAC Ref. GS001).</p>	<p>Deadline 6</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																											
<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 10.8 and paragraphs 10.4.68 and 10.4.69 require amendment to present the revised Agricultural Land Classification grade distribution. These figures have been updated due to the reduction in the area of land within Order Limits as a result of Change MRC01 [CR1-002]. These updates represent minor reduction in effects, however, do not alter the significance of effects reported in ES Chapter 10.</p>	<p>Table 10.8 of ES Chapter 10 is amended as follows: Table 10.8 ALC grade distribution within the Order Limits – south of the Thames</p> <table border="1"> <thead> <tr> <th>ALC grade</th> <th>Area (ha)</th> <th>Area (%)</th> </tr> </thead> <tbody> <tr> <td>Grade 1 (Excellent)</td> <td>17.22</td> <td>2.5 2.7</td> </tr> <tr> <td>Grade 2 (Very Good)</td> <td>272.92 263.34</td> <td>39.7 40.6</td> </tr> <tr> <td>Subgrade 3a (Good)</td> <td>89.35 68.11</td> <td>13.0 10.5</td> </tr> <tr> <td>Subgrade 3b (Moderate)</td> <td>53.96 47.06</td> <td>7.8 7.2</td> </tr> <tr> <td>Grade 4 (Poor)</td> <td>19.75</td> <td>2.9 3.0</td> </tr> <tr> <td>Grade 5 (Very Poor)</td> <td>0.00</td> <td>0.0</td> </tr> <tr> <td>Other Land/Non-agricultural</td> <td>234.40 233.80</td> <td>34.1 36.0</td> </tr> <tr> <td>Total</td> <td>687.60 649.29</td> <td>100.0</td> </tr> </tbody> </table> <p><i>* Please note, all numbers are rounded to 2 decimal points and are displayed true for the whole number. *</i></p> <p>Paragraphs 10.4.68 and 10.4.69 are amended to: The collation and review of historical data and the detailed ALC surveys found agricultural land in Grades 1 (17.22 ha), 2 (272.92 263.34ha), 3a (89.35 68.11ha), 3b (53.96 47.06ha) and 4 (19.75 ha). Grade 1, 2 and 3a land, covering approximately 55.2 53.8% of the land within the Order Limits south of the Thames, is considered to be BMV agricultural land.</p>	ALC grade	Area (ha)	Area (%)	Grade 1 (Excellent)	17.22	2.5 2.7	Grade 2 (Very Good)	272.92 263.34	39.7 40.6	Subgrade 3a (Good)	89.35 68.11	13.0 10.5	Subgrade 3b (Moderate)	53.96 47.06	7.8 7.2	Grade 4 (Poor)	19.75	2.9 3.0	Grade 5 (Very Poor)	0.00	0.0	Other Land/Non-agricultural	234.40 233.80	34.1 36.0	Total	687.60 649.29	100.0	<p>Deadline 9</p>
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Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																											
<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 10.9 and paragraphs 10.4.79 and 10.4.80 require amendment to present the revised Agricultural Land Classification grade distribution. These figures have been updated due to the reduction in the area of land within Order Limits as a result of: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] These updates do not alter the significance of effects reported in ES Chapter 10.</p>	<p>Table 10.9 of ES Chapter 10 is amended as follows: Table 10.9 ALC grade distribution within the Order Limits – north of the Thames</p> <table border="1"> <thead> <tr> <th>ALC grade</th> <th>Area (ha)</th> <th>Area (%)</th> </tr> </thead> <tbody> <tr> <td>Grade 1 (Excellent)</td> <td>7.40</td> <td>0.4</td> </tr> <tr> <td>Grade 2 (Very Good)</td> <td>71.02</td> <td>4.2</td> </tr> <tr> <td>Subgrade 3a (Good)</td> <td>358.72 343.85</td> <td>21.0 20.4</td> </tr> <tr> <td>Subgrade 3b (Moderate)</td> <td>672.73 670.13</td> <td>39.4 39.7</td> </tr> <tr> <td>Grade 4 (Poor)</td> <td>26.63</td> <td>1.6</td> </tr> <tr> <td>Grade 5 (Very Poor)</td> <td>0.00</td> <td>0.0</td> </tr> <tr> <td>Other Land/Non-agricultural</td> <td>571.13 567.61</td> <td>33.4 33.7</td> </tr> <tr> <td>Total</td> <td>1707.63 1686.63</td> <td>100.0</td> </tr> </tbody> </table> <p><i>* Please note, all numbers are rounded to 2 decimal points and are displayed true for the whole number. *</i></p> <p>Paragraphs 10.4.79 and 10.4.80 are amended to: The collation and review of historical data and the detailed ALC surveys found agricultural land in Grades 1 (7.4ha), 2 (71.02ha), 3a (358.72 343.85ha), 3b (672.73 670.13ha) and 4 (26.63 ha). Grade 1, 2 and 3a land, covering approximately 25.6 25% of the land within the Order Limits north of the Thames, is considered to be BMV agricultural land.</p>	ALC grade	Area (ha)	Area (%)	Grade 1 (Excellent)	7.40	0.4	Grade 2 (Very Good)	71.02	4.2	Subgrade 3a (Good)	358.72 343.85	21.0 20.4	Subgrade 3b (Moderate)	672.73 670.13	39.4 39.7	Grade 4 (Poor)	26.63	1.6	Grade 5 (Very Poor)	0.00	0.0	Other Land/Non-agricultural	571.13 567.61	33.4 33.7	Total	1707.63 1686.63	100.0	Deadline 9
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Total	1707.63 1686.63	100.0																												
<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148]</p>	<p>Table 10.21 and paragraphs 10.6.21 and 10.6.22 require amendment to present the revised permanent and temporary loss of agricultural</p>	<p>Table 10.21 of ES Chapter 10 is amended as follows:</p>	Deadline 9																											

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																																																																				
Document not re-issued. Updates identified in ES Addendum only.	land. These figures have been updated due to the reduction in the area of land within Order Limits as a result of: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] These updates do not alter the significance of effects reported in ES Chapter 10.	<p style="text-align: center;">Table 10.21 Permanent and temporary loss of agricultural land</p> <table border="1"> <thead> <tr> <th>ALC grade</th> <th>Total area (ha)</th> <th>Area required permanently (ha)</th> <th>Area reinstated by the end of the construction phase (ha)</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">South of the River</td> </tr> <tr> <td>1</td> <td>17.22</td> <td>15.24 15.10</td> <td>1.98 2.12</td> </tr> <tr> <td>2</td> <td>272.92 263.34</td> <td>200.28 190.76</td> <td>72.64 72.58</td> </tr> <tr> <td>3a</td> <td>89.35 68.11</td> <td>71.80 50.56</td> <td>17.55</td> </tr> <tr> <td>BMV land</td> <td>379.49 348.67</td> <td>287.32 256.42</td> <td>92.17 92.25</td> </tr> <tr> <td>3b</td> <td>53.96 47.06</td> <td>16.29 8.97</td> <td>37.67 38.09</td> </tr> <tr> <td>4</td> <td>19.75</td> <td>0.00</td> <td>19.75</td> </tr> <tr> <td>5</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>Total agricultural land</td> <td>453.20 415.48</td> <td>303.61 265.40</td> <td>149.59 150.09</td> </tr> <tr> <td>Non-agricultural</td> <td>234.40 233.80</td> <td>173.33 172.85</td> <td>61.07 60.95</td> </tr> <tr> <td>Sub Total</td> <td>687.60 649.29</td> <td>476.94 438.25</td> <td>240.66 211.04</td> </tr> <tr> <td colspan="4" style="text-align: center;">North of the River</td> </tr> <tr> <td>1</td> <td>7.40</td> <td>7.40</td> <td>0.00</td> </tr> <tr> <td>2</td> <td>71.02</td> <td>38.94</td> <td>32.08</td> </tr> <tr> <td>3a</td> <td>358.72 343.85</td> <td>205.57 205.01</td> <td>153.15 138.84</td> </tr> <tr> <td>BMV land</td> <td>437.13 422.26</td> <td>251.90 251.34</td> <td>185.23 170.92</td> </tr> </tbody> </table>	ALC grade	Total area (ha)	Area required permanently (ha)	Area reinstated by the end of the construction phase (ha)	South of the River				1	17.22	15.24 15.10	1.98 2.12	2	272.92 263.34	200.28 190.76	72.64 72.58	3a	89.35 68.11	71.80 50.56	17.55	BMV land	379.49 348.67	287.32 256.42	92.17 92.25	3b	53.96 47.06	16.29 8.97	37.67 38.09	4	19.75	0.00	19.75	5	0.00	0.00	0.00	Total agricultural land	453.20 415.48	303.61 265.40	149.59 150.09	Non-agricultural	234.40 233.80	173.33 172.85	61.07 60.95	Sub Total	687.60 649.29	476.94 438.25	240.66 211.04	North of the River				1	7.40	7.40	0.00	2	71.02	38.94	32.08	3a	358.72 343.85	205.57 205.01	153.15 138.84	BMV land	437.13 422.26	251.90 251.34	185.23 170.92	
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Document reference	Reason for amendment	Environmental Statement amendment			Amendment date	
		3b	672.73 670.13	420.57 420.96	252.16 249.17	
		4	26.63	8.17	18.46	
		5	0.00	0.00	0.00	
		Total agricultural land	1136.50 1119.03	680.65 680.47	455.85 438.56	
		Non-agricultural	571.13 567.61	329.19 329.23	241.94 238.38	
		Sub Total	1707.63 1686.63	1009.84 1009.70	697.79 676.93	
		North and South of the Thames				
		1	24.62 24.61	22.64 22.50	1.98 2.12	
		2	343.94 334.36	239.22 229.70	104.72 104.66	
		3a	448.07 411.96	277.37 255.57	170.70 156.39	
		BMV land	816.62 770.94	539.22 507.77	277.40 263.17	
		3b	726.69 717.20	436.86 429.93	289.83 287.26	
		4	46.38 46.37	8.17	38.21	
		5	0.00	0.00	0.00	
		Total agricultural land	1589.70 1534.51	984.26 945.86	605.44 588.64	
		Non-agricultural	805.53 801.41	502.52 502.09	303.01 299.33	
		Total	2395.23 2335.92	1486.78 1447.95	908.45 887.97	
		* Please note, all numbers are rounded to 2 decimal points and are displayed true for the whole number. *				

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																																								
		<p>Paragraphs 10.6.21 and 10.6.22 are amended to:</p> <p>As shown in Table 10.21, during construction the Project would result in the total loss of 1589.70 1534.51ha of agricultural land at the start of the construction phase. A total of 816.62 770.94ha (34.1 33% of the land within the Order Limits) comprises BMV land.</p> <p>However, by the end of the construction phase, land required temporarily would be reinstated, leaving a permanent loss of 984.26 945.86ha of agricultural land. Of this land affected permanently, 22.64 22.50ha is Grade 1, 239.22 229.70ha Grade 2 and 277.37 255.57ha Grade 3a.</p>																																									
<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 10.22 requires amendment to present the revised impacts relating to assessment of impacts on agricultural land during the construction phase. These figures have been updated due to the reduction in the area of land within Order Limits as a result of:</p> <p>Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] No change to BMV significance, however a change to the area required during the construction phase (ha)</p>	<p>Table 10.22 of ES Chapter 10 is amended as follows:</p> <p>Table 10.22 Assessment of impacts relating to the impact on agricultural land during the construction phase</p> <table border="1" data-bbox="902 727 1856 1289"> <thead> <tr> <th>ALC grade</th> <th>Receptor sensitivity</th> <th>Area required during the construction phase (ha)</th> <th>Magnitude of impact</th> <th>Significance of effect</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Very high</td> <td>24.62 24.61</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>2</td> <td>Very high</td> <td>343.94 334.36</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>3a</td> <td>High</td> <td>448.07 411.96</td> <td>Major</td> <td>Large or vVery large</td> </tr> <tr> <td>BMV land</td> <td></td> <td>816.62 770.94</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>3b</td> <td>Medium</td> <td>726.69 717.20</td> <td>Major</td> <td>Moderate or lLarge</td> </tr> <tr> <td>4</td> <td>Low</td> <td>46.38 46.37</td> <td>Major</td> <td>Slight or moderate</td> </tr> <tr> <td>5</td> <td>Low</td> <td>0.00</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><i>* Please note, all numbers are rounded to 2 decimal points and are displayed true for the whole number. *</i></p>	ALC grade	Receptor sensitivity	Area required during the construction phase (ha)	Magnitude of impact	Significance of effect	1	Very high	24.62 24.61	Major	Very large	2	Very high	343.94 334.36	Major	Very large	3a	High	448.07 411.96	Major	Large or vVery large	BMV land		816.62 770.94	Major	Very large	3b	Medium	726.69 717.20	Major	Moderate or lLarge	4	Low	46.38 46.37	Major	Slight or moderate	5	Low	0.00	N/A	N/A	<p>Deadline 9</p>
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<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils</p> <p>[APP-148]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 10.23 requires amendment to present the revised assessment of impacts relating to the permanent loss of agricultural land. These figures have been updated due to the reduction in the area of land within Order Limits as a result of:</p> <p>Changes MRC01 and MRC03 [CR1-002]</p> <p>Amendments EA04 and EA05 [CR2-002]</p> <p>Amendment EA07 [REP5-001]</p> <p>No change to BMV significance, however a change to the area required permanently (ha)</p>	<p>Table 10.23 of ES Chapter 10 is amended as follows:</p> <p>Table 10.23 Assessment of impacts relating to the permanent loss of agricultural land (following reinstatement of land required temporarily during the construction phase)</p> <table border="1"> <thead> <tr> <th>ALC grade</th> <th>Receptor sensitivity</th> <th>Area required permanently (ha)</th> <th>Magnitude of impact</th> <th>Significance of effect</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Very high</td> <td>22.64 22.50</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>2</td> <td>Very high</td> <td>239.22 229.70</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>3a</td> <td>High</td> <td>277.37 255.57</td> <td>Major</td> <td>Large or vVery large</td> </tr> <tr> <td><i>BMV land</i></td> <td></td> <td>539.22 507.77</td> <td><i>Major</i></td> <td><i>Very large</i></td> </tr> <tr> <td>3b</td> <td>Medium</td> <td>436.86 429.93</td> <td>Major</td> <td>Moderate orLarge</td> </tr> <tr> <td>4</td> <td>Low</td> <td>8.17</td> <td>Moderate</td> <td>Slight</td> </tr> <tr> <td>5</td> <td>Low</td> <td>0.00</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><i>* Please note, all numbers are rounded to 2 decimal points and are displayed true for the whole number. *</i></p>	ALC grade	Receptor sensitivity	Area required permanently (ha)	Magnitude of impact	Significance of effect	1	Very high	22.64 22.50	Major	Very large	2	Very high	239.22 229.70	Major	Very large	3a	High	277.37 255.57	Major	Large or v Very large	<i>BMV land</i>		539.22 507.77	<i>Major</i>	<i>Very large</i>	3b	Medium	436.86 429.93	Major	Moderate or Large	4	Low	8.17	Moderate	Slight	5	Low	0.00	N/A	N/A	Deadline 9
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<p>6.2 Environmental Statement – Figure 10.1 – Geology Site Walkover</p> <p>Version 1 [APP-299]</p> <p>Document not re-issued. Updates</p>	<p>Figure 10.1 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to:</p> <p>Changes MRC01 and MRC03 [CR1-002]</p>	<p>Pages 1, 3 and 4 of 6 of ES Figure 10.1 are amended as follows:</p> <p>Update to Order Limits.</p> <p>Update to Compensation area for nitrogen deposition.</p> <p>The figure is not re-issued, Order Limits and Compensation area for nitrogen deposition shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9																																								

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]		
6.2 Environmental Statement - Figure 10.2 - Soil Scape Mapping [APP-300]	Figure 10.2 requires reissuing due to corruption issue with Version 1, which opened with error message	Figure 10.2 is amended to resolve error message. Resubmitted in December 2022 as: Additional Submission - 6.2 Environmental Statement - Figure 10.2 - Soil Scape Mapping (Version 2) - Accepted at the discretion of the Examining Authority [AS-047]	Section 51 submission December 2022
6.2 Environmental Statement - Figure 10.2 - Soil Scape Mapping [AS-047] Document not re-issued. Updates identified in ES Addendum only.	Figure 10.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 3 and 4 of 6 of ES Figure 10.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 10.3 – Provisional Agricultural Land Classification Mapping Version 1 [APP-301] Document not re-issued. Updates	Figure 10.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 3 and 4 of 6 of ES Figure 10.3 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement - Figure 10.4 - Agricultural Land Classification Mapping [APP-302]	Figure 10.4 requires amendment to show the reduction in the area of land within Order Limits as a result of: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] This update ensures Figure 10.4 remains aligned with the revised information presented in this ES Addendum for ES Chapter 10 and ES Appendix 10.4. An error in the shading for Grade 3A agricultural land at East Tilbury is also corrected.	Pages 1, 3 and 4 of 6 of ES Figure 10.4 are amended as follows: Update to Order Limits. Correction to Grade 3A agricultural land. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 10.4 - Agricultural Land Classification Mapping (Clean) (Version 2) 6.2 Environmental Statement – Figure 10.4 - Agricultural Land Classification Mapping (Tracked) (Version 2)	Deadline 9
6.2 Environmental Statement – Figure 10.5 – Refined Conceptual Site Model - Credible Contamination Sources [APP-303]	Figure 10.5 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002]	Pages 1, 3 and 4 of 6 of ES Figure 10.5 are amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition. The figure is not re-issued, Order Limits and Compensation area for nitrogen deposition shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]		
6.2 Environmental Statement – Figure 10.6 – Superficial Deposits [APP-304] Document not re-issued. Updates identified in ES Addendum only.	Figure 10.6 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 2 and 3 of 4 of ES Figure 10.6 are amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition. The figure is not re-issued, Order Limits and Compensation area for nitrogen deposition shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 10.7 – Bedrock Geology [APP-305] Document not re-issued. Updates identified in ES Addendum only.	Figure 10.7 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 2 and 3 of 4 of ES Figure 10.7 are amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition. The figure is not re-issued, Order Limits and Compensation area for nitrogen deposition shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure	Figure 10.8 requires amendment to update Order Limits and Nitrogen	ES Figure 10.8 is amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
10.8 – Local Geological Sites [APP-306] Document not re-issued. Updates identified in ES Addendum only.	Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	The figure is not re-issued, Order Limits and Compensation area for nitrogen deposition shown on these pages should be read with reference to ES Addendum Figure 1.	
6.2 Environmental Statement – Figure 10.9 – Unexploded Ordnance Map [APP-307] Document not re-issued. Updates identified in ES Addendum only.	Figure 10.9 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1 and 2 of 3 of ES Figure 10.9 are amended as follows: Update to Order Limits. Update to Compensation area for nitrogen deposition. The figure is not re-issued, Order Limits and Compensation area for nitrogen deposition shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
ES Appendices			
6.3 Environmental Statement – Appendix 10.3 – Site Walkover Factual Report [APP-424] Document not re-issued. Updates identified in ES Addendum only.	Appendix 10.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Plate A.1 of ES Appendix 10.3 is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.3 Environmental Statement – Appendix 10.4 - Agricultural Land Classification Factual Report [APP-425]</p>	<p>Tables 2.5, 3.5 and 4.1 and paragraphs 2.8.2 and 3.8.2 require amendment to present the revised figures for agricultural land. These figures have been updated due to the reduction in the area of land within Order Limits as a result of: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Tables 2.5, 3.5 and 4.1 of ES Appendix 10.4 are amended to present the revised figures for agricultural land. Paragraphs 2.8.2 and 3.8.2 of Appendix 10.4 are amended to correct an error in cross referencing sections of the appendix. Resubmitted 11 December 2023 as: 6.3 Environmental Statement – Appendix 10.4 - Agricultural Land Classification Factual Report (Clean) (Version 2) 6.3 Environmental Statement – Appendix 10.4 - Agricultural Land Classification Factual Report (Tracked) (Version 2)</p>	<p>Deadline 9</p>
<p>6.3 Environmental Statement – Appendix 10.4 - Agricultural Land Classification Factual Report [APP-425]</p>	<p>Figure 1 in Appendix 10.4 requires amendment to update Order Limits shown in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] An error in the shading for Grade 3A agricultural land at East Tilbury is also corrected.</p>	<p>Pages 7, 8, 10 and 19 of 19 of Figure 1 of ES Appendix 10.4 are amended as follows: Update to Order Limits. Correction to Grade 3A agricultural land. Resubmitted 11 December 2023 as: 6.3 Environmental Statement – Appendix 10.4 - Agricultural Land Classification Factual Report (Clean) (Version 2) 6.3 Environmental Statement – Appendix 10.4 - Agricultural Land Classification Factual Report (Tracked) (Version 2)</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.3 Environmental Statement – Appendix 10.6 – Preliminary Risk Assessment Report [APP-427] Document not re-issued. Updates identified in ES Addendum only.	Appendix 10.6 requires amendment to update Order Limits and Nitrogen Deposition Compensation Areas shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Plates 5.4, 5.5, 5.8, 5.9, 6.1 and 6.2, Figure 1 - Pages 1 and 2 of 3, Figure 2 - Page 2 of 4, Figure 3 - Page 2 of 4, Figure 4 - Page 2 of 4 of ES Appendix 10.6 are amended as follows: Update to Order Limits. Update to Nitrogen Deposition Compensation Areas. The appendix is not re-issued, Order Limits and Nitrogen Deposition Compensation Areas shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 10.7 – East Tilbury Landfill Risk Assessment [APP-428] Document not re-issued. Updates identified in ES Addendum only.	Appendix 10.7 requires amendment to update Order Limits shown, in relation to: Amendments EA04 and EA05 [CR2-002]	Figure 1 of ES Appendix 10.7 is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 10.8 – Generic Quantitative Risk Assessment Report for the Phase 1 Investigation [APP-429]	Appendix 10.8 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Plate 6.2 and Figure A - Page 3 of 3 of ES Appendix 10.8 is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.			
6.3 Environmental Statement – Appendix 10.9 – Generic Quantitative Risk Assessment Report for the Phase 2 Investigation (2 of 3) [APP-431] Document not re-issued. Updates identified in ES Addendum only.	Appendix 10.9 (2 of 3) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Annex B Plates 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.10, 5.11, 5.12 and 5.13 and Annex B Figure B of ES Appendix 10.9 (2 of 3) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 10.9 – Generic Quantitative Risk Assessment Report for the Phase 2 Investigation (3 of 3) [APP-432] Document not re-issued. Updates identified in ES Addendum only.	Appendix 10.9 (3 of 3) requires amendment to update the recommended further assessment for one low risk potential source of contamination.	ES Appendix 10.9 (3 of 3) is amended to correct erratum on one page of Annex D-A of Annex D. The following information is inserted for HLU01140: Implementation of standard protocols including watching brief and materials management as detailed in the REAC as required. The appendix is not re-issued.	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.3 Environmental Statement – Appendix 10.9 – Generic Quantitative Risk Assessment Report for the Phase 2 Investigation (3 of 3) [APP-432] Document not re-issued. Updates identified in ES Addendum only.	Appendix 10.9 (3 of 3) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]	Annex C Plates 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.8 and 5.9, Annex C Figure B, Annex D Plates 5.1, 5.2, 5.3 and 5.4 Table 5.3, 5.4 and 5.5 of ES Appendix 10.9 (3 of 3) is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy [APP-434]	Appendix 10.11 requires amendment to address a small number or minor errors in existing text, including reference to REAC item which does not exist.	ES Appendix 10.11 is amended to correct minor errors. Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy (Clean) (Version 2) [REP1-165] 6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy (Tracked) (Version 2) [REP1-164]	Deadline 1
6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy [REP1-165] Document further revised since Version 2 but not re-issued.	Appendix 10.11 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Annex A - Page 2 of 3 of ES Appendix 10.11 is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Updates identified in ES Addendum only.			

3.12 ES Chapter 11 Material Assets and Waste

3.12.1 The following changes have been made throughout Examination to ES Chapter 11, associated figures and appendices, as set out in Table 3.8.

Table 3.8 Updates to Chapter 11, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 11 – Material Assets and Waste [APP-149] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 11.5.19 are required to update REAC MW012 to remain consistent with the changes made in Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038].	Paragraph 11.5.19, bullet point a (ii), of ES Chapter 11 is amended to: (ii) The Contractors would use the methodology in the Excavated Materials Assessment (Application Document 6.3, Appendix 11.1) to identify offsite facilities and/or schemes that score positively against the sustainability scoring system presented in that document. Sites would be considered acceptable where they perform no worse than those sites on the detailed assessment list (at the time of submission of the DCO application) (REAC Ref. MW012).	Deadline 6
6.1 Environmental Statement - Chapter 11 – Material Assets and Waste [APP-149] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 11.5.19 are required to update REAC MW013 to remain consistent with the changes made in Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122].	Paragraph 11.5.19, bullet point a (iii), of ES Chapter 11 is amended to: iii. Where reuse is not practical recycling and recovery of materials would be the next preferred option. Through a combination of one or more of reuse, recycling and/or recovery the Contractors shall achieve a minimum of 70% (by weight) with a target of 90% (by weight) of non hazardous excavated wastes and a minimum of 70% (by weight) with a target of 90% (by weight) of non-hazardous construction and demolition waste that are destined for off-site waste management outside the Order Limits, and	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	in response to stakeholder engagement.	therefore would be diverted from final disposal in landfill (REAC Ref. MW013).	
6.1 Environmental Statement - Chapter 11 – Material Assets and Waste [APP-149]	Chapter 11 requires amendment to update the chapter in line with the updates to the commitments for disposal of waste and REAC Ref. MW013 presented at Deadline 7.	<p>Amendments have been made to ES Chapter 11, including the following:</p> <p>Paragraph 11.3.54 is updated to remove reference to REAC Ref. MW013, as MW013 has been updated to remove reference to the 70% target.</p> <p>Paragraph 11.4.12 is updated to ensure consistency with the updates made to REAC Ref. MW013 within the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122].</p> <p>Paragraph 11.5.20 covering offsite excavated material management is updated to ensure consistency with the updates made to REAC Ref. MW012 within the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038].</p> <p>Paragraphs 11.6.9 and 11.6.10 are updated to ensure consistency with the updates made to REAC Ref. MW013 within the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122].</p> <p>Table 11.12 is updated to remove reference to REAC Ref. MW013, as REAC Ref. MW013 has been updated to remove reference to the 70% target.</p> <p>Chapter 11 – Material Assets and Waste (Version 2) has also been updated to include the amendments presented in the ES Addendum at previous deadlines. Other minor errata items and typographical errors identified whilst updating the chapter have also been updated.</p> <p>Resubmitted 11 December 2023 as:</p> <p>6.1 Environmental Statement - Chapter 11 – Material Assets and Waste (Clean) (Version 2)</p> <p>6.1 Environmental Statement - Chapter 11 – Material Assets and Waste (Tracked) (Version 2)</p>	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Figures			
6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment [APP-308]	Figure 11.1 requires amendment to incorporate omitted active landfill sites.	Figure 11.1 is amended to include omitted active landfill sites. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Clean) (Version 2) [REP1-152] 6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Tracked) (Version 2) [REP1-153]	Deadline 1
6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment [REP1-152]	Figure 11.1 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] Figure 11.1 also requires amendment to correct errata with baseline waste treatment facilities data. Year updated from 2021 to 2022 in the Environment Agency copyright.	Pages 1, and 2 of 3 of Figure 11.1 are amended as follows: Update to Order Limits. To correct errata with baseline waste treatment facilities data. Year updated from 2021 to 2022 in the Environment Agency copyright. Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Clean) (Version 3) 6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Tracked) (Version 3)	Deadline 9
ES Appendices			
6.3 Environmental Statement – Appendix 11.1 – Excavated Materials Assessment [APP-435]	Updates to text in paragraph 2.1.11 are required to update REAC MW012 to remain consistent with the changes made in Code of	Paragraph 2.1.11, bullet point c, of Appendix 11.1 is amended to: c. The Contractors would use the methodology described in Appendix 11.1, Excavated Materials Assessment [this document], to identify sites that score positively against a sustainability scoring system agreed with The Applicant. Sites would be considered acceptable where they perform	Deadline 6

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] .	no worse than those sites on the detailed assessment list (at the time of submission of the DCO application) (REAC Ref. MW012).	
6.3 Environmental Statement - Appendix 11.1 – Excavated Materials Assessment [APP-435] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 2.1.17 are required to update REAC MW012 to remain consistent with the changes made in Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] .	Paragraph 2.1.17 of Appendix 11.1 is amended to: Should alternative options be considered these would be assessed using the criteria established in this document. The Contractors would assess any new receiver sites (and/or existing sites) that are proposed using the methodology presented in the Excavated Materials Assessment. Sites would be considered acceptable where they perform no worse than those sites on the detailed assessment list (at the time of submission of the DCO application) (REAC Ref. MW012).	Deadline 6
6.3 Environmental Statement - Appendix 11.1 – Excavated Materials Assessment [APP-435] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 3.1.45 are required to update REAC MW012 to remain consistent with the changes made in Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] .	Paragraph 3.1.45 of Appendix 11.1 is amended to: It is acknowledged that some of the potential receiver sites listed in the assessment have received excavated materials from other major infrastructure projects (of similar nature to the Project) including Crossrail and Thames Tideway. Projects including HS2 are potentially set to send excavated material to potential receiver sites listed in the assessment. Therefore, the capacity at some receiving sites may have depleted before construction starts on the Project. The Excavated Materials Assessment represents the available sites at a point in time. The Contractors would use the methodology described in this document, to identify reuse sites that score positively against a sustainability scoring system agreed with the Applicant. Sites would be considered acceptable where they perform no worse than those sites on the detailed assessment list (at the time of submission of the DCO application) (REAC Ref. MW012).	Deadline 6
6.3 Environmental Statement - Appendix 11.1 – Excavated	Updates to text in paragraph 3.1.48 are required to update REAC MW012 to remain consistent with the changes	Paragraph 3.1.48 of Appendix 11.1 is amended to: This Excavated Materials Assessment provides the methodology and flexibility for such potential receiver sites to be used in future following further assessment during detailed design. It is also likely that other sites	Deadline 6

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Materials Assessment [APP-435] Document not re-issued. Updates identified in ES Addendum only.	made in Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] .	would become available before construction commences. The Contractors would assess any new receiver sites (and/or existing sites) that are proposed, using the methodology presented in the Excavated Materials Assessment. Sites would be considered acceptable where they perform no worse than those sites on the detailed assessment list (at the time of submission of the DCO application) (REAC Ref. MW012). Sites would be considered acceptable where they perform no worse than those sites on the detailed assessment list (at the time of submission of the DCO application).	
6.3 Environmental Statement – Appendix 11.2 – Mineral Safeguarding Assessment [APP-436] Document not re-issued. Updates identified in ES Addendum only.	Appendix 11.2 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Figure 1 - Pages 1 and 2 of 3, Figure 2 - Pages 1 and 2 of 3, Figure 3 - Pages 1 and 2 of 3 of Appendix 11.2 are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors [APP-437] Document not re-issued. Updates identified in ES Addendum only.	Table 1.1 of Appendix 11.3 is incomplete and requires amendment to incorporate information on all active landfills within the study area.	Table 1.1 of ES Appendix 11.3 is amended to include the omitted data. Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors (Clean) (Version 2) [REP1-166] 6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors (Tracked) (Version 2) [REP1-167]	Deadline 1

3.13 ES Chapter 12 Noise and Vibration

3.13.1 The following changes have been made throughout Examination to ES Chapter 12, associated figures and appendices, as set out in Table 3.9.

Table 3.9 Updates to Chapter 12, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates identified in ES Addendum only.	Table 12.33 on page 96 requires revision to correct error against Construction noise receptor CN 77.	Conclusion text (indicated in bold) in Table 12.33 on page 96 of ES Chapter 12 is amended to: However, based upon the transient nature of these activities, the exceedance above a SOAEL associated would not be expected to occur for a duration of 10 or more days in any 15 consecutive day period or for more than 15 days in any six-month period and would therefore be unlikely to constitute a significant effect on the basis of duration not constitute a significant effect on the basis of duration.	Deadline 4
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 12.3.62 requires revision to correct the reported future assessment year from 2044 to 2045.	Paragraph 12.3.62 of ES Chapter 12 is amended to: Modelling techniques have been used to calculate future road traffic noise levels across the operational road traffic noise study area. This has been done for all receptors identified for the future assessment year of 2044 2045 in accordance with the requirements of DMRB LA 111.	Deadline 4
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150]	Updates to text in paragraph 12.6.127 bullet point b) are required to correct an error related to the number of significant beneficial effects.	Paragraph 12.6.127 bullet point b) of ES Chapter 12 is amended to: b. Nine dwellings: one dwelling (No. 2 Potash Cottages, Orsett) which reports a Minor beneficial change above a SOAEL during the daytime and nighttime periods, with a further nine eight dwellings reporting a significant effect during the night-time only.	Deadline 5

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.			
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 12.5.15 are required to update REAC NV013 to remain consistent with the changes made in the CoCP (Version 5) [REP5-050] in response to ExQ1 - the Examining Authority's written questions and requests for information [PD-029] .	Paragraph 12.5.15 of ES Chapter 12 is amended to: NV013 of the REAC states that: <i>'For the locations identified on ES Figure 12.6, a surfacing system that has a reported noise Road Surface Influence (RSIH) of -7.5dB(A) or better in accordance with the Highway Authorities Product Approval Scheme [HAPAS] certification system shall be installed. For the locations identified on ES Figure 12.6, a 'Level 3' (i.e. RSIH -3.5 dB(A) or better), very quiet surfacing material, as defined by Manual Specification for Highways Works Volume 1, Series 0900, Table 9-17, shall be installed on all other new and altered trunk roads and associated slip roads forming part of the Project. For the locations identified on ES Figure 12.6, a 'Level 2' (i.e. RSIH - 2.5dB(A) or better), quieter than Hot Rolled Asphalt (HRA) surfacing material, as defined by Manual Specification for Highways Works Volume 1, Series 0900, Table 9- 17, shall be installed on all new and altered local roads forming part of the Project. Surface renewal will be undertaken using replacement road pavement on the strategic road network that has a no worse noise emission performance (HAPAS certification values) than that laid for the scheme's opening.'</i>	Deadline 5
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates	Paragraph 12.6.202 is updated to include the new REAC reference number, where mitigation measures identified in Chapter 12 are now secured in the CoCP	Paragraph 12.6.202 of Chapter 12 is amended to: A final assessment and verification of possible eligibility under the Noise Insulation Regulations will be undertaken within the first year of the Project opening (REAC Ref. NV018).	Deadline 5

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	(Version 5) [REP5-050] as REAC reference NV018.		
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 12.8.7 is updated to include the new REAC reference number, where mitigation measures identified in Chapter 12 are now secured in the CoCP (Version 5) [REP5-050] as REAC reference NV019. Text is also amended to align with the REAC item.	Paragraph 12.8.7 of Chapter 12 is amended to: 12.8.7 While, for the reasons outlined in paragraph 12.8.5, physical monitoring of noise levels as a means of verification will not be undertaken as part of the Project, the performance specification of specific operational mitigation measures would be confirmed at preopening stage prior to opening of the road (REAC Ref. NV019). This would consider issues such as the following: a. Visual surveys to ensure that mitigation secured through REAC Ref. NV011 are implemented appropriately and correctly installed onsite (length, height and position), and fitment is to a good quality of workmanship. b. Review of installation specifications (Highway Authority Product Approval Scheme Certification, sound reduction index performance certification) to ensure the performance assumptions in the ES assessment, secured under REAC commitment NV013, are achieved by the products installed onsite, including consideration of deterioration. c. Ongoing maintenance and upkeep of acoustic mitigation measures to ensure that performance does not deteriorate outside of allowable tolerances from DMRB LD 119 (National Highways, 2020e) through ongoing maintenance programmes associated with the Project.	Deadline 5
6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates	Updates to text in paragraph 12.5.13 bullet point l.i) are required to update REAC NV015 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version	Paragraph 12.5.13 bullet point l.i), of ES Chapter 12 is amended to: l. Action in case of construction Noise or Vibration exceedance (REAC Ref. NV015): i. In the event that noise and vibration monitoring (as provided for in NV009) identifies that noise and vibration limits (as provided for in NV004) have been exceeded, the Contractors shall, at the earliest reasonably practicable opportunity, investigate to confirm that works being undertaken as part of the Project are the source of the noise and / or vibration. If this is	Deadline 6

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>identified in ES Addendum only.</p>	<p>6) [REP6-038] in response to stakeholder engagement.</p>	<p>confirmed, then the Contractor shall immediately undertake a further review of the best practicable means (as defined under the Control of Pollution Act, 1974) employed for the activity to minimise noise and / or vibration and agree additional or modified mitigation with the relevant local authorities unless otherwise agreed with the SoS. The specific time period shall be a matter which forms part of the Noise and Vibration Management Plan (NV002) and, where appropriate, subject to consent by the relevant local authorities under Section 61 of the Control of Pollution Act 1974.</p>	
<p>6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text in paragraph 12.5.13 bullet point m.i) are required to update REAC NV017 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] in response to stakeholder engagement.</p>	<p>Paragraph 12.5.13 bullet point m.i), of ES Chapter 12 is amended to: m. Vibration from piling construction activities (REAC Ref. NV017): i. Works to any structures requiring piling Any construction works with the potential to generate discernible levels of ground-borne vibration outside of the site boundary including piling and the use of vibratory compaction rollers and located within 100m of any Vibration Sensitive Receptor as defined under DMRB LA 111 may require further specific mitigation and control measures to reduce the level of vibration from piling construction activities within the specified distance beyond Best Practicable Means (BPM) defined under BS 5228-2. Where significant effects on Vibration Sensitive Receptors are identified in ES Figure 12.1, the contractor shall as part of the Noise and Vibration Management Plan (NVMP) (REAC item NV002) set out the measures beyond BPM to minimise those effects as a result of the Project's construction works. The NVMP must set out details of a risk assessment of each building which is a Vibration Sensitive Receptor to determine susceptibility to damage from vibration and define acceptable vibration limits that the works must comply with to avoid physical or structural damage. The NVMP should also contain details of reasonable practicable measures and methods adopted to reasonably minimise noise and vibration impacts on buildings which remain occupied during the works. This NVMP would be provided to the relevant local planning authorities as part of an application submitted under the Control of Pollution Act (CoPA) 1974 Section 61 (REAC item NV004) which is</p>	<p>Deadline 6</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		relevant to the works caught by the NVMP. Following the implementation of these control measures, compliance with vibration limits will be monitored, reported and managed in accordance with REAC commitments NV009 and NV015.	
<p>6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text in paragraph 12.5.13 bullet point I.i) are required to update REAC NV015 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7)-[REP7-122] in response to stakeholder engagement.</p>	<p>Paragraph 12.5.13 bullet point I.i) of ES Chapter 12 (as amended at Deadline 6) is updated to: I. Action in case of construction Noise or Vibration exceedance (REAC Ref. NV015): i. In the event that noise and vibration monitoring (as provided for in NV009) identifies that noise and vibration limits (as provided for in NV004) have been exceeded, the Contractors shall, at the earliest reasonably practicable opportunity, investigate to confirm that works being undertaken as part of the Project are the source of the noise and / or vibration. If this is confirmed, then the Contractor shall immediately undertake a further review of the best practicable means (as defined under the Control of Pollution Act, 1974) employed for the activity to minimise noise and / or vibration and agree additional or modified mitigation with the relevant local authorities unless otherwise agreed with the SoS. The specific time period shall be a matter which forms part of the Noise and Vibration Management Plan (NV002) and, where appropriate, subject to consent by the relevant local authorities under Section 61 of the Control of Pollution Act 1974. In the event that best practicable measures are not sufficient to attenuate noise and/or vibration impacts from the Project in line with the limits agreed in the Section 61 consent, a scheme for the installation of noise insulation or the reasonable costs thereof, or a scheme to facilitate temporary rehousing of occupants, as appropriate, will be implemented.</p>	<p>Deadline 7</p>
<p>6.1 Environmental Statement - Chapter 12 – Noise and Vibration [APP-150]</p>	<p>Updates to text in paragraph 12.6.202 are required to update REAC NV018 to remain consistent with the changes made in the Code</p>	<p>Paragraph 12.6.202 of ES Chapter 12 (as amended at Deadline 5) is updated to: A final assessment and verification of possible eligibility under the Noise Insulation Regulations will be undertaken within the first year six months of the Project opening (REAC Ref. NV018).</p>	<p>Deadline 7</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122] in response to stakeholder engagement.		
ES Figures			
6.2 Environmental Statement – Figure 12.1 – Construction Noise and Vibration Study Area [APP-309]	Figure 12.1 requires amendment to update locations of Muckingford Road and Low Street Lane Utilities Logistics Hubs, in relation to: Change MRC03 [CR1-002]	Page 2 of 4 of ES Figure 12.1 is amended as follows: Update to Utilities Logistics Hubs (ULH11 and ULH 12). Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 12.1 – Construction Noise and Vibration Study Area (Clean) (Version 2) 6.2 Environmental Statement – Figure 12.1 – Construction Noise and Vibration Study Area (Tracked) (Version 2)	Deadline 9
6.2 Environmental Statement – Figure 12.2 – Construction Traffic Noise - Affected Links [APP-310]	Figure 12.2 requires amendment to update locations of Muckingford Road and Low Street Lane Utilities Logistics Hubs construction haul routes, in relation to: Change MRC03 [CR1-002]	Pages 2 and 3 of 5 of ES Figure 12.2 are amended as follows: Update to Utilities Logistics Hubs (ULH11 and ULH 12). Resubmitted 11 December 2023 as: 6.2 Environmental Statement – Figure 12.2 – Construction Traffic Noise - Affected Links (Clean) (Version 2) 6.2 Environmental Statement – Figure 12.2 – Construction Traffic Noise - Affected Links (Tracked) (Version 2)	Deadline 9
ES Appendices			
6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment [APP-444]	Table 2.5 of Appendix 12.4 included erroneous daily haulage movement data by construction phase.	Table 2.5 of ES Appendix 12.4 is amended to include the corrected haulage movement data by construction phase. Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment (Clean) (Version 2) [REP1-169]	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment (Tracked) (Version 2) [REP1-168]	
6.3 Environmental Statement – Appendix 12.5 – Baseline Noise Survey Information [APP-445] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 1.34 and Paragraph 1.35 of Appendix 12.5 require amendment to address errata in relation to road naming.	Paragraph 1.34 of ES Appendix 12.5 is amended to: <u>Survey position description</u> <i>Monitoring location adjacent to Ackers Lane Ackers Drive, Swanscombe, DA10 1AZ. Meter located at the bottom of embankment just north of Spring River hotel.</i> Paragraph 1.35 of Appendix 12.5 is amended to: <u>Monitoring location description</u> <i>Queens Garden Queens Gardens, Dartford, DA2 6HZ.</i>	Section 51 submission December 2022

3.14 ES Chapter 13 Population and Human Health

3.14.1 The following changes have been made throughout Examination to ES Chapter 13, associated figures and appendices, as set out in Table 3.10.

Table 3.10 Updates to Chapter 13, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.	Chapter 13 requires revision to correct the eight instances of 'Gammon Field' Travellers Site' with 'Gammonfields Way Travellers' Site'.	ES Chapter 13 is amended to replace the eight instances of 'Gammon Field' Travellers Site' with Gammonfields Way Travellers' Site .	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date												
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p> <p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraph 8.6.448 references assessment detailed in Chapter 13 in relation to recreational pressure at Shorne Woods Country Park as a result of the proposed Thong Lane car park. Chapter 13 omitted to include a detailed assessment of changes in recreational pressure as a result of the new car park as referenced in Chapter 8.</p>	<p>No amendment to ES Chapter 8 [APP-146] or ES Chapter 13 [APP-151] is proposed.</p> <p>A technical note has been prepared to report on this assessment topic and respond to specific comments raised by Natural England. This technical note is presented in Appendix A of this ES Addendum.</p> <p>Update at Deadline 9: As a result of amendment EA08 Thong Lane Car Park removal [REP6A-023] the information presented in Appendix E related to the proposed car park has been updated</p>	<p>Deadline 1</p>												
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 13.56 requires revision to the description of receptors.</p> <p>Table 13.74 requires revision to the reported number of properties requiring demolition from 26 to 31 properties to the north of the River Thames.</p>	<p>The following row in Table 13.56 of ES Chapter 13 is amended to:</p> <p>Table 13.56 Residential properties subject to demolition – north of River Thames</p> <table border="1" data-bbox="835 890 1805 1332"> <thead> <tr> <th data-bbox="835 890 1077 970">Receptor</th> <th data-bbox="1077 890 1319 970">Sensitivity</th> <th data-bbox="1319 890 1561 970">Magnitude of impact</th> <th data-bbox="1561 890 1805 970">Significance of effect</th> </tr> </thead> <tbody> <tr> <td data-bbox="835 970 1077 1198"> <p>1-2 Whitfield Cottages, Whitfield Cottage, Barn View and Stable View, Stifford Clays Road</p> </td> <td data-bbox="1077 970 1319 1198"> <p>High</p> </td> <td data-bbox="1319 970 1561 1198"> <p>Major adverse</p> </td> <td data-bbox="1561 970 1805 1198"> <p>Very large adverse</p> </td> </tr> <tr> <td data-bbox="835 1198 1077 1332"> <p>Yellow Stock Mews 1-5 Yellow Stock Mews, Ockendon Road</p> </td> <td data-bbox="1077 1198 1319 1332"> <p>High</p> </td> <td data-bbox="1319 1198 1561 1332"> <p>Major adverse</p> </td> <td data-bbox="1561 1198 1805 1332"> <p>Very large adverse</p> </td> </tr> </tbody> </table>	Receptor	Sensitivity	Magnitude of impact	Significance of effect	<p>1-2 Whitfield Cottages, Whitfield Cottage, Barn View and Stable View, Stifford Clays Road</p>	<p>High</p>	<p>Major adverse</p>	<p>Very large adverse</p>	<p>Yellow Stock Mews 1-5 Yellow Stock Mews, Ockendon Road</p>	<p>High</p>	<p>Major adverse</p>	<p>Very large adverse</p>	<p>Deadline 1</p>
Receptor	Sensitivity	Magnitude of impact	Significance of effect												
<p>1-2 Whitfield Cottages, Whitfield Cottage, Barn View and Stable View, Stifford Clays Road</p>	<p>High</p>	<p>Major adverse</p>	<p>Very large adverse</p>												
<p>Yellow Stock Mews 1-5 Yellow Stock Mews, Ockendon Road</p>	<p>High</p>	<p>Major adverse</p>	<p>Very large adverse</p>												

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																				
		<p>The following row in Table 13.74 of ES Chapter 13 is amended to:</p> <p style="text-align: center;">Table 13.74 Land-use and accessibility sub-topics summary impact table</p> <table border="1" data-bbox="837 363 1805 695"> <thead> <tr> <th data-bbox="837 363 1028 443">Impact description</th> <th data-bbox="1032 363 1223 443">Sensitivity</th> <th data-bbox="1227 363 1417 443">Impact magnitude</th> <th data-bbox="1422 363 1612 443">Effect</th> <th data-bbox="1617 363 1805 443">Significance</th> </tr> </thead> <tbody> <tr> <td colspan="5" data-bbox="837 446 1805 475">Construction</td> </tr> <tr> <td colspan="5" data-bbox="837 478 1805 507">North of the River Thames</td> </tr> <tr> <td data-bbox="837 510 1028 695">Private property and housing – 26 31 properties affected by demolition</td> <td data-bbox="1032 510 1223 695">High</td> <td data-bbox="1227 510 1417 695">Major adverse</td> <td data-bbox="1422 510 1612 695">Very large / large adverse</td> <td data-bbox="1617 510 1805 695">Significant</td> </tr> </tbody> </table> <p>This update to the number of demolished properties is also relevant to the Health and Equalities Impact Assessment (HEqIA) [APP-539]. This update is reported in the Errata Report (Version 2) [REP1-004].</p>	Impact description	Sensitivity	Impact magnitude	Effect	Significance	Construction					North of the River Thames					Private property and housing – 26 31 properties affected by demolition	High	Major adverse	Very large / large adverse	Significant	
Impact description	Sensitivity	Impact magnitude	Effect	Significance																			
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Private property and housing – 26 31 properties affected by demolition	High	Major adverse	Very large / large adverse	Significant																			
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 13.66 requires amendment to include further information on the Two Forts Way temporary closures and alternative route available.</p>	<p>Table 13.66 of ES Chapter 13 is amended to include further information on Two Forts Way temporary closures:</p> <p style="text-align: center;">Table 13.66 PRow temporarily or permanently affected by the Project – north of the River Thames</p> <table border="1" data-bbox="837 1007 1805 1364"> <thead> <tr> <th data-bbox="837 1007 981 1150">Receptor</th> <th data-bbox="985 1007 1176 1150">Nature of effect</th> <th data-bbox="1180 1007 1301 1150">Change in journey length</th> <th data-bbox="1305 1007 1460 1150">Sensitivity of route</th> <th data-bbox="1464 1007 1619 1150">Magnitude of impact</th> <th data-bbox="1624 1007 1805 1150">Significance of effect</th> </tr> </thead> <tbody> <tr> <td data-bbox="837 1153 981 1364">FP146</td> <td data-bbox="985 1153 1176 1364">This route would be subject to a temporary closure for a period of less than one</td> <td data-bbox="1180 1153 1301 1364">No change</td> <td data-bbox="1305 1153 1460 1364">Medium</td> <td data-bbox="1464 1153 1619 1364">No change</td> <td data-bbox="1624 1153 1805 1364">Neutral</td> </tr> </tbody> </table>	Receptor	Nature of effect	Change in journey length	Sensitivity of route	Magnitude of impact	Significance of effect	FP146	This route would be subject to a temporary closure for a period of less than one	No change	Medium	No change	Neutral	<p>Deadline 1</p>								
Receptor	Nature of effect	Change in journey length	Sensitivity of route	Magnitude of impact	Significance of effect																		
FP146	This route would be subject to a temporary closure for a period of less than one	No change	Medium	No change	Neutral																		

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			<p>month to allow for a section of the Two Forts Way to be upgraded for use by pedestrians and cyclists. For the duration of the temporary closure, an alternative route would be available for users, via the realigned England Coast Path.</p>					
		FP146	<p>The Two Forts Way would be subject to a further temporary closure for a period of approximately eight weeks to allow for the installation of a water inlet</p>	No change	Medium	No change	Neutral	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			with self-regulating valve into the sea wall. An alternative route would be available for users of the Two Forts Way during this period, via the realigned England Coast Path.					
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 13.73 Human health assessment – operation requires amendment to correct a mistake in the text.</p>	<p>Page 236, Table 13.73 Human health assessment – operation, text under the health outcome column is amended to: The health outcome for affected communities / sensitive populations as a result of changes in air quality during construction operation is assessed as neutral.</p>						<p>Deadline 3</p>
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates</p>	<p>Updates to text are required related to amendment EA01 Claylane Wood, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002].</p>	<p>Table 13.51 of ES Chapter 13 provides a summary of replacement land/land to mitigate impacts identified. The row relating to Claylane Wood is deleted from Table 13.51. Table 13.57 of ES Chapter 13 sets out the effects on community land to the south of the River Thames during the construction phase of the Project. The row relating to Claylane Wood is deleted from Table 13.57 by virtue of the fact that Claylane Wood is privately owned and not accessible to members of the public.</p>						<p>Deadline 3</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																
identified in ES Addendum only.	Text related to open space designation and proposed replacement public open space at Claylane Wood is amended.	Table 13.69 of ES Chapter 13 sets out the effects on community land to the south of the River Thames during the operation phase of the Project. The row relating to Claylane Wood is deleted from Table 13.69 by virtue of the fact that Claylane Wood is privately owned and not accessible to members of the public. This update is also relevant to the Health and Equalities Impact Assessment (HEqIA) [APP-539] which is updated and reissued as version 2 at Deadline 3.																	
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.	Updates to text are required related to amendment EA04 Condovers Scout Activity Centre Order Limit reduction, as described in 10.2 Second Notification of Proposed Changes to the Planning Inspectorate [CR2-002]. Text related to the Condovers Scout Activity Centre is amended.	<p>Table 13.15 of ES Chapter 13 identifies community land north of the River Thames and the distance of these from Order Limits. The row in Table 13.15 relating to Condovers Scout Activity Centre is amended as follows:</p> <table border="1" data-bbox="842 596 1805 772"> <thead> <tr> <th data-bbox="842 596 1084 703">Site</th> <th data-bbox="1095 596 1386 703">Classification</th> <th data-bbox="1397 596 1805 703">Approximate distance from Order Limits (distances have been rounded)</th> </tr> </thead> <tbody> <tr> <td data-bbox="842 711 1084 772">Condovers Scout Activity Centre</td> <td data-bbox="1095 711 1386 772">Community activity</td> <td data-bbox="1397 711 1805 772">Within Order Limits Adjacent to Order Limits</td> </tr> </tbody> </table> <p>Table 13.58 of ES Chapter 13 sets out the effects on community land to the north of the River Thames during the construction phase of the Project. The row in Table 13.58 relating to Condovers Scout Activity Centre is amended as follows:</p> <table border="1" data-bbox="842 951 1805 1367"> <thead> <tr> <th data-bbox="842 951 1028 1031">Receptor</th> <th data-bbox="1039 951 1225 1031">Nature of impact</th> <th data-bbox="1236 951 1422 1031">Sensitivity</th> <th data-bbox="1433 951 1619 1031">Magnitude of impact</th> <th data-bbox="1630 951 1805 1031">Significance of effect</th> </tr> </thead> <tbody> <tr> <td data-bbox="842 1038 1028 1367">Condovers Scout Activity Centre</td> <td data-bbox="1039 1038 1225 1367">Temporary disruption associated with nearby utilities diversions and permanent rights over land. Works would be of</td> <td data-bbox="1236 1038 1422 1367">Medium</td> <td data-bbox="1433 1038 1619 1367">Negligible</td> <td data-bbox="1630 1038 1805 1367">Slight adverse</td> </tr> </tbody> </table>	Site	Classification	Approximate distance from Order Limits (distances have been rounded)	Condovers Scout Activity Centre	Community activity	Within Order Limits Adjacent to Order Limits	Receptor	Nature of impact	Sensitivity	Magnitude of impact	Significance of effect	Condovers Scout Activity Centre	Temporary disruption associated with nearby utilities diversions and permanent rights over land. Works would be of	Medium	Negligible	Slight adverse	Deadline 3
Site	Classification	Approximate distance from Order Limits (distances have been rounded)																	
Condovers Scout Activity Centre	Community activity	Within Order Limits Adjacent to Order Limits																	
Receptor	Nature of impact	Sensitivity	Magnitude of impact	Significance of effect															
Condovers Scout Activity Centre	Temporary disruption associated with nearby utilities diversions and permanent rights over land. Works would be of	Medium	Negligible	Slight adverse															

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date
			short duration and not impact operation of the facility.				
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Updates to text in paragraph 13.5.35 are required to update REAC PH002 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 6) [REP6-038] in response to stakeholder engagement.</p>	<p>Paragraph 13.5.35 of ES Chapter 13 is amended to: A commitment in the REAC relates to the provision of healthcare services for the construction workforce. REAC Reference PH002 states that '<i>the Contractor will provide an appropriate range of medical and occupational healthcare services (including on-site facilities) to meet the physical and mental health needs of the construction workforce. The range of services will be agreed with National Highways the Secretary of State, following engagement with and having regard for the views of the Integrated Care Partnerships</i>'.</p>					<p>Deadline 6</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraphs 13.5.39 and 13.6.144 and Table 13.69 require revision to reflect amendment EA08 Thong Lane Car Park removal. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].</p>	<p>Paragraph 13.5.39 of ES Chapter 13 is amended as follows: Enhancements of relevance to population and human health are described below: a. The provision of a new car park area to the west of Thong Lane to provide recreational access to the PRow network and open spaces within the wider area (Design Principle S2.11). Facilities at the car park area shall include provision for buildings including a kiosk, toilets, changing and storage facility, and provide an area for cycle hire and cycle wash facility. The car park area shall also include provision for horsebox parking with suitable surfaced parking for 10-12 horseboxes, located away from the main car park circulation. b. The Project design incorporates provision of new routes for WCH, designed to improve access to the existing network, to increase access for users (including those with limited mobility) while considering and mitigating potential impacts from misuse and anti-social behaviour through good design. Total additional and improved provision equates to 64km of routes. New and improved routes which do not form part of the embedded mitigation for the Project, together with associated improvements to user experience, are summarised in Table 13.54, together with the Design Principle to which they relate. Paragraph 13.6.144 of ES Chapter 13 is deleted as follows: Environmental enhancement opportunities arising during operation have been identified in relation to the provision of a new car park area to the west of Thong Lane to provide recreational access to the PRow network and open spaces within the wider area (Design Principle S2.11). Facilities at the car park area include provision for buildings including a kiosk, toilets, changing and storage facility, and together with an area for cycle hire and cycle wash facility. The car park area would also include provision for horsebox parking with suitable surfaced parking for 10-12 horseboxes, located away from the main car park circulation. The car park and associated facilities would provide an additional means of accessing Shorne Woods Country Park particularly for residents from</p>	<p>Deadline 7</p>

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date										
		<p>the eastern outskirts of Gravesend, reducing journey times to the current access point from Brewers Road.</p> <p>Table 13.69 of ES Chapter 13 is amended as follows:</p> <p style="text-align: center;">Table 13.69 Effects on community land – south of River Thames</p> <table border="1" data-bbox="835 427 1805 1370"> <thead> <tr> <th data-bbox="835 427 1028 507">Receptor</th> <th data-bbox="1032 427 1225 507">Nature of impact</th> <th data-bbox="1229 427 1422 507">Sensitivity</th> <th data-bbox="1426 427 1619 507">Magnitude of impact</th> <th data-bbox="1624 427 1805 507">Significance of effect</th> </tr> </thead> <tbody> <tr> <td data-bbox="835 510 1028 1370">Shorne Woods Country Park</td> <td data-bbox="1032 510 1225 1370">Replacement land is immediately adjacent to the east of Shorne Woods Country Park and would be landscaped to match the existing site and use, allowing for the spaces to interlink together and function as one. The new area of woodland to the east would link Shorne Woods with Great Crabbles Wood, thus</td> <td data-bbox="1229 510 1422 1370">Very high</td> <td data-bbox="1426 510 1619 1370">Minor beneficial</td> <td data-bbox="1624 510 1805 1370">Large beneficial</td> </tr> </tbody> </table>					Receptor	Nature of impact	Sensitivity	Magnitude of impact	Significance of effect	Shorne Woods Country Park	Replacement land is immediately adjacent to the east of Shorne Woods Country Park and would be landscaped to match the existing site and use, allowing for the spaces to interlink together and function as one. The new area of woodland to the east would link Shorne Woods with Great Crabbles Wood, thus	Very high	Minor beneficial	Large beneficial	
Receptor	Nature of impact	Sensitivity	Magnitude of impact	Significance of effect													
Shorne Woods Country Park	Replacement land is immediately adjacent to the east of Shorne Woods Country Park and would be landscaped to match the existing site and use, allowing for the spaces to interlink together and function as one. The new area of woodland to the east would link Shorne Woods with Great Crabbles Wood, thus	Very high	Minor beneficial	Large beneficial													

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			<p>creating new recreational areas. The new car park and associated facilities provides additional means of access to the Country Park. A further area of ancient woodland compensation would be provided on land north of Brummelhill Wood and Randall Wood (to the north of Shorne Woods Country Park).</p>					
6.1 Environmental Statement - Chapter 13 - Population and		<p>This update is also relevant to the Health and Equalities Impact Assessment (HEqIA) [REP3-118] which is updated and reissued as version 3 at Deadline 7.</p> <p>Table 13.13 of ES Chapter 13 is amended to include an additional row: Table 13.13 Community land – south of the River Thames</p>						Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment			Amendment date	
<p>Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Plot 13-03 Open Space which comprises the provision of additional replacement open space on a precautionary basis to compensate for the permanent acquisition of an informal recreational walking route (plot 13-09 on Sheet 13 of Land Plans Volume B) to the rear of Gravesend Golf Centre. This is as described in Notification of proposed amendments – November 2023 [REP6A-023].</p>	<p>Site</p>	<p>Classification</p>	<p>Approximate distance from Order Limits (distances have been rounded)</p>		
		<p>Land to the rear of Gravesend Golf Centre</p>	<p>Informal recreation route</p>	<p>Within Order Limits</p>		
		<p>Table 13.51 of ES Chapter 13 is amended to include an additional row:</p>				
		<p>Table 13.51 Summary of replacement land/land to mitigate impacts identified</p>				
		<p>Site name</p>	<p>Area of land to be acquired/land in which permanent rights are sought</p>	<p>Area of land reprovided</p>		
<p>South of the River Thames</p>						
<p>Land to the rear of Gravesend Golf Centre</p>	<p>0.53ha (permanently acquired)</p>	<p>0.58ha</p>				
<p>Table 13.57 of ES Chapter 13 is amended to include an additional row:</p>						
<p>Table 13.57 Effects on community land – south of River Thames</p>						
<p>Receptor</p>	<p>Nature of impact</p>	<p>Sensitivity</p>	<p>Magnitude of impact</p>	<p>Significance of effect</p>		
<p>Land to the rear of Gravesend Golf Centre</p>	<p>The land is currently accessible off Thong Lane through the Cascade Leisure Centre site and consists of an informal path around the boundary of the closed 9-hole golf course. The route is in the ownership of Gravesham Borough</p>	<p>High</p>	<p>Minor</p>	<p>Slight adverse</p>		

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			<p>Council. The Applicant requires the permanent acquisition of land to provide a new recreational site (Chalk Park) including the creation of associated landscape and public rights of way. The land is not identified as open space in the Gravesham Open Space Assessment (2016) and does not follow the alignment of any public right of way, however, the Applicant proposes to treat this land as public open space on a precautionary basis. Accordingly, an area of replacement land has been included to the east of the existing informal path, as part of the proposals for Chalk Park. The replacement land is</p>					

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date										
			<p>anticipated to become available for public use five years after the existing land to the rear of Gravesend Golf Centre is impacted by the Project. Land to the rear of Gravesend Golf Centre is of high sensitivity due to the described frequency of use by members of the community. Impacts are considered to be minor adverse given the informal nature of usage. This results in a slight adverse significance of effect.</p>														
Table 13.69 of ES Chapter 13 is amended to include an additional row:																	
<table border="1"> <thead> <tr> <th data-bbox="842 1070 994 1142">Receptor</th> <th data-bbox="999 1070 1279 1142">Nature of impact</th> <th data-bbox="1283 1070 1440 1142">Sensitivity</th> <th data-bbox="1444 1070 1612 1142">Magnitude of impact</th> <th data-bbox="1617 1070 1809 1142">Significance of effect</th> </tr> </thead> <tbody> <tr> <td data-bbox="842 1145 994 1359">Land to the rear of Gravesend Golf Centre</td> <td data-bbox="999 1145 1279 1359">Replacement land is provided to the east of the existing informal path, as part of the proposals for Chalk Park. The replacement land is</td> <td data-bbox="1283 1145 1440 1359">High</td> <td data-bbox="1444 1145 1612 1359">Minor</td> <td data-bbox="1617 1145 1809 1359">Slight beneficial</td> </tr> </tbody> </table>								Receptor	Nature of impact	Sensitivity	Magnitude of impact	Significance of effect	Land to the rear of Gravesend Golf Centre	Replacement land is provided to the east of the existing informal path, as part of the proposals for Chalk Park. The replacement land is	High	Minor	Slight beneficial
Receptor	Nature of impact	Sensitivity	Magnitude of impact	Significance of effect													
Land to the rear of Gravesend Golf Centre	Replacement land is provided to the east of the existing informal path, as part of the proposals for Chalk Park. The replacement land is	High	Minor	Slight beneficial													

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date
			<p>more accessible than the current route; the route could be accessed from Gravesend off Thong Lane in the same way as currently, or alternatively from other directions from within Chalk Park by using the network of new and diverted WCH routes the new recreational landscape would accommodate.</p>				
		<p>This update is also relevant to the Health and Equalities Impact Assessment (HEqIA) [REP3-118] which is updated and reissued as version 3 at Deadline 7.</p>					
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p>	<p>Updates to text in Table 13.53 are required to update REAC commitment TB005 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8) [REP8-044] in</p>	<p>Table 13.53 of ES Chapter 13 is amended to: Invasive species would be identified prior to construction and, if recorded during the construction phase, would be removed or treated to prevent their spread, following the Construction Industry Research and Information Association’s guidance in Wade et al. (Invasive Species Management for Infrastructure Managers and the Construction Industry, 2008) (REAC Ref. TB005).</p>					<p>Deadline 8</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	<p>response to Question 11.1.11 in ExQ3 - The Examining Authority's written questions and requests for information [PD-046].</p>		
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p>	<p>An update to Table 13.66 is required to remove incorrect referencing to a Public Right of Way.</p>	<p>The row relating to FP30 within Table 13.66 on page 192 of ES Chapter 13 is deleted: Table 13.66 PRow temporarily or permanently affected by the Project – north of the River Thames Receptor - FP30 Nature of effect - Utility over-head works and road construction works would require temporary closure of the route for approximately two years. Once the new Muckingford Road bridge is completed a temporary diversion would be created with surface improvements. The temporary diversion route would be in place until construction works are complete or until it is safe to reopen the route via the proposed new alignment. The temporary diversion will run from the northern side of the railway line at Coal Road Path, following a north-easterly direction to Muckingford Road. The diversion route would be approximately 2km in length, connecting up with FP66 at the western end (Muckingford Road) and Bridleway 58 at the southern end. These routes are primarily used for recreational purposes and as such, the longer length is not considered to constitute an adverse effect. Change in journey length - >500m Sensitivity of route - Medium Magnitude of impact - Major adverse Significance of effect - Moderate adverse Table 13.74 Land-use and accessibility sub-topics summary impact table is amended to reflect the removal of FP30 from Table 13.66. Row on Page 252 of the ES Chapter 13 is amended as follows:</p>	<p>Deadline 8</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>Impact description - Walkers, cyclists and horse riders – severance and temporary closures of PRowS, cycle routes and bridleways as a result of construction activities, with changes in journey length identified</p> <p>Sensitivity - Low to high</p> <p>Impact magnitude - Moderate beneficial to major adverse</p> <p>Effect - Moderate beneficial to Large adverse</p> <p>Significance - Significant beneficial effects relating to four WCH routes. Significant adverse effects relating to seven WCH routes.</p>	
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]	Updates to text in paragraph 13.5.35 are required to update REAC commitment PH002 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC), First iteration of Environmental Management Plan (Version 8) [REP8-044] The further amendment has been made following further discussion with representatives from the Integrated Care Boards.	Paragraph 13.5.35 of ES Chapter 13, as amended previously at Deadline 6, is further amended to: A commitment in the REAC relates to the provision of healthcare services for the construction workforce. REAC Reference PH002 states that <i>'the Contractor will provide an appropriate range of medical and occupational healthcare services (including on-site facilities) to meet the physical and mental health needs of the construction workforce. The range of services will be agreed with the Secretary of State, following engagement with and having regard for the views of the Integrated Care Partnerships Boards (ICBs). The Contractor will share information relating to uptake of services by the construction workforce and relevant incident data with ICBs on a six-monthly basis.'</i>	Deadline 8
6.1 Environmental Statement - Chapter 13 - Population and	The Applicant has made provision to purchase Whitecroft Care Home. Should the purchase of	Should the purchase of Whitecroft Care Home by the Applicant be agreed, bullet point a of the existing 13.6.75 of ES Chapter 13 would be deleted: a. Whitecroft Care Home—part of the title of the care home is located within the Order Limits; the care home building itself is within 300m of	Deadline 8

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Human Health [APP-151]</p>	<p>Whitecroft Care Home by the Applicant be agreed, this would necessitate the following updates to Chapter 13 of the ES. Paragraph 13.6.75 bullet point a. would require deletion. A new paragraph would be added at 13.6.98 to assess the construction phase impacts on care home provision. New information would be added to Table 13.74 and the References section of Chapter 13. Update at Deadline 9: There was no new information available on status of the proposed purchase for inclusion at Deadline 9. Text remains as written for Deadline 8.</p>	<p>the Stanford Road compound. The care home building would not be affected by the permanent or temporary use of land for construction of the Project, although a small area of land owned by the care home would be required permanently for the works to connect the existing driveway to the realigned Stanford Road. The Stanford Road compound would support construction works affecting slip roads between the A13 and A1013. Most of the compound would be used for storage, equipment and stockpiling, in addition to providing space for car parking, offices, welfare facilities and workshops. Access to the care home would be maintained at all times during the construction phase. Mitigation measures identified in relation to construction traffic management and community engagement are set out in the CoCP (Application Document 6.3, Appendix 2.2). The Whitecroft Care Home is identified as being of high sensitivity. Impacts on the care home are assessed as minor adverse due to a discernible change in access during the construction period, resulting in a slight adverse level of effect which is not significant.</p> <p>Should the purchase of Whitecroft Care Home by the Applicant be agreed, a new paragraph would need to be inserted at 13.6.98 of ES Chapter 13 as follows:</p> <p>Construction impacts – care home provision In a similar way to impacts on housing and healthcare services, impacts on care home provision has been considered as a ‘community asset’ in light of the fact that the Applicant has made provision to purchase the Whitecroft Care Home. This would enable the operator to fund a replacement care home facility such that any loss of bed spaces may be short term and temporary (depending on the timescales for providing the replacement facility in relation to the Project construction programme). A review has been undertaken of care home capacity within the Thurrock area to understand potential community impacts relating to care home bed provision associated with the temporary loss of bed spaces at the Whitecroft Care Home during the construction phase. The South Essex Housing Needs Assessment</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>(June 2022) identifies a need for 169 extra care spaces between 2020-2040. This is in addition to that already provided at Whitecroft Care Home. With the temporary removal of the Whitecroft Care Home, the total need over this period would therefore increase to 225 spaces.</p> <p>While the needs assessment identifies a shortfall in provision to 2040, there are known to be a number of proposals emerging for new care home provision in the Thurrock Council area to provide for that need over the next 17 years as set out below.</p> <p>Planning application reference 19/01662/FUL proposes redevelopment of Langdon Hills Golf and Country Club, including provision of a 64-bed residential care home with dementia facilities (Use Class C2). The application was approved on 21 September 2022. Once operational, this would notionally provide more bed spaces than those temporarily removed at Whitecroft Care Home, with a remaining need for 161 spaces within the Council area.</p> <p>Planning application reference 23/00853/FUL proposes a residential development which also includes a 77-bed care home. This application is currently awaiting determination (as at 30 November 2023). If the application is approved, this would leave a notional need for a further 84 bed spaces.</p> <p>The Applicant’s proposal would enable the operator of the Whitecroft Care Home to fund a replacement facility of at least 56 spaces. The Applicant therefore has considered impacts on bedspace provision as relating to the relocation of a care home facility rather than a permanent closure. Counting the relocated 56 bed spaces associated with the new care home provided by the operator towards the total need identified in the South Essex Housing Needs Assessment (June 2022) thereby leaves a residual requirement for a further 28 bed spaces to meet need up to 2040.</p> <p>In the short-term, the temporary loss of the Whitecroft Care Home would contribute towards a reduction in available care home bedspaces; however the above evidence points to a range of opportunities at various stages in the planning process which together contribute towards meeting the need for bedspaces over the period to 2040.</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>The sensitivity of care home resources is considered to be very high, given frequency of use (daily) and availability of alternatives. It is considered that the magnitude of impact on care home provision as a result of the short-term temporary loss of the Whitecroft Care Home would be negligible given that, although there is a shortfall in care home spaces identified within the Thurrock Council area, this is likely to be met by provision currently in the planning pipeline, together with the provision of a replacement care home facility by the current operator of the Whitecroft Care Home. This would result in a slight adverse level of effect which is not significant.</p> <p>Should the purchase of Whitecroft Care Home by the Applicant be agreed, Table 13.74 Land-use and accessibility sub-topics summary impact table would be amended to include a new row on page 249 of the ES Chapter 13 as follows: Impact description – Community assets – impacts of the Project on care home bedspace provision Sensitivity – Very high Impact magnitude – Negligible Effect – Slight adverse Significance – Not significant</p> <p>A new reference is added to the References section on page 274 of ES Chapter 13 as follows: Turley (2022). South Essex Housing Needs Assessment</p>	
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraph 13.4.90 and Table 13.20 require amendment to present the revised information on agricultural land holdings affected within the Order Limits to the south of the River Thames. This information has been updated due to the</p>	<p>Paragraph 13.4.90 of ES Chapter 13 is amended to: Agricultural land use south of the River Thames is predominantly arable with limited areas of pasture. There are a total of 27 identifiable agricultural landholdings or groupings of landholdings south of the River Thames, as detailed in Table 13.20. These range from very small landholdings (single fields) to landholdings in excess of 350 ha in size. In total the landholdings cover approximately 1400 ha, with approximately 520 480ha (37 35%) falling within the Order Limits. The total landholding areas presented in Table 13.20 relate to the extent of land parcels that overlap or intersect with/are adjacent to the order limits. It should be recognised that this may not describe the full extent</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																														
	<p>reduction in the area of land within Order Limits as a result of:</p> <p>Changes MRC01 and MRC03 [CR1-002]</p> <p>Amendments EA04 and EA05 [CR2-002]</p> <p>Amendment EA07 [REP5-001]</p> <p>Holding IDs were amended to align with referencing in line with Land and Property data</p> <p>These updates do not alter the significance of effects reported in ES Chapter 13.</p>	<p>of the landholding where land parcels are owned which are distant from the Project, but this will result in the stated percentage of landholding within the order limits being a worst case scenario where such a situation arises.</p> <p>Please be aware this data has been reordered alphabetically. Table 13.20 of ES Chapter 13 is amended as follows:</p> <p>Table 13.20 Details of agricultural land holdings affected within the Order Limits – south of the River Thames</p> <table border="1" data-bbox="837 531 1870 1343"> <thead> <tr> <th data-bbox="837 531 1025 735">Holding ID (see Figure 13.5)</th> <th data-bbox="1037 531 1196 735">Description</th> <th data-bbox="1207 531 1379 735">Landholding area within the Order Limits (ha)</th> <th data-bbox="1391 531 1547 735">Total landholding area (approx.) (ha)</th> <th data-bbox="1559 531 1715 735">Percentage of landholding within the Order Limits</th> <th data-bbox="1727 531 1870 735">Sensitivity to change</th> </tr> </thead> <tbody> <tr> <td data-bbox="837 743 1025 895">CON10035438 GRP460</td> <td data-bbox="1037 743 1196 895">Pasture land accessed from Henhurst Road</td> <td data-bbox="1207 743 1379 895">0.155</td> <td data-bbox="1391 743 1547 895">0.936</td> <td data-bbox="1559 743 1715 895">16.6</td> <td data-bbox="1727 743 1870 895">High</td> </tr> <tr> <td data-bbox="837 903 1025 1023">CON13011956 GRP455</td> <td data-bbox="1037 903 1196 1023">Pasture land accessed from Thong Lane</td> <td data-bbox="1207 903 1379 1023">0.970</td> <td data-bbox="1391 903 1547 1023">3.415</td> <td data-bbox="1559 903 1715 1023">28.4</td> <td data-bbox="1727 903 1870 1023">High</td> </tr> <tr> <td data-bbox="837 1031 1025 1182">CON13016957 GRP461</td> <td data-bbox="1037 1031 1196 1182">Pasture land accessed from Bowesden Lane</td> <td data-bbox="1207 1031 1379 1182">1.834</td> <td data-bbox="1391 1031 1547 1182">1.834</td> <td data-bbox="1559 1031 1715 1182">100.0</td> <td data-bbox="1727 1031 1870 1182">High</td> </tr> <tr> <td data-bbox="837 1190 1025 1343">CON20062081 GRP449</td> <td data-bbox="1037 1190 1196 1343">Pasture land accessed from Woodlands Lane</td> <td data-bbox="1207 1190 1379 1343">6.219</td> <td data-bbox="1391 1190 1547 1343">6.219</td> <td data-bbox="1559 1190 1715 1343">100.0</td> <td data-bbox="1727 1190 1870 1343">High</td> </tr> </tbody> </table>	Holding ID (see Figure 13.5)	Description	Landholding area within the Order Limits (ha)	Total landholding area (approx.) (ha)	Percentage of landholding within the Order Limits	Sensitivity to change	CON10035438 GRP460	Pasture land accessed from Henhurst Road	0.155	0.936	16.6	High	CON13011956 GRP455	Pasture land accessed from Thong Lane	0.970	3.415	28.4	High	CON13016957 GRP461	Pasture land accessed from Bowesden Lane	1.834	1.834	100.0	High	CON20062081 GRP449	Pasture land accessed from Woodlands Lane	6.219	6.219	100.0	High	
Holding ID (see Figure 13.5)	Description	Landholding area within the Order Limits (ha)	Total landholding area (approx.) (ha)	Percentage of landholding within the Order Limits	Sensitivity to change																												
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CON20062081 GRP449	Pasture land accessed from Woodlands Lane	6.219	6.219	100.0	High																												

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP002	Multiple parcels of arable land accessed from Shorne Ifield Road	52.115	84.899	61.4	Low	
		GRP007	Arable and Pasture land accessed from Church Road. Only arable land within the order limits.	19.931	45.233	44.1	Low	
		GRP009	Multiple parcels of pasture land accessed from Lower Higham Road	9.616	56.411	17.0	High	
		GRP010	Arable land accessed from Lower Higham Road	0.705	6.358	11.1	Low	
		GRP016	Pasture land accessed from Thong lane	0.174	0.502	34.7	High	
		GRP043	Multiple parcels of arable land accessed	50.181	54.807	91.6	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			from A226 Rochester Road					
		GRP047	Pasture land accessed from Thong Lane	9.791	11.571	84.6	High	
		GRP052	Multiple parcels of arable and pasture land accessed from Lower Higham Road and Rochester Road	48.212	61.098	78.9	Medium	
		GRP053	Pasture land accessed from Thong Lane	10.428	18.479	56.4	High	
		GRP056	Pasture land accessed from Queen's Farm Road	7.830	25.477	30.7	High	
		GRP058	Pasture land accessed from Henhurst Road	0.808	19.270	4.2	High	
		GRP077	Arable land accessed	51.157	97.580	52.4	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			from Gravesend Road					
		GRP112	Multiple parcels of pasture land accessed from Henhurst Road	5.989	147.107	4.1	High	
		GRP119	Multiple parcels of arable and pasture land accessed from Thong Lane	77.033	85.058	90.6	Medium	
		GRP124	Pasture land accessed from Thong lane	3.259	3.259	100.0	High	
		GRP149	Arable land accessed from Shorne Ifield Road	9.135	9.135	100.0	Low	
		GRP151	Pasture land accessed from Brewers Road	0.362	52.640	0.7	High	
		GRP184	Arable land accessed from Park Pale	7.620	7.620	100.0	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP304	Woodland accessed from Thong lane	3.266	3.266	100.0	Low	
		GRP306	Pasture land accessed from Bowesden Lane	3.495	3.495	100.0	High	
		GRP330	Multiple parcels of pasture land accessed from Queen's Farm Road	7.830	158.998	4.9	High	
		GRP332	Multiple parcels of arable land accessed from Shorne Ifield Road and Swillers Lane	52.119	60.689	85.9	Low	
		GRP341	Multiple parcels of arable land accessed from Rochester Road and Bell Lane	80.865 42.625	369.375	21.9 11.5	Low	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<i>* Please note all areas and percentages shown are rounded to three decimal places, and one decimal place respectively. *</i>	
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 13.4.92 and Table 13.21 require amendment to present the revised information on agricultural land holdings affected within the Order Limits to the north of the River Thames. This information has been updated due to the reduction in the area of land within Order Limits as a result of: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001] Holding IDs were amended to align with referencing in line with Land and Property data Correction has been made to the total landholding area for GRP001. These updates do not alter the significance of	Paragraph 13.4.92 of ES Chapter 13 is amended to: Agricultural land use north of the River Thames is predominantly arable with small areas used for grazing or woodland. There are 36 identifiable agricultural landholdings north of the River Thames as detailed in Table 13.21. These range from very small landholdings (single fields) to a landholding more than 1,845 1,912 ha in size. Generally, the larger landholdings comprise arable land. In total, the landholdings cover approximately 3700 ha, with approximately 1280 1250 ha (35 33 %) falling within the Order Limits. The total landholding areas presented in Table 13.21 relate to the extent of land parcels that overlap or intersect with/are adjacent to the order limits. It should be recognised that this may not describe the full extent of the landholding where land parcels are owned which are distant from the Project, but this will result in the stated percentage of landholding within the order limits being a worst case scenario where such a situation arises. Please be aware this data has been reordered alphabetically. Table 13.21 of ES Chapter 13 is amended as follows: Table 13.21 Details of agricultural land holdings affected within the Order Limits – north of the River Thames	Deadline 9

Holding ID (see Figure 13.5)	Description	Landholding area within the Order Limits	Total landholding area (approx.)	Percentage of landholding within the Order Limits	Sensitivity
CON10030124 GRP465	Pasture land accessed from	0.265	1.996	13.3	High

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
	effects reported in ES Chapter 13.		Stanford Road					
		CON10039643 CON10039678 GRP468	Arable land accessed from Fen Lane	0.029	9.107	0.3	Low	
		CON10056526 CON10056530 GRP448	Pasture land accessed from Mill lane	0.652	1.971	33.1	High	
		CON10057184 GRP469	Pasture land accessed from Linford Road and Turnpike Lane	0.268	3.229	8.3	High	
		CON10058775 GRP437	Pasture land. Access from Stifford Clays Road	0.353	2.282	15.5	High	
		GRP001	Multiple parcels of arable land accessed from the local highway network and farm access tracks	643.437 625.384	1845.558 1912.162	34.9 32.7	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP006	Pasture land accessed from Baker Street and farm access tracks	0.949	2.864	33.1	High	
		GRP019	Arable land and landfill accessed from Princess Margaret Road	12.169	123.757	9.8	Low	
		GRP022	Arable land accessed from Helipad Road and North Road	32.561	169.447	19.2	Low	
		GRP023	Multiple parcels of arable land accessed from the local highway network and farm access tracks	117.868	332.822	35.4	Low	
		GRP024	Arable land accessed from Standford Road	30.559	112.686	27.1	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP027	Arable land accessed from Walton's Hall Road and Butts Lane	5.530	89.364	6.2	Low	
		GRP035	Arable land accessed from Ockendon Road	8.049	11.512	69.9	Low	
		GRP036	Pasture land accessed from St. Marys Lane	2.662	5.728	46.5	High	
		GRP040	Arable land accessed from Warley Street	1.158	16.581	7.0	Low	
		GRP041	Multiple arable land parcels accessed from Fen Lane and via farm access tracks	70.596	227.365	31.0	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP042	Arable land accessed from the Princess Margaret Road and Station Road	88.765	116.565	76.2	Low	
		GRP045	Arable land accessed from Princess Margaret Road	18.148	20.967	86.6	Low	
		GRP054	Pasture land accessed from St. Marys Lane	3.596	19.179	18.7	High	
		GRP087	Arable land accessed from Long Lane and farm access tracks	12.036	24.422	49.3	Low	
		CON10030124 GRP465	Pasture land accessed from Stanford Road	0.265	1.996	13.3	High	
		GRP001	Multiple parcels of arable land accessed	643.437 625.384	1845.558 1912.162	34.9 32.7	Low	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			from the local highway network and farm access tracks					
		GRP106	Arable land accessed from West Road and Dennis Road	2.143	54.857	3.9	Low	
		GRP109	Woodland area accessed from B1421	1.111	1.111	100.0	Low	
		GRP114	Arable land accessed from Baker Street and via farm access tracks	98.782	102.253	96.6	Low	
		GRP133	Arable land accessed from Muckingford Road	38.566 27.068	41.023	94.0 66.0	Low	
		GRP142	Arable land accessed from Green Lane	53.366	95.076	56.1	Low	
		GRP152	Pasture land accessed	8.159	8.159	100.0	High	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			from Clay Tye Road					
		GRP272	Arable land accessed from Heath Road and Hornsby Lane	8.197	8.514	96.3	Low	
		GRP317	Arable Land accessed from Princess Margaret Road	6.883 3.862	50.939	13.5 7.6	Low	
		GRP322	Pasture land accessed from Heath Road	0.149	0.149	100.0	High	
		GRP329	Pasture land accessed from Folkes lane	5.564	7.233	76.9	High	
		GRP331	Pasture land accessed from the B186	1.633	12.785	12.8	High	

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
			North Road					
		GRP335	Arable land accessed from Fen Lane	3.044	126.520	2.4	Low	
		ORG10000019 GRP447	Pasture land accessed from Baker Street	2.632	3.876	67.9	High	
		ORG20001466 GRP473	Pasture land accessed from Fen Lane	2.631	7.848	33.5	High	
		ORG20001467 GRP456	Arable land accessed from Dennis Road	0.030	1.129	2.6	Low	
		ORG20001468 GRP475	Arable land accessed from Fort Road	1.012 0.174	38.084	2.7 0.5	Low	
<p><i>* Please note all areas and percentages shown are rounded to three decimal places, and one decimal place respectively. *</i></p>								

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																																																																		
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</p>	<p>Table 13.60 and surrounding text has been updated due to a revision of order limits and an updated landuse. Holding IDs were amended to align with referencing in line with Land and Property data</p> <p>These updates do not alter the significance of effects reported in ES Chapter 13.</p>	<p>Paragraphs 13.6.117 and 13.6.118 of ES Chapter 13 is amended to:</p> <p>During construction, a total of 4804.65 1732.999ha of land within agricultural landholdings would be affected. The impacts on each affected landholding are assessed in the following sections.</p> <p>A total of 27 landholdings in agricultural use would be affected south of the River Thames, as shown on Figure 13.5 (Application Document 6.2).</p> <p>Please be aware this data has been reordered alphabetically. Table 13.60 of ES Chapter 13 is amended to:</p> <p style="text-align: center;">Table 13.60 Summary of effects on landholdings – south of the River Thames</p> <table border="1" data-bbox="835 627 1870 1343"> <thead> <tr> <th>Holding ID (see Figure 13.5)</th> <th>Area of holding required</th> <th>Percentage of holding required during construction</th> <th>Sensitivity to change</th> <th>Magnitude of impact</th> <th>Classification of effect during construction</th> </tr> </thead> <tbody> <tr> <td>CON10035438 GRP460</td> <td>0.155</td> <td>16.6</td> <td>High</td> <td>Minor</td> <td>Moderate</td> </tr> <tr> <td>CON13011956 GRP455</td> <td>0.970</td> <td>28.4</td> <td>High</td> <td>Moderate</td> <td>Large</td> </tr> <tr> <td>CON13016957 GRP461</td> <td>1.834</td> <td>100.0</td> <td>High</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>CON20062084 GRP449</td> <td>6.219</td> <td>100.0</td> <td>High</td> <td>Major</td> <td>Very large</td> </tr> <tr> <td>GRP002</td> <td>52.115</td> <td>61.4</td> <td>Low</td> <td>Major</td> <td>Moderate</td> </tr> <tr> <td>GRP007</td> <td>19.931</td> <td>44.1</td> <td>Low</td> <td>Moderate</td> <td>Slight</td> </tr> <tr> <td>GRP009</td> <td>9.616</td> <td>17.0</td> <td>High</td> <td>Minor</td> <td>Moderate</td> </tr> <tr> <td>GRP010</td> <td>0.705</td> <td>11.1</td> <td>Low</td> <td>Minor</td> <td>Slight</td> </tr> <tr> <td>GRP016</td> <td>0.174</td> <td>34.7</td> <td>High</td> <td>Moderate</td> <td>Large</td> </tr> <tr> <td>GRP043</td> <td>50.181</td> <td>91.6</td> <td>Low</td> <td>Major</td> <td>Moderate</td> </tr> </tbody> </table>	Holding ID (see Figure 13.5)	Area of holding required	Percentage of holding required during construction	Sensitivity to change	Magnitude of impact	Classification of effect during construction	CON10035438 GRP460	0.155	16.6	High	Minor	Moderate	CON13011956 GRP455	0.970	28.4	High	Moderate	Large	CON13016957 GRP461	1.834	100.0	High	Major	Very large	CON20062084 GRP449	6.219	100.0	High	Major	Very large	GRP002	52.115	61.4	Low	Major	Moderate	GRP007	19.931	44.1	Low	Moderate	Slight	GRP009	9.616	17.0	High	Minor	Moderate	GRP010	0.705	11.1	Low	Minor	Slight	GRP016	0.174	34.7	High	Moderate	Large	GRP043	50.181	91.6	Low	Major	Moderate	<p>Deadline 9</p>
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Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP047	9.791	84.6	High	Major	Very large	
		GRP052	48.212	78.9	Medium	Major	Large	
		GRP053	10.428	56.4	High	Major	Very large	
		GRP056	7.830	30.7	High	Moderate	Large	
		GRP058	0.808	4.2	High	Negligible	Slight	
		GRP077	51.157	52.4	Low	Major	Moderate	
		GRP112	5.989	4.1	High	Negligible	Slight	
		GRP119	77.033	90.6	Medium	Major	Large	
		GRP124	3.259	100.0	High	Major	Very large	
		GRP149	9.135	100.0	Low	Major	Moderate	
		GRP151	0.362	0.7	High	Negligible	Slight	
		GRP184	7.620	100.0	Low	Major	Moderate	
		GRP304	3.266	100.0	Low	Major	Moderate	
		GRP306	3.495	100.0	High	Major	Very large	
		GRP330	7.830	4.9	High	Negligible	Slight	
		GRP332	52.119	85.9	Low	Major	Moderate	
		GRP341	80.865 42.625	21.9 11.5	Low	Moderate	Slight	
		<i>* Please note all areas and percentages shown are rounded to three decimal places, and one decimal place respectively. *</i>						
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]	Table 13.61 and surrounding text has been updated due to a revision of order limits and an updated landuse. Holding IDs were amended to align with referencing in line with Land and	<p>Paragraph 13.6.121 of ES Chapter 13 is amended to:</p> <p>Approximately 185.1 184.9ha of land associated with agricultural landholdings required for construction would be returned to agricultural use by the end of the construction phase. The effect on each landholding at the end of the construction phase as a result of land being reinstated is summarised in Table 13.61 (there would be no change to the severance impacts).</p> <p>Please be aware this data has been reordered alphabetically. Table 13.61 of ES Chapter 13 is amended to:</p>						Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date
	<p>Property data These updates do not alter the significance of effects reported in ES Chapter 13.</p>	<p>Table 13.61 Summary of effects on landholdings once land required temporarily has been returned – south of the River Thames</p>					
		Holding name	Area of holding required permanently	Percentage of holding required permanently	Sensitivity to change	Magnitude of impact	Classification of effect once land required temporarily has been returned
		CON10035438 GRP460	0.000	0.0	High	No change	Neutral
		CON13011956 GRP455	0.108	3.2	High	Negligible	Slight
		CON13016957 GRP461	1.834	100.0	High	Major	Very large
		CON20062084 GRP449	6.219	100.0	High	Major	Very large
		GRP002	39.449	46.5	Low	Moderate	Slight
		GRP007	19.917	44.0	Low	Moderate	Slight
		GRP009	0.000	0.0	High	No change	Neutral
		GRP010	0.000	0.0	Low	No change	Neutral
		GRP016	0.000	0.0	High	No change	Neutral
		GRP043	22.146	40.4	Low	Moderate	Slight
		GRP047	9.239	79.8	High	Major	Very large
		GRP052	12.083	19.8	Medium	Minor	Slight
		GRP053	4.920	26.6	High	Moderate	Large
		GRP056	0.000	0.0	High	No change	Neutral

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP058	0.308	1.6	High	Negligible	Slight	
		GRP077	7.684 7.766	7.9 8.0	Low	Minor	Slight	
		GRP112	0.000	0.0	High	No change	Neutral	
		GRP119	69.288	81.5	Medium	Major	Large	
		GRP124	2.826	86.7	High	Major	Very large	
		GRP149	6.363	69.7	Low	Major	Moderate	
		GRP151	0.113	0.2	High	Negligible	Slight	
		GRP184	7.620	100.0	Low	Major	Moderate	
		GRP304	2.378	72.8	Low	Major	Moderate	
		GRP306	3.495	100.0	High	Major	Very large	
		GRP330	0.000	0.0	High	No change	Neutral	
		GRP332	39.453	65.0	Low	Major	Moderate	
		GRP341	80.544 42.403	21.8 11.5	Low	Moderate	Slight	
		<i>* Please note all areas and percentages shown are rounded to three decimal places, and one decimal place respectively. *</i>						
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]	Table 13.62 and surrounding text has been updated due to a revision of order limits and an updated landuse. Holding IDs were amended to align with referencing in	<p>Paragraph 13.6.124 of ES Chapter 13 is amended to:</p> <p>A total of 36 identifiable landholdings in agricultural use would be affected north of the River Thames, as shown on Figure 13.5 (Application Document 6.2). Please be aware this data has been reordered alphabetically. Table 13.62 of ES Chapter 13 is amended to:</p>						Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date																																																																																																																								
	<p>line with Land and Property data</p> <p>Correction has been made to the total landholding area for GRP001.</p> <p>These updates do not alter the significance of effects reported in ES Chapter 13.</p>	<p>Table 13.62 Summary of effects on landholdings – north of the River Thames</p> <table border="1"> <thead> <tr> <th data-bbox="842 320 1037 485">Holding ID</th> <th data-bbox="1048 320 1160 485">Area of holding required</th> <th data-bbox="1171 320 1344 485">Percentage of holding required during construction</th> <th data-bbox="1355 320 1505 485">Sensitivity to change</th> <th data-bbox="1516 320 1666 485">Magnitude of impact</th> <th data-bbox="1677 320 1868 485">Classification of effect during construction</th> </tr> </thead> <tbody> <tr> <td data-bbox="842 493 1037 549">CON10030124 GRP465</td> <td data-bbox="1048 493 1160 549">0.265</td> <td data-bbox="1171 493 1344 549">13.3</td> <td data-bbox="1355 493 1505 549">High</td> <td data-bbox="1516 493 1666 549">Minor</td> <td data-bbox="1677 493 1868 549">Moderate</td> </tr> <tr> <td data-bbox="842 557 1037 644">CON10039643 CON10039678 GRP468</td> <td data-bbox="1048 557 1160 644">0.029</td> <td data-bbox="1171 557 1344 644">0.3</td> <td data-bbox="1355 557 1505 644">Low</td> <td data-bbox="1516 557 1666 644">Negligible</td> <td data-bbox="1677 557 1868 644">Slight</td> </tr> <tr> <td data-bbox="842 652 1037 740">CON10056526 CON10056530 GRP448</td> <td data-bbox="1048 652 1160 740">0.652</td> <td data-bbox="1171 652 1344 740">33.1</td> <td data-bbox="1355 652 1505 740">High</td> <td data-bbox="1516 652 1666 740">Moderate</td> <td data-bbox="1677 652 1868 740">Large</td> </tr> <tr> <td data-bbox="842 748 1037 804">CON10057184 GRP469</td> <td data-bbox="1048 748 1160 804">0.268</td> <td data-bbox="1171 748 1344 804">8.3</td> <td data-bbox="1355 748 1505 804">High</td> <td data-bbox="1516 748 1666 804">Minor</td> <td data-bbox="1677 748 1868 804">Moderate</td> </tr> <tr> <td data-bbox="842 812 1037 868">CON10058775 GRP437</td> <td data-bbox="1048 812 1160 868">0.353</td> <td data-bbox="1171 812 1344 868">15.5</td> <td data-bbox="1355 812 1505 868">High</td> <td data-bbox="1516 812 1666 868">Minor</td> <td data-bbox="1677 812 1868 868">Moderate</td> </tr> <tr> <td data-bbox="842 876 1037 932">GRP001</td> <td data-bbox="1048 876 1160 932">643.437 625.384</td> <td data-bbox="1171 876 1344 932">34.9 32.7</td> <td data-bbox="1355 876 1505 932">Low</td> <td data-bbox="1516 876 1666 932">Moderate</td> <td data-bbox="1677 876 1868 932">Slight</td> </tr> <tr> <td data-bbox="842 940 1037 963">GRP006</td> <td data-bbox="1048 940 1160 963">0.949</td> <td data-bbox="1171 940 1344 963">33.1</td> <td data-bbox="1355 940 1505 963">High</td> <td data-bbox="1516 940 1666 963">Moderate</td> <td data-bbox="1677 940 1868 963">Large</td> </tr> <tr> <td data-bbox="842 971 1037 995">GRP019</td> <td data-bbox="1048 971 1160 995">12.169</td> <td data-bbox="1171 971 1344 995">9.8</td> <td data-bbox="1355 971 1505 995">Low</td> <td data-bbox="1516 971 1666 995">Minor</td> <td data-bbox="1677 971 1868 995">Slight</td> </tr> <tr> <td data-bbox="842 1003 1037 1027">GRP022</td> <td data-bbox="1048 1003 1160 1027">32.561</td> <td data-bbox="1171 1003 1344 1027">19.2</td> <td data-bbox="1355 1003 1505 1027">Low</td> <td data-bbox="1516 1003 1666 1027">Minor</td> <td data-bbox="1677 1003 1868 1027">Slight</td> </tr> <tr> <td data-bbox="842 1035 1037 1059">GRP023</td> <td data-bbox="1048 1035 1160 1059">117.868</td> <td data-bbox="1171 1035 1344 1059">35.4</td> <td data-bbox="1355 1035 1505 1059">Low</td> <td data-bbox="1516 1035 1666 1059">Moderate</td> <td data-bbox="1677 1035 1868 1059">Slight</td> </tr> <tr> <td data-bbox="842 1067 1037 1091">GRP024</td> <td data-bbox="1048 1067 1160 1091">30.559</td> <td data-bbox="1171 1067 1344 1091">27.1</td> <td data-bbox="1355 1067 1505 1091">Low</td> <td data-bbox="1516 1067 1666 1091">Moderate</td> <td data-bbox="1677 1067 1868 1091">Slight</td> </tr> <tr> <td data-bbox="842 1099 1037 1123">GRP027</td> <td data-bbox="1048 1099 1160 1123">5.530</td> <td data-bbox="1171 1099 1344 1123">6.2</td> <td data-bbox="1355 1099 1505 1123">Low</td> <td data-bbox="1516 1099 1666 1123">Minor</td> <td data-bbox="1677 1099 1868 1123">Slight</td> </tr> <tr> <td data-bbox="842 1131 1037 1155">GRP035</td> <td data-bbox="1048 1131 1160 1155">8.049</td> <td data-bbox="1171 1131 1344 1155">69.9</td> <td data-bbox="1355 1131 1505 1155">Low</td> <td data-bbox="1516 1131 1666 1155">Major</td> <td data-bbox="1677 1131 1868 1155">Moderate</td> </tr> <tr> <td data-bbox="842 1163 1037 1187">GRP036</td> <td data-bbox="1048 1163 1160 1187">2.662</td> <td data-bbox="1171 1163 1344 1187">46.5</td> <td data-bbox="1355 1163 1505 1187">High</td> <td data-bbox="1516 1163 1666 1187">Moderate</td> <td data-bbox="1677 1163 1868 1187">Large</td> </tr> <tr> <td data-bbox="842 1195 1037 1219">GRP040</td> <td data-bbox="1048 1195 1160 1219">1.158</td> <td data-bbox="1171 1195 1344 1219">7.0</td> <td data-bbox="1355 1195 1505 1219">Low</td> <td data-bbox="1516 1195 1666 1219">Minor</td> <td data-bbox="1677 1195 1868 1219">Slight</td> </tr> <tr> <td data-bbox="842 1227 1037 1251">GRP041</td> <td data-bbox="1048 1227 1160 1251">70.596</td> <td data-bbox="1171 1227 1344 1251">31.0</td> <td data-bbox="1355 1227 1505 1251">Low</td> <td data-bbox="1516 1227 1666 1251">Moderate</td> <td data-bbox="1677 1227 1868 1251">Slight</td> </tr> <tr> <td data-bbox="842 1259 1037 1283">GRP042</td> <td data-bbox="1048 1259 1160 1283">88.765</td> <td data-bbox="1171 1259 1344 1283">76.2</td> <td data-bbox="1355 1259 1505 1283">Low</td> <td data-bbox="1516 1259 1666 1283">Major</td> <td data-bbox="1677 1259 1868 1283">Moderate</td> </tr> <tr> <td data-bbox="842 1291 1037 1315">GRP045</td> <td data-bbox="1048 1291 1160 1315">18.148</td> <td data-bbox="1171 1291 1344 1315">86.6</td> <td data-bbox="1355 1291 1505 1315">Low</td> <td data-bbox="1516 1291 1666 1315">Major</td> <td data-bbox="1677 1291 1868 1315">Moderate</td> </tr> <tr> <td data-bbox="842 1323 1037 1347">GRP054</td> <td data-bbox="1048 1323 1160 1347">3.596</td> <td data-bbox="1171 1323 1344 1347">18.7</td> <td data-bbox="1355 1323 1505 1347">High</td> <td data-bbox="1516 1323 1666 1347">Minor</td> <td data-bbox="1677 1323 1868 1347">Moderate</td> </tr> </tbody> </table>					Holding ID	Area of holding required	Percentage of holding required during construction	Sensitivity to change	Magnitude of impact	Classification of effect during construction	CON10030124 GRP465	0.265	13.3	High	Minor	Moderate	CON10039643 CON10039678 GRP468	0.029	0.3	Low	Negligible	Slight	CON10056526 CON10056530 GRP448	0.652	33.1	High	Moderate	Large	CON10057184 GRP469	0.268	8.3	High	Minor	Moderate	CON10058775 GRP437	0.353	15.5	High	Minor	Moderate	GRP001	643.437 625.384	34.9 32.7	Low	Moderate	Slight	GRP006	0.949	33.1	High	Moderate	Large	GRP019	12.169	9.8	Low	Minor	Slight	GRP022	32.561	19.2	Low	Minor	Slight	GRP023	117.868	35.4	Low	Moderate	Slight	GRP024	30.559	27.1	Low	Moderate	Slight	GRP027	5.530	6.2	Low	Minor	Slight	GRP035	8.049	69.9	Low	Major	Moderate	GRP036	2.662	46.5	High	Moderate	Large	GRP040	1.158	7.0	Low	Minor	Slight	GRP041	70.596	31.0	Low	Moderate	Slight	GRP042	88.765	76.2	Low	Major	Moderate	GRP045	18.148	86.6	Low	Major	Moderate	GRP054	3.596	18.7	High	Minor	Moderate	
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GRP036	2.662	46.5	High	Moderate	Large																																																																																																																										
GRP040	1.158	7.0	Low	Minor	Slight																																																																																																																										
GRP041	70.596	31.0	Low	Moderate	Slight																																																																																																																										
GRP042	88.765	76.2	Low	Major	Moderate																																																																																																																										
GRP045	18.148	86.6	Low	Major	Moderate																																																																																																																										
GRP054	3.596	18.7	High	Minor	Moderate																																																																																																																										

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP087	12.036	49.3	Low	Moderate	Slight	
		GRP106	2.143	3.9	Low	Negligible	Slight	
		GRP109	1.111	100.0	Low	Major	Moderate	
		GRP114	98.782	96.6	Low	Major	Moderate	
		GRP133	38.566 27.068	94.0 66.0	Low	Major	Moderate	
		GRP142	53.366	56.1	Low	Major	Moderate	
		GRP152	8.159	100.0	High	Major	Very large	
		GRP272	8.197	96.3	Low	Major	Moderate	
		GRP317	6.883 3.862	13.5 7.6	Low	Minor	Slight	
		GRP322	0.149	100.0	High	Major	Very large	
		GRP329	5.564	76.9	High	Major	Very large	
		GRP331	1.633	12.8	High	Minor	Moderate	
		GRP335	3.044	2.4	Low	Negligible	Slight	
		ORG10000019 GRP447	2.632	67.9	High	Major	Very large	
		ORG20001466 GRP473	2.631	33.5	High	Moderate	Large	
		ORG20001467 GRP456	0.030	2.6	Low	Negligible	Slight	
		ORG20001468 GRP475	1.012 0.174	2.7 0.5	Low	Negligible	Slight	
		<i>* Please note all areas and percentages shown are rounded to three decimal places, and one decimal place respectively. *</i>						
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]	Table 13.63 and surrounding text has been updated due to a revision of order limits and an updated landuse. Holding IDs were amended to align with referencing in	Paragraph 13.6.127 of ES Chapter 13 is amended to: Approximately 542.15 516.02ha of land associated with agricultural landholdings required for construction would be returned to agricultural use by the end of the construction phase. The effect on each landholding at the end of the construction phase (i.e. once land required temporarily has been reinstated) is summarised in Table 13.63 (there would be no change to the severance impacts).						Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date																																																																																																
	<p>line with Land and Property data.</p> <p>Correction has been made to the total landholding area for GRP001.</p> <p>These updates do not alter the significance of effects reported in ES Chapter 13.</p>	<p>Please be aware this data has been reordered alphabetically. Table 13.63 of ES Chapter 13 is amended to:</p> <p style="text-align: center;">Table 13.63 Summary of effects on landholdings once land required temporarily has been returned – north of the River Thames</p> <table border="1" data-bbox="837 427 1870 1335"> <thead> <tr> <th data-bbox="837 427 1032 612">Holding ID</th> <th data-bbox="1032 427 1205 612">Area of holding required permanently</th> <th data-bbox="1205 427 1377 612">Percentage of holding required permanently</th> <th data-bbox="1377 427 1527 612">Sensitivity to change</th> <th data-bbox="1527 427 1680 612">Magnitude of impact</th> <th data-bbox="1680 427 1870 612">Classification of effect once land required temporarily has been returned</th> </tr> </thead> <tbody> <tr> <td data-bbox="837 612 1032 676">CON10030124 GRP465</td> <td data-bbox="1032 612 1205 676">0.198</td> <td data-bbox="1205 612 1377 676">9.9</td> <td data-bbox="1377 612 1527 676">High</td> <td data-bbox="1527 612 1680 676">Minor</td> <td data-bbox="1680 612 1870 676">Moderate</td> </tr> <tr> <td data-bbox="837 676 1032 772">CON10039643 CON10039678 GRP468</td> <td data-bbox="1032 676 1205 772">0.000</td> <td data-bbox="1205 676 1377 772">0.0</td> <td data-bbox="1377 676 1527 772">Low</td> <td data-bbox="1527 676 1680 772">No change</td> <td data-bbox="1680 676 1870 772">Neutral</td> </tr> <tr> <td data-bbox="837 772 1032 868">CON10056526 CON10056530 GRP448</td> <td data-bbox="1032 772 1205 868">0.000</td> <td data-bbox="1205 772 1377 868">0.0</td> <td data-bbox="1377 772 1527 868">High</td> <td data-bbox="1527 772 1680 868">No change</td> <td data-bbox="1680 772 1870 868">Neutral</td> </tr> <tr> <td data-bbox="837 868 1032 932">CON10057184 GRP469</td> <td data-bbox="1032 868 1205 932">0.268</td> <td data-bbox="1205 868 1377 932">8.3</td> <td data-bbox="1377 868 1527 932">High</td> <td data-bbox="1527 868 1680 932">Minor</td> <td data-bbox="1680 868 1870 932">Moderate</td> </tr> <tr> <td data-bbox="837 932 1032 995">CON10058775 GRP437</td> <td 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1123">Low</td> <td data-bbox="1527 1091 1680 1123">Minor</td> <td data-bbox="1680 1091 1870 1123">Slight</td> </tr> <tr> <td data-bbox="837 1123 1032 1155">GRP022</td> <td data-bbox="1032 1123 1205 1155">15.548</td> <td data-bbox="1205 1123 1377 1155">9.2</td> <td data-bbox="1377 1123 1527 1155">Low</td> <td data-bbox="1527 1123 1680 1155">Minor</td> <td data-bbox="1680 1123 1870 1155">Slight</td> </tr> <tr> <td data-bbox="837 1155 1032 1187">GRP023</td> <td data-bbox="1032 1155 1205 1187">70.384</td> <td data-bbox="1205 1155 1377 1187">21.1</td> <td data-bbox="1377 1155 1527 1187">Low</td> <td data-bbox="1527 1155 1680 1187">Moderate</td> <td data-bbox="1680 1155 1870 1187">Slight</td> </tr> <tr> <td data-bbox="837 1187 1032 1219">GRP024</td> <td data-bbox="1032 1187 1205 1219">26.445</td> <td data-bbox="1205 1187 1377 1219">23.5</td> <td data-bbox="1377 1187 1527 1219">Low</td> <td data-bbox="1527 1187 1680 1219">Moderate</td> <td data-bbox="1680 1187 1870 1219">Slight</td> </tr> <tr> <td data-bbox="837 1219 1032 1251">GRP027</td> <td data-bbox="1032 1219 1205 1251">0.000</td> <td data-bbox="1205 1219 1377 1251">0.0</td> <td data-bbox="1377 1219 1527 1251">Low</td> <td data-bbox="1527 1219 1680 1251">No change</td> <td data-bbox="1680 1219 1870 1251">Neutral</td> </tr> <tr> <td data-bbox="837 1251 1032 1283">GRP035</td> <td data-bbox="1032 1251 1205 1283">0.491</td> <td data-bbox="1205 1251 1377 1283">4.3</td> <td data-bbox="1377 1251 1527 1283">Low</td> <td data-bbox="1527 1251 1680 1283">Negligible</td> <td data-bbox="1680 1251 1870 1283">Slight</td> </tr> <tr> <td data-bbox="837 1283 1032 1315">GRP036</td> <td data-bbox="1032 1283 1205 1315">0.119</td> <td data-bbox="1205 1283 1377 1315">2.1</td> <td data-bbox="1377 1283 1527 1315">High</td> <td data-bbox="1527 1283 1680 1315">Negligible</td> <td data-bbox="1680 1283 1870 1315">Slight</td> </tr> <tr> <td data-bbox="837 1315 1032 1335">GRP040</td> <td data-bbox="1032 1315 1205 1335">0.000</td> <td data-bbox="1205 1315 1377 1335">0.0</td> <td data-bbox="1377 1315 1527 1335">Low</td> <td data-bbox="1527 1315 1680 1335">No change</td> <td data-bbox="1680 1315 1870 1335">Neutral</td> </tr> </tbody> </table>	Holding ID	Area of holding required permanently	Percentage of holding required permanently	Sensitivity to change	Magnitude of impact	Classification of effect once land required temporarily has been returned	CON10030124 GRP465	0.198	9.9	High	Minor	Moderate	CON10039643 CON10039678 GRP468	0.000	0.0	Low	No change	Neutral	CON10056526 CON10056530 GRP448	0.000	0.0	High	No change	Neutral	CON10057184 GRP469	0.268	8.3	High	Minor	Moderate	CON10058775 GRP437	0.000	0.0	High	Negligible	Slight	GRP001	309.239 301.617	16.8 15.8	Low	Minor	Slight	GRP006	0.801	27.9	High	Moderate	Large	GRP019	12.169	9.8	Low	Minor	Slight	GRP022	15.548	9.2	Low	Minor	Slight	GRP023	70.384	21.1	Low	Moderate	Slight	GRP024	26.445	23.5	Low	Moderate	Slight	GRP027	0.000	0.0	Low	No change	Neutral	GRP035	0.491	4.3	Low	Negligible	Slight	GRP036	0.119	2.1	High	Negligible	Slight	GRP040	0.000	0.0	Low	No change	Neutral	
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GRP022	15.548	9.2	Low	Minor	Slight																																																																																														
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GRP024	26.445	23.5	Low	Moderate	Slight																																																																																														
GRP027	0.000	0.0	Low	No change	Neutral																																																																																														
GRP035	0.491	4.3	Low	Negligible	Slight																																																																																														
GRP036	0.119	2.1	High	Negligible	Slight																																																																																														
GRP040	0.000	0.0	Low	No change	Neutral																																																																																														

Document reference	Reason for amendment	Environmental Statement amendment						Amendment date
		GRP041	31.789	14.0	Low	Minor	Slight	
		GRP042	63.446 63.918	54.4 54.8	Low	Major	Moderate	
		GRP045	18.148	86.6	Low	Major	Moderate	
		GRP054	2.143	11.2	High	Minor	Moderate	
		GRP087	10.164	41.6	Low	Moderate	Slight	
		GRP106	2.143 2.015	3.9 7.6	Low	Negligible	Slight	
		GRP109	1.111	100.0	Low	Major	Moderate	
		GRP114	98.782	96.6	Low	Major	Moderate	
		GRP133	10.882	26.5	Low	Moderate	Slight	
		GRP142	52.313 52.311	55.0	Low	Major	Moderate	
		GRP152	5.469	67.0	High	Major	Very large	
		GRP272	1.174	13.8	Low	Minor	Slight	
		GRP317	0.000	0.0	Low	No change	Neutral	
		GRP322	0.070	46.9	High	Moderate	Large	
		GRP329	5.564	76.9	High	Major	Very large	
		GRP331	0.000	0.0	High	No change	Neutral	
		GRP335	0.002	0.0	Low	Negligible	Slight	
		ORG10000019 GRP447	2.513	64.8	High	Major	Very large	
		ORG20001466 GRP473	0.000	0.0	High	No change	Neutral	
		ORG20001467 GRP456	0.030	2.6	Low	Negligible	Slight	
		ORG20001468 GRP475	0.000	0.0	Low	No change	Neutral	
		<p><i>* Please note all areas and percentages shown are rounded to three decimal places, and one decimal place respectively. Where a percentage which rounds to 0.0 is actually >0, this has been reflected in a reported magnitude of 'Negligible' rather than 'No Change'. *</i></p>						
ES Figures								

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.2 Environmental Statement – Figure 13.1 – Population and Human Health Baseline – Private Property & Housing, Development Land & Businesses, Community Land & Asset [APP-317] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 13.1 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 2 and 7 of 7 of Figure 13.1 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 13.2 – Population and Human Health Baseline – PRoW and WCH routes [APP-318] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 13.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 2, 3 and 6 of 6 of Figure 13.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and</p>	<p>Figure 13.3 requires amendment to remove the 'Private building access significantly impacted/ building affected' layer</p>	<p>Figure 13.3 is amended to show only properties requiring demolition. Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition (Clean) (Version 2) [REP1-154]</p>	<p>Deadline 1</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Businesses at Risk of Demolition [APP-319]	which is a redundant dataset.	6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition (Tracked) (Version 2) [REP1-155]	
6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition [REP1-154] Document not further re-issued. Updates identified in ES Addendum only.	Figure 13.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2 and 3 of 5 of Figure 13.3 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 13.4 – Population and Human Health Assessment - Proposed WCH Links [APP-320]	Figure 13.4 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 2 and 3 of 5 of Figure 13.4 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 13.5 - Agricultural Landowners [APP-321]	Figure 13.5 requires amendment to present the revised information on agricultural land holdings and landowner data. This information has been	All pages of Figure 13.5 are amended as follows: Updated information of landholdings and landowner data. Update to Order Limits. Addition of information for land parcel at Blue Bell Hill. Resubmitted 11 December 2023 as:	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	<p>updated due to the reduction in the area of land within Order Limits as identified below.</p> <p>Figure 13.5 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p> <p>Figure 13.5 requires updates where land holding IDs were amended to align with referencing in line with Land and Property data, as reflected in the updates to ES Chapter 13.</p> <p>Figure 13.5 also requires amendment to correct an error where the land parcel at Blue Bell Hill was not shown.</p>	<p>6.2 Environmental Statement – Figure 13.5 - Agricultural Landowners (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 13.5 - Agricultural Landowners (Tracked) (Version 2)</p>	

3.15 ES Chapter 14 Road Drainage and the Water Environment

3.15.1 The following changes have been made throughout Examination to ES Chapter 14, associated figures and appendices, as set out in Table 3.11.

Table 3.11 Updates to Chapter 14, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 14 - Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 14.5.10 bullet point f. related to REAC commitment RDWE006 are required in response to the Examination Authority's Written Question 10.4.6 in ExQ1 - the Examining Authority's written questions and requests for information [PD-029].	Paragraph 14.5.10, bullet point f. of ES Chapter 14 is amended to: f. The Contractor shall develop a construction phase drainage plan. The plan shall demonstrate how the Contractor would manage surface water runoff across the worksite, including details of how offsite impacts would be prevented. The surface water drainage design for temporary works shall include climate change allowances up to 2030 the opening year in accordance with Flood risk assessments: climate change allowances (Environment Agency, 2022). Work site drainage systems would incorporate pollution control systems designed in line with Control of Water Pollution from Construction Sites C532 (CIRIA, 2001) or as agreed with the Secretary of State. Surface watercourses and waterbodies (as identified in Table 14.6 of ES Chapter 14 (Application Document 6.1)) near work sites would be regularly inspected for signs of siltation or other forms of pollution in line with CIRIA C741 guidance (CIRIA, 2015) and pumped groundwater, process effluents and construction site runoff would be tested to ensure compliance with discharge consent requirements. Rainfall runoff from areas where there is a risk of contamination would be managed using temporary drainage systems and would be subject to treatment prior to discharge. Rainfall runoff from areas of low contamination risk would be captured and reused where reasonably practicably to reduce consumptive water use (e.g to supply wheel wash facilities or for dust suppression).The Contractor shall consult with the EA on any proposed work site discharge to ground in Source Protection Zone 1 and Source Protection Zone 2 (RDWE006).	Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.1 Environmental Statement - Chapter 14 - Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 14.5.15 bullet point k. requires revision to correct a typographical error where 600mm was written as 60mm.	Paragraph 14.5.15, bullet point k. of ES Chapter 14 is amended to: k. A raised bund would be constructed to prevent formation of the new flow path from Golden Bridge Sewer to the Mardyke in Orsett Fen. The bund would be designed to provide the intended function during storm events up to the 1 in 1000-year with climate change allowance to 2130 and incorporate a freeboard allowance of 600mm.	Deadline 4
6.1 Environmental Statement - Chapter 14 - Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 14.5.15 bullet point o. are required related to MRC03 East Tilbury utilities relocations and Order Limits reduction, as described in 10.4 Change Application (August 2023) [CR1-002] . Paragraph 14.5.15 bullet point t. is a duplication of bullet point o. This duplication is removed.	Paragraph 14.5.15, bullet point o. of ES Chapter 14 is amended to: o. The Low Street irrigation reservoir (located at Easting 567,023 and Northing 177,780) is groundwater fed. Utility corridors are proposed to the east, west and north of the reservoir (Work No. MU28, and Work No. MU33 and MUT6) and have the potential to form a barrier to groundwater flow, cause draining of groundwater that would otherwise flow towards the unlined reservoir or cause direct drainage from the reservoir. The spatial arrangement of the utility corridors and the below-ground materials shall be designed to prevent drainage from the reservoir, or barrier effects reducing groundwater flow to the reservoir (RDWE054). Paragraph 14.5.15, bullet point t. is removed, as this is a duplication of bullet point o.	Deadline 4
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates	References to REAC RDWE 001, RDWE029, RDWE037, RDWE039 and RDWE040 require updating to remain consistent with the changes made in the CoCP (Version 5) [REP5-050] . These changes were made in response to ExQ1 – the	Paragraph 14.5.10, bullet point b. of ES Chapter 14 is amended to: b. The contractor shall prepare a construction phase FRA in accordance with the National Planning Policy Framework (Department of Levelling Up Housing and Communities, 2021). The scope of the construction phase FRA shall consider all construction phase activities and temporary works necessary to deliver the Project. The construction phase FRA shall consider on-site and off-site flood risk and include climate change allowances up to 2030 the opening year in accordance with Flood risk	Deadline 5

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>identified in ES Addendum only.</p>	<p>Examining Authority’s written questions and requests for information [PD-029].</p>	<p>assessments: climate change allowances (Environment Agency, 2022) (RDWE001).</p> <p>Paragraph 14.5.14, bullet point o. of ES Chapter 14 is amended to:</p> <p>o. Compensatory flood storage areas (CFSAs) would be formed to offset any loss of storage attributable to the Project. The form of CFSAs used for the Project would comprise areas that allow flood water to freely flow in and out of them, and areas where floodwater is temporarily retained in upstream catchments. All CFSAs would be designed to accommodate a 1 in 100 year fluvial event with climate change allowances up to 21302, and would be as described in Part 6 of Appendix 14.6: Flood Risk Assessment (Application Document 6.3) and as shown in Drawings 1080, 1081 and 1082. (RDWE037). Their preliminary design and modelled efficacy has been reviewed and approved by the EA.</p> <p>Paragraph 14.5.15, bullet point i. of ES Chapter 14 is amended to:</p> <p>i. Flood protection would be provided around the North Portal to reduce the risk of inundation of the tunnel. The flood protection will comprise flood walls, bunds and targeted earthworks. The portal protection would be designed to accommodate a 1 in 1000 year River Thames extreme tide level with climate change allowances up to 21302 and a freeboard (to allow for residual uncertainties) of 1000mm. The portal protection would be as described in ES Appendix 14.6: Flood Risk Assessment – Part 6 (Application Document 6.3) (RDWE029).</p> <p>Paragraph 14.5.15, bullet point j. of ES Chapter 14 is amended to:</p> <p>j. A drainage channel would be provided between the Mardyke and the viaduct abutment immediately to the west of the river. The channel would be designed to manage intercepted floodplain flows for a 1 in 100-year storm event with climate change allowances to 21302. (RDWE040).</p> <p>Paragraph 14.5.15, bullet point k. of ES Chapter 14 is amended to:</p> <p>k. A raised bund would be constructed to prevent formation of the new flow path from Golden Bridge Sewer to the Mardyke in Orsett Fen. The bund would be designed to provide the intended function during storm events up</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		to the 1 in 1000-year with climate change allowance to 21302 and incorporate a freeboard allowance of 60mm. The bund would be as described in Flood Risk Assessment – Part 6 (and as shown on Drawing 00181) of Appendix 14.6 (Application Document 6.3) (RDWE039).	
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	A new bullet point z) is added to paragraph 14.5.14 to include new REAC item, RDWE059. This has been added to the CoCP (Version 5) [REP5-050] in response to action point 1 in Action Points from Issue Specific Hearing 5 (ISH5) - 7 September 2023 [EV-044a] .	Bullet point z) is added to paragraph 14.5.14, of ES Chapter 14 to state: z. Construction of the bored section of the highway bored tunnels Work No 4A(i) shall be undertaken using closed face tunnelling techniques (RDWE059).	Deadline 5
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 14.5.10 bullet point f. are required to update REAC RDWE006 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122] following stakeholder engagement.	Paragraph 14.5.10 bullet point f. of ES Chapter 14 is amended to: f. The Contractor shall develop a construction phase drainage plan. The plan shall demonstrate how the Contractor would manage surface water runoff across the worksite, including details of how offsite impacts would be prevented managed and mitigated . The surface water drainage design for temporary works shall include climate change allowances up to 2030 the opening year in accordance with Flood risk assessments: climate change allowances (Environment Agency, 2022). Work site drainage systems would incorporate pollution control systems designed in line with Control of Water Pollution from Construction Sites C532 (CIRIA, 2001) or as agreed with the Secretary of State. Surface watercourses and waterbodies (as identified in Table 14.6 of ES Chapter 14 (Application Document 6.1)) near work sites would be regularly inspected for signs of siltation or other forms of pollution in line with CIRIA C741 guidance (CIRIA, 2015) and pumped groundwater, process effluents and construction site runoff would be tested to ensure compliance with discharge consent requirements. Rainfall runoff from areas where there is	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		a risk of contamination would be managed using temporary drainage systems and would be subject to treatment prior to discharge. Rainfall runoff from areas of low contamination risk would be captured and reused where reasonably practicably to reduce consumptive water use (e.g to supply wheel wash facilities or for dust suppression).The Contractor shall consult with the EA on any proposed work site discharge to ground in Source Protection Zone 1 and Source Protection Zone 2 (RDWE006).	
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 14.5.11 bullet point d. are required to update REAC RDWE014 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122] as part of ongoing technical engagement with the Environment Agency.	Paragraph 14.5.11 bullet point d. of ES Chapter 14 is amended to: d. Culverts and hydraulic structures would be inspected and maintained, in accordance with National Highways’ DMRB CS 450, DMRB GS 801 Asset Delivery Asset Inspection Requirements and DMRB GM 701 Asset Delivery Asset Maintenance Requirements (ADAMr), as applicable (RDWE014). Where there are any additional, specific inspection or maintenance requirements, these would be documented in the Maintenance and Repair Statement.	Deadline 7
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.	Updates to text in paragraph 14.5.14 bullet point k. are required to update REAC RDWE019 to remain consistent with the changes made in the Code of Construction Practice (CoCP) First iteration of Environmental Management Plan (Version 7) [REP7-122]	Paragraph 14.5.14 bullet point k. of ES Chapter 14 is amended to: k. Chemicals and materials, such as cement, grout and lubricants used during construction activities in proximity to any groundwater SPZ would be stored, transported and used in a suitable manner to safeguard potable water supply, source protection zones and the water environment. Prior to commencement of ground treatment, tunnelling or trenchless installation the Contractor would be required to agree the use of any chemical additives proposed for the works with the Environment Agency (RDWE019).	Deadline 7

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	in response to stakeholder engagement.		
6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152]	Updates to text in paragraph 14.5.15 bullet points d, f and g are required to update REAC commitments RDWE034, RDWE035 and RDWE048 to remain consistent with the changes made in the Code of Construction Practice, including Register of Environmental Actions and Commitments (REAC) First iteration of Environmental Management Plan (Version 8) [REP8-044] . This was actioned in response to Question 10.1.7 in ExQ3 - The Examining Authority’s written questions and requests for information [PD-046] .	Paragraph 14.5.15, bullet point d. of ES Chapter 14 is amended to: d. Infiltration basins shall be provided at the locations identified on Figure 2.4: Environmental Masterplan (Application Document 6.2). These would be designed as vegetated drainage systems in accordance with the relevant provisions of DMRB CD 532 and will be constructed prior to being required to serve the development. Pollution control measures for infiltration basins shall comprise the treatment systems identified in Part 7 of the FRA and pollution control measures on existing infiltration basins shall be decommissioned and replaced with equivalent alternatives. Where included, infiltration basins would incorporate a lined sediment forebay with sufficient capacity to accommodate the first flush. Where sediment forebays cannot be accommodated, a vortex grit separator shall be installed upstream of the basin inlet. Infiltration basins would accommodate runoff from the Project road for all events up to and including the 1 in 100 year rainfall event with climate change. and e Overland flow paths shall be established to manage exceedance flows from infiltration basins, guided by the prevailing topography and based on existing overland flow routes. Exceedance flow rates and volumes would not be appreciably greater than under existing conditions (RDWE034). Paragraph 14.5.15, bullet point f. of ES Chapter 14 is amended to: f. Retention ponds shall be provided at the locations shown on Figure 2.4: Environmental Masterplan (Application Document 6.2). New retention ponds shall be designed as vegetated drainage systems in accordance with the provisions of DMRB CD 532 and will be constructed prior to being required to serve the development. The ponds will be sized to ensure no increase in flood risk outside the highway boundary by providing for discharge that is attenuated to the 1 in 1 year greenfield runoff rate (or 1 litre per second whichever is higher) for all events up to and including the 1 in 100 year rainfall event with climate change. Attenuation would be by means of vortex controls, orifice plates or a combination thereof. Overland	Deadline 8

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>follow paths shall be established to manage exceedance flows from retention ponds, guided by the prevailing topography and based on existing overland flow routes. Exceedance flow rates and volumes would not be appreciably greater than under existing conditions. Discharge rates from existing retention ponds would be reduced by a least 50% on current discharge rates. Pollution control measures shall comprise the treatment systems identified in Appendix 14.6: Flood Risk Assessment - Part 7 (Application Document 6.3). Retention ponds would incorporate a lined sediment forebay with sufficient capacity to accommodate the first flush. (RDWE035).</p> <p>Paragraph 14.5.15, bullet point g. of ES Chapter 14 is amended to: g. A detention basin shall be provided at the location identified on Figure 2.4 Environmental Masterplan (Application Document 6.2). The basin shall be designed as a vegetated drainage system in accordance with the relevant provisions of DMRB CD 532 and will be constructed prior to being required to serve the development. The basin will be sized to ensure no increase in flood risk outside of the highway boundary by providing for discharge that is attenuated to the 1 in 1-year greenfield runoff rate (or 1 litre per second, whichever is higher) for all events up to and including the 1 in 100 year rainfall event with climate change. Attenuation would be by means of vortex controls, orifice plates or a combination thereof. Overland flow paths shall be established to manage exceedance flows from the detention basin, guided by the prevailing topography and based on existing overland flow routes. Exceedance flow rates and volumes would not be appreciably greater than under existing conditions. Pollution control measures shall comprise the treatment systems identified in Appendix 14.6: Flood Risk Assessment - Part 7 (Application Document 6.3). The detention basin would incorporate a lined sediment forebay with sufficient capacity to accommodate the first flush. (RDWE048).</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.1 Environmental Statement – Chapter 14 – Road Drainage and the Water Environment [APP-152] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Submission of supporting information in relation to flood risk at Deadline 6: 9.147 Coalhouse Point Flood Risk Assessment [REP6-102]</p>	<p>The Coalhouse Point Flood Risk Assessment [REP6-102] was submitted by the Applicant at Deadline 6. The technical note reported the additional hydraulic modelling undertaken to assess the impacts of the proposed Coalhouse Point wetland area on flood risk and to provide interpretation of the model results. Interpretation of the hydraulic modelling results demonstrates that the proposed wetland area will not have an adverse impact on flood risk elsewhere. This supports the conclusions presented in Section 14.6 of ES Chapter 14: Road Drainage and the Water Environment [APP-152] that there would be no significant adverse flood impacts to and from the Project.</p>	<p>Deadline 9</p>
ES Figures			
<p>6.2 Environmental Statement – Figure 14.1 – Surface Water Receptors and Resources [APP-322] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 14.1 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Page 2 of 4 of ES Figure 14.1 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 14.2 – Groundwater Receptors and Resources [APP-323] Document not re-issued. Updates</p>	<p>Figure 14.2 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 1 and 2 of 3 of ES Figure 14.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.			
6.2 Environmental Statement – Figure 14.3 – Superficial Aquifer Designations [APP-324] Document not re-issued. Updates identified in ES Addendum only.	Figure 14.3 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 2 of 3 of ES Figure 14.3 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement - Figure 14.4 - Bedrock Aquifer Designations [APP-325]	Figure 14.4 requires reissuing due to corruption issue with Version 1, which opened with error message.	Figure 14.4 is amended to resolve error message. Resubmitted in December 2022 as: Additional Submission - 6.2 Environmental Statement - Figure 14.4 - Bedrock Aquifer Designations (Version 2) - Accepted at the discretion of the Examining Authority [AS-048]	Section 51 submission December 2022
6.2 Environmental Statement - Figure 14.4 - Bedrock Aquifer Designations [AS-048] Document not re-issued. Updates identified in ES Addendum only.	Figure 14.4 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Page 2 of 3 of ES Figure 14.4 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.2 Environmental Statement – Figure 14.5 – Water Framework Directive - Surface Water Bodies, Transitional	Figure 14.5 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	Page 2 of 3 of ES Figure 14.5 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Waterbodies and Current Status [APP-326] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>		
<p>6.2 Environmental Statement – Figure 14.6 – Water Framework Directive – Groundwater Bodies and Current Status [APP-327] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 14.6 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Page 2 of 3 of ES Figure 14.6 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>6.2 Environmental Statement – Figure 14.7 – Water Framework Directive – Protected Areas [APP-328] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 14.7 requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Page 2 of 3 of Figure 14.7 is amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	<p>Deadline 9</p>
<p>ES Appendices</p>			

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.3 Environmental Statement – Appendix 14.2 – Water Features Survey Factual Report (1 of 2). [APP-454] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Annex B Water Feature Survey Results - Groundwater Pages 1, 6 and 7 of 12, Annex B Water Feature Survey Results - Surface Water Pages 1, 9, 10 and 11 of 23 of ES Appendix 14.2 are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 14.3 – Operational Surface Water Drainage Pollution Risk Assessment [APP-456] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Annex A of ES Appendix 14.3 is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 1 of 2) [APP-458] Document not re-issued. Updates	Paragraph 3.9.6 required revision to correct area number.	Paragraph 3.9.6 of ES Appendix 14.5 is amended to: Phase 1 habitat surveys, compared with UKTAG WTT habitat types, identified potential groundwater dependent habitats in a number of small ditches, watercourse margins and ponds. South of the River Thames, Jeskyns Community Woodland car park was identified as having a swamp habitat. North of the River Thames, identified areas were Cooper Shaw Road ditch, two small areas in Tilbury and four small areas in North Ockendon Pit SINC.	Section 51 submission December 2022

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date												
identified in ES Addendum only.															
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 1 of 2) [APP-458] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.5 (1 of 2) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Figures 1 and 2, Annex C - Plates 1.3, 1.7 and 1.8 and Annex F - Plate 1.11 of ES Appendix 14.5 (1 of 2) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9												
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 2 of 2) [APP-459] Document not re-issued. Updates identified in ES Addendum only.	Table 1.6 in Annex Q Utilities assessment (groundwater) of Appendix 14.5 requires amendment to provide missing text.	Table 1.6 in Annex Q of ES Appendix 14.5 is amended as follows: Table 1.6 Main trenchless sections of utilities – north of the River Thames <table border="1"> <thead> <tr> <th>Utility corridor section</th> <th>Summary description of trenchless section ¹</th> <th>Water resources^{2, 4}</th> <th>Residual significance (construction phase and operational phase) [REAC ref.]</th> </tr> </thead> <tbody> <tr> <td colspan="4">North of the River Thames (multi-utility):</td> </tr> <tr> <td>Work number MU72 under the railway</td> <td>Length of deep section:80m, maximum depth: 11m Proposed utility construction method: Thrust bore trenchless method</td> <td>SPZ3 ³ Essex Gravels groundwater body Fields south of Cranham Marsh SINC (50m west), Thames Chase Forest Centre SINC (250m north)</td> <td>Not significant [Following the precautionary principle. A Project commitment has been added, comprising {REAC ref. – number to be confirmed} [RDWE0056, which secures the reduction of temporary groundwater level lowering outside of the Order Limits by total or partial temporary</td> </tr> </tbody> </table>	Utility corridor section	Summary description of trenchless section ¹	Water resources ^{2, 4}	Residual significance (construction phase and operational phase) [REAC ref.]	North of the River Thames (multi-utility):				Work number MU72 under the railway	Length of deep section:80m, maximum depth: 11m Proposed utility construction method: Thrust bore trenchless method	SPZ3 ³ Essex Gravels groundwater body Fields south of Cranham Marsh SINC (50m west), Thames Chase Forest Centre SINC (250m north)	Not significant [Following the precautionary principle. A Project commitment has been added, comprising {REAC ref. – number to be confirmed} [RDWE0056, which secures the reduction of temporary groundwater level lowering outside of the Order Limits by total or partial temporary	Deadline 1
Utility corridor section	Summary description of trenchless section ¹	Water resources ^{2, 4}	Residual significance (construction phase and operational phase) [REAC ref.]												
North of the River Thames (multi-utility):															
Work number MU72 under the railway	Length of deep section:80m, maximum depth: 11m Proposed utility construction method: Thrust bore trenchless method	SPZ3 ³ Essex Gravels groundwater body Fields south of Cranham Marsh SINC (50m west), Thames Chase Forest Centre SINC (250m north)	Not significant [Following the precautionary principle. A Project commitment has been added, comprising {REAC ref. – number to be confirmed} [RDWE0056, which secures the reduction of temporary groundwater level lowering outside of the Order Limits by total or partial temporary												

Document reference	Reason for amendment	Environmental Statement amendment				Amendment date
		Work number MU73	Length of deep section: number to be confirmed approximately 370m. Alignment is beneath the London, Tilbury and Southend railway line, beneath the proposed A122 cutting and beneath the existing M25 cutting. Proposed utility construction method: Large HDD trenchless method	SPZ3 ³ Essex Gravels groundwater body Fields south of Cranham Marsh SINC (300m north west), Hall Farm moat, paddock and St Mary Magdalene Churchyard SINC (275m south east)	exclusion of water flow into the shafts]. Not significant [Following the precautionary principle. A Project commitment has been added, comprising REAC ref. – number to be confirmed RDWE0057, which secures the reduction of groundwater lowering outside of the Order Limits by temporary total or partial exclusion of water flow into the pits].	
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 2 of 2) – Annex Q Utilities assessment (groundwater) [APP-459] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.5 (2 of 2) requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Annex L - Plate 1.1, Annex N - Plate 5.1, Annex N - Annex A BGS 50K Superficial Geology (North of River), Annex N - Annex A Bedrock Geology Map (North Portal to A13), Annex N - Annex B Groundwater Flooding Potential (North Portal to A13) and Annex O Plates 2.1 and 2.2 of ES Appendix 14.5 (2 of 2) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.				Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 1 [APP-460] Part 2 [APP-461] Part 3 [APP-462] Part 8 [APP-467] Part 10 [APP-477] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>The London Borough of Havering is incorrectly noted as acting as the Lead Local Flood Authority (LLFA) on behalf of Brentwood Borough Council in the following locations: Part 1 paragraph 5.1.2, Part 2 paragraph 4.1.4, Part 3 paragraph 3.5.4, Part 8 paragraph 4.4.4, Part 10 footnote 2 (page 6)</p>	<p>Paragraphs identified are amended to: The London Borough of Havering Essex County Council is acting as the LLFA on behalf of for the area within the borough of Brentwood Borough Council.</p>	Deadline 1
<p>6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 2 [APP-461] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraph 2.3.5 requires revision to include an omitted fourth Lead Local Flood Authority (LLFA).</p>	<p>Paragraph 2.3.5 is amended to: The Project falls under the jurisdiction of three four LLFAs: a. Kent County Council b. Thurrock Council c. London Borough of Havering d. Essex County Council</p>	Deadline 3
<p>6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 4 [APP-463] Document not re-issued. Updates</p>	<p>Appendix 14.6 (Part 4) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002]</p>	<p>Plate 7.7 of ES Appendix 14.6 (Part 4) is amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	Amendment EA07 [REP5-001]		
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 5 [APP-464] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.6 (Part 5) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Plates 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, E.5, E.6, E.7, E.8, E.9, E.10, E.11, E.12, E.13, E.14 and E.15 of ES Appendix 14.6 (Part 5) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 6 [APP-465]	Part 6 Annex A – Calculations requires updating to include omitted calculation sheets.	Part 6 Annex A of ES Appendix 14.6 is amended to incorporate omitted calculation sheets. Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 14.6 Flood Risk Assessment - Part 6 (Clean) (Version 2) [REP1-171] 6.3 Environmental Statement – Appendix 14.6 Flood Risk Assessment - Part 6 (Tracked) (Version 2) [REP1-170]	Deadline 1
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 6 [REP1-171] Document not re-issued. Updates identified in ES Addendum only.	Submission of supporting information in relation to flood risk at Deadline 6: 9.147 Coalhouse Point Flood Risk Assessment [REP6-102]	The Coalhouse Point Flood Risk Assessment [REP6-102] was submitted by the Applicant at Deadline 6. The technical note reported the additional hydraulic modelling undertaken to assess the impacts of the proposed Coalhouse Point wetland area on flood risk and to provide interpretation of the model results. Interpretation of the hydraulic modelling results demonstrates that the proposed wetland area will not have an adverse impact on flood risk elsewhere. This supports the conclusions presented in Section 15.2 of Appendix 14.6 Flood Risk Assessment - Part 6 [REP1-171] .	Deadline 9
6.3 Environmental Statement – Appendix 14.6 – Flood Risk	Appendix 14.6 (Part 9 Annex A) requires amendment to update Order Limits shown, in relation to:	Figure Flood Risk Catchments, Figure Extent of Fluvial and Tidal Flooding - Sheets 1 and 2 of 3, Figure Extent of Fluvial Flooding - Sheets 1 and 2 of 3, Figure Extent of Surface Water Flooding - Sheets 1 and 2 of 3 of ES Appendix 14.6 (Part 9 Annex A) are amended as follows:	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Assessment – Part 9 Annex A [APP-469] Document not re-issued. Updates identified in ES Addendum only.	Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex B [APP-470] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.6 (Part 9 Annex B) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	All sheets 1 and all sheets 2 of 3 of ES Appendix 14.6 (Part 9 Annex B) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex C [APP-471] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.6 (Part 9 Annex C) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1, 3, 6, 7, 9, 10, 13, 22 and 23 of ES Appendix 14.6 (Part 9 Annex C) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex G	Appendix 14.6 (Part 9 Annex G) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002]	All sheets within ES Appendix 14.6 (Part 9 Annex G) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
[APP-475] Document not re-issued. Updates identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]		
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 9 Annex H [APP-476] Document not re-issued. Updates identified in ES Addendum only.	Appendix 14.6 (Part 9 Annex H) requires amendment to update Order Limits shown, in relation to: Change MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	All sheets within ES Appendix 14.6 (Part 9 Annex H) are amended as follows: Update to Order Limits. The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 10 [APP-477]	Table 4.7 and Table 4.8 of Part 10 require updating to include works numbers so that proposed culverts can be easily identified with reference to the Drainage Plans [REP6-008]	Table 4.7 and Table 4.8 in Part 10 of ES Appendix 14.6 are amended to incorporate works numbers for proposed culverts. This change is in response to a request by Thurrock Council for clarity on the number of culverts proposed in the Project design. Resubmitted 17 November 2023 as: 6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 10 (Clean) (Version 2) [REP7-130] 6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 10 (Tracked) (Version 2) [REP7-131]	Deadline 7
6.3 Environmental Statement – Appendix 14.7 – Water Framework Directive Assessment [APP-478] Document not re-issued. Updates	Appendix 14.7 requires amendment to update Order Limits and locations of Muckingford Road and Low Street Lane Utilities Logistics Hubs shown, in relation to: Changes MRC01 and MRC03 [CR1-002]	The following items in ES Appendix 14.7 are amended as identified: Annex C Drawing 1 - Page 2 and 3 of 5 Annex C Drawing 2 - Page 2 and 3 of 5 Annex C Drawing 3 - Page 1 and 2 of 3 Annex C Drawing 4 - Page 2 of 2 Update to Order Limits. Update to Utilities Logistics Hubs (ULH11 and ULH 12) .	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.	Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	The appendix is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1. The information presented in Annex C Drawing 2 for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262] , Figure 4.2.	

3.16 ES Chapter 15 Climate

3.16.1 The following changes have been made throughout Examination to ES Chapter 15, associated figures and appendices, as set out in Table 3.12.

Table 3.12 Updates to Chapter 15, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
ES Chapter			
6.1 Environmental Statement - Chapter 15 – Climate [APP-153] Document not re-issued. Updates identified in ES Addendum only.	Update to Project carbon quantification following alignment to PAS280:2023 and completion of the Project's procurement phase.	Appendix E presents an analysis of the changes that would arise from the alignment of the Project carbon quantification with the latest specification set out in the PAS2080:2023 specification and following the amendment of the Project's maximum carbon limit CBN04 to reflect the outcome of the procurement phase of the Project.	Deadline 7
6.1 Environmental Statement - Chapter 15 – Climate [APP-153] Document not re-issued. Updates identified in ES Addendum only.	Formatting error identified after paragraph 15.6.28 on pages 67 to 72 inclusive.	A paragraph numbering error has been identified after paragraph 15.6.28 of ES Chapter 15. Paragraph numbers should run continuously from 15.6.28 to the end of Section 15.6 (currently the numbering restarts at 15.6.1 after 15.6.28). No amendment to ES Chapter 15 is proposed at this time, but will be incorporated within the updates to the ES to be submitted by Deadline 9.	Deadline 7

3.17 ES Chapter 16 Cumulative Effects

3.17.1 The following changes have been made throughout Examination to ES Chapter 16, associated figures and appendices, as set out in Table 3.13.

Table 3.13 Updates to Chapter 16, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date										
ES Chapter													
6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 16.5.40 requires revision to correct the reported number of significant effects on soils from 50 to 53 and align with the information reported in ES Appendix 16.2.	Paragraph 16.5.40 of ES Chapter 16 is amended to: Based on the data available on the other development proposals, the cumulative effects assessment identified 50 53 shortlisted developments with the potential to cause significant inter-project effects for soils receptors, during construction.	Deadline 1										
6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154] Document not re-issued. Updates identified in ES Addendum only.	Table 16.10 requires revision to correct an error and ensure the text reported in Chapter 16 is aligned with significant effects reported in ES Appendix 16.2 (Short List of Developments). This relates specifically to significant effects on soils for three shortlisted developments and removal of a single non-significant effect on	Table 16.10 of ES Chapter 16 is amended to include significant effects for the following three developments: <ul style="list-style-type: none"> • 21/01525/OUT - Entire land east of A128 south of A127. • 20/503707/HYBRID - Kent Science Park • MC/19/0287 - Land at Town Road Cliffe Woods <p style="text-align: center;">Table 16.10 Inter-project cumulative effects on receptors</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Development</th> <th>Description</th> <th>Construction</th> <th>Operation</th> <th>Residual Cumulative Effect</th> </tr> </thead> <tbody> <tr> <td>Entire Land East Of A128 South Of A127 Tilbury Road West Horndon</td> <td><i>No revision to description documented in ES Chapter 16 Table 16.10.</i></td> <td>Population and Human Health: Effects during construction may depend</td> <td>Population and Human Health: Slight beneficial effects anticipated</td> <td>Residential Amenity and Access - Slight Adverse and not significant</td> </tr> </tbody> </table>	Development	Description	Construction	Operation	Residual Cumulative Effect	Entire Land East Of A128 South Of A127 Tilbury Road West Horndon	<i>No revision to description documented in ES Chapter 16 Table 16.10.</i>	Population and Human Health: Effects during construction may depend	Population and Human Health: Slight beneficial effects anticipated	Residential Amenity and Access - Slight Adverse and not significant	Deadline 1
Development	Description	Construction	Operation	Residual Cumulative Effect									
Entire Land East Of A128 South Of A127 Tilbury Road West Horndon	<i>No revision to description documented in ES Chapter 16 Table 16.10.</i>	Population and Human Health: Effects during construction may depend	Population and Human Health: Slight beneficial effects anticipated	Residential Amenity and Access - Slight Adverse and not significant									

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date
	<p>population and human health receptors. There is no change to the assessment conclusions, which remain correct as presented in ES Appendix 16.2. Update at Deadline 9: text explaining the reason for amendment has been developed to make this clearer</p>	<p>Essex. Also known as Dunton Hills, Brentwood - Reference: 21/01525/OUT (approximately 4km from Order Limits and adjacent to ARN) Brentwood Borough Council area</p>		<p>on timescale for the proposal coming forward, as adverse effects may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.</p>	<p>during scheme operation in terms of potential increased accessibility for employment and access to community facilities.</p>	<p>effect (Construction) Employment and Access - Slight Beneficial and significant effect (Operation)</p>	
				<p>Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.</p>	<p>Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.</p>	<p>Soils - Very Large Adverse and significant effect (Construction) Soils - Neutral and not significant effect (Operation)</p>	

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date
		<p>Kent Science Park Shimmin Road Sittingbourne - Reference: 20/503707/ HYBRID (approximately 12.6km from Order Limits and 450m from ARN) Swale District Area</p>	<p>Hybrid planning application consisting of - Outline planning permission (with all matters reserved except access) for commercial development, accesses and roads, parking, associated services, infrastructure, earthworks and landscaping - Full planning permission for the erection of a manufacturing facility, associated parking, services, infrastructure, landscaping and earthworks</p>	<p>Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.</p>	<p>Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.</p>	<p>Soils - Very Large Adverse and significant effect (Construction) Soils - Neutral and not significant effect (Operation)</p>	
		<p>Land at Town Road Cliffe Woods. Rochester Medway ME3 8JL - Reference: MC/19/0287 (approximately 3.2km from Order Limits and 2.5km from ARN)</p>	<p>Outline planning permission with some matters reserved (appearance landscaping layout and scale) for up to 225 residential dwellings including up to 25% affordable housing, introduction of structural planting and landscaping, informal public open</p>	<p>Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of</p>	<p>Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.</p>	<p>Soils - Very Large Adverse and significant effect (Construction) Soils - Neutral and not significant effect (Operation)</p>	

Document reference	Reason for amendment	Environmental Statement amendment					Amendment date
		Medway Council area	space and children's play area, surface water flood mitigation and attenuation, vehicular access point from Town Road and associated ancillary works.	which has the potential to be best and most versatile land.			
6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154] Document not re-issued. Updates identified in ES Addendum only.	New environmental information - not errata. An update to the inter-project effects assessment presented in ES Chapter 16 has been undertaken to identify new developments (and new relevant information on developments previously considered) that have come forward since the inter-project effects cut-off date of 31 May 2022. This update has identified additional significant effects to those reported to date for the DCO application.	No amendment to ES Chapter 16 [APP-154] is proposed. The new environmental information on additional significant effects identified through this assessment update is presented in Appendix B of the ES Addendum document.					Deadline 1
6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154]	Table 16.2 on Page 17 requires revision to correct errata in relation to the interrelationship between biodiversity and	Table 16.2 on Page 17 of ES Chapter 16, row for Biodiversity receptors is amended as follows: Column for 13. Population and human health: N is updated to Y. Column for Approach to assessment of intra-project effects, new bullet point to be added:					Deadline 4

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.	population and human health effects.	Effects from population and human health related to disturbance to species and degradation of sites and habitats from increased visitor pressure	
6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154]	Tables 16.8, 16.9 and 16.11 require revision in response to changes to significant landscape and visual effects identified since the DCO submission, as reported within the ES Addendum at Deadlines 1 and 7. The revisions have amended the descriptions of receptor groups to be clear that the additional receptors on Rochester Road and A1013 Stanford Road are included, and to change the significance of effects for one receptor group.	<p>Table 16.8 on Pages 46 and 47 of ES Chapter 16, row for Westcourt ward Landscape and Visual is amended as follows: Temporary significant very large, large and moderate adverse visual effects on some residential receptors in the eastern part of the ward at Thong Lane and on Rochester Road have been identified.</p> <p>Table 16.8 on Pages 46 and 47 of ES Chapter 16, row for Westcourt ward, column for Assessment of intra-project effects on receptors is amended as follows: Adverse effects are likely, particularly on properties where combined construction phase dust and emissions, noise, vibration, visual effects and effects on human health would arise. Locations likely to experience significant intra-project effects are:</p> <ul style="list-style-type: none"> • Receptors located on and around Thong Lane and Rochester Road where there would be combined temporary adverse construction phase dust and emissions, noise, visual and human health effects. These effects would be no worse than the very large adverse effects identified from visual effects in relation to some receptors at this location. <p>Table 16.8 on Pages 54 and 55 of ES Chapter 16, row for Orsett ward Landscape and Visual is amended as follows: Temporary adverse visual effects on residential receptors ranging from large adverse to neutral have been identified. Temporary significant adverse effects have been identified as follows:</p> <ul style="list-style-type: none"> • Large adverse effects on some residential receptors in and around Baker Street • Large adverse effects on some residential receptors on Hornsby Lane • Large adverse effects on some residential receptors on Stanford Road at and around the Whitcroft 	Deadline 8

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> • Moderate adverse effects on some residential receptors at the western edge of Orsett • Large adverse effects on some residential receptors on and around Stifford Clays Road • Large to moderate effects on some residential receptors to the north of the ward <p>Table 16.8 on Page 57 of ES Chapter 16, row for Orsett ward, column for Assessment of intra-project effects on receptors, 5th bullet point, is amended as follows:</p> <ul style="list-style-type: none"> • Receptors on Stanford Road at and around the Whitecroft where there would be adverse combined effects from construction phase dust and emissions, noise, visual and human health effects. These effects would be no worse than the large adverse effects identified from visual effects in relation to some receptors at this location. <p>Table 16.9 on Pages 79 and 80 of ES Chapter 16, row for Orsett ward Landscape and Visual is amended as follows:</p> <p>Visual effects on residential receptors ranging from large adverse to neutral effects in opening year reducing to moderate adverse to neutral effects in design year following the establishment of mitigation. Significant adverse effects on residential receptors in opening year have been identified as follows:</p> <ul style="list-style-type: none"> • Large and moderate adverse effects on some residential receptors in and around Baker Street • Large and moderate adverse effects on some residential receptors on Hornsby Lane • Large adverse effects on some residential receptors on Stanford Road at and around the Whitecroft • Moderate adverse effects on some residential receptors at the western edge of Orsett • Moderate adverse effects on some residential receptors on Stifford Clays Road 	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<ul style="list-style-type: none"> • Moderate effects on some residential receptors to the north of the ward <p>Significant adverse effects on residential receptors in design year have been identified as follows:</p> <ul style="list-style-type: none"> • Moderate adverse effects on some residential receptors in and around Baker Street • Moderate adverse effects on some residential receptors on Hornsby Lane • Moderate adverse effects on some residential receptors on Stanford Road at and around the Whitecroft • Moderate adverse effects on some residential receptors on Stifford Clays Road • Moderate effects on some residential receptors to the north of the ward <p>Table 16.9 on Pages 79 and 80 of ES Chapter 16, row for Orsett ward, column for Assessment of intra-project effects on receptors, 3rd bullet point, is amended as follows:</p> <ul style="list-style-type: none"> • Residential receptors located on Stanford Road at and around the Whitecroft where adverse air quality, noise, visual and human health effects would combine. These effects would be no worse than the large adverse effects identified from visual effects in relation to some receptors at this location in opening year. Visual effects would reduce in significance in design year to moderate adverse, reducing the overall combined effects. <p>Table 16.11 Intra-project effects summary on Page 149 of ES Chapter 16, row for Westcourt ward is amended as follows:</p> <p>Effects on groups of receptors – Receptors located on and around Thong Lane and Rochester Road where there would be combined temporary adverse construction phase dust and emissions, noise, visual and human health effects.</p> <p>Cumulative Effect – Very Large adverse*</p> <p>Table 16.11 Intra-project effects summary on Page 150 of ES Chapter 16, row for Orsett ward is amended as follows:</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>Effects on groups of receptors – Receptors on Stanford Road at and around the Whitecroft where there would be adverse combined effects from construction phase dust and emissions, noise, visual and human health effects.</p> <p>Table 16.11 Intra-project effects summary on page 155 of ES Chapter 16, row for Orsett ward is amended as follows:</p> <p>Effects on groups of receptors – Receptors located on Stanford Road at and around the Whitecroft where adverse air quality, noise, visual and human health effects would combine.</p>	
ES Figures			
<p>6.2 Environmental Statement – Figure 16.1 – Cumulative Zones of Influence [APP-329]</p> <p>Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.</p>	<p>Figure 16.1 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 1, 2 and 3 of 4 of ES Figure 16.1 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9
<p>6.2 Environmental Statement – Figure 16.2 – Developments in the Cumulative Shortlist [APP-330]</p> <p>Document revised since Version 1 but not re-issued.</p>	<p>Figure 16.2 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]</p>	<p>Pages 4, 5 and 10 of 20 of ES Figure 16.2 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Updates identified in ES Addendum only.			
6.2 Environmental Statement – Figure 16.3 – Overview Map of Local Authorities and Wards [APP-331] Document revised since Version 1 but not re-issued. Updates identified in ES Addendum only.	Figure 16.3 requires amendment to update Order Limits shown, in relation to: Changes MRC01 and MRC03 [CR1-002] Amendments EA04 and EA05 [CR2-002] Amendment EA07 [REP5-001]	Pages 1 and 5 of 6 of ES Figure 16.3 are amended as follows: Update to Order Limits. The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.	Deadline 9
ES Appendices			
6.3 Environmental Statement – Appendix 16.2 – Short List of Developments [APP-484] Document not re-issued. Updates identified in ES Addendum only.	Page 72 of the Shortlist Table of Appendix 16.2 requires amendment to correct data in two rows (relating to entries for Air Quality and Noise and Vibration) against Application Reference 22/00402/FUL Brentwood Enterprise Park. The shortlist incorrectly identified the development as being included in the traffic model (through the inclusion of a 'Y' in column 5 on Page 72).	Entries against Application Reference 22/00402/FUL Brentwood Enterprise Park on Page 72 of ES Appendix 16.2 are amended to: The 'N' in column 5 is amended to 'Y'. <u>Air Quality text in column 8:</u> The are 4 There are 2 receptors near the proposed development site (LTC_Con_017 and LTC293) both of which show. With the traffic associated with this development included in the traffic model, all receptors show modelled concentrations well below the AQS objective, indicating. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective. <u>Air Quality text in column 9:</u> The are 4 receptors near the proposed development site. With the traffic associated with this development included in the traffic model, all receptors show modelled concentrations well below the AQS objective. This The closest receptor to the proposed development site (LTC293) shows modelled concentrations well below the AQS objective, indicating indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
	<p>Consequently, updates are required to the Air Quality and Noise assessment text in the associated rows of the Shortlist. This has no change to residual significance of effects reported.</p>	<p>Noise and Vibration text in column 9: The predicted traffic from the proposed development is included within the project traffic model and so any cumulative effects would be evident. The operational road traffic noise assessment for the Project indicates negligible changes in road traffic noise levels across this application site. The traffic from the proposed development is unlikely to increase the traffic to a level that would be significant.</p>	

3.18 ES Chapter 17 Summary

3.18.1 The following changes have been made throughout Examination to ES Chapter 17, associated figures and appendices, as set out in Table 3.14.

Table 3.14 Updates to Chapter 17, figures and appendices

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date				
ES Chapter							
6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates identified in ES Addendum only.	The Chapter 17 summary requires updating to reflect the various ES updates set out within this ES Addendum.	<p>ES Chapter 17 is amended to reflect the various ES updates set out within this ES Addendum.</p> <p>The first column of Table 17.2 on page 9 of ES Chapter 17 is amended to:</p> <p style="text-align: center;">Table 17.2 Summary of likely significant effects detailed in Chapter 6: Cultural Heritage</p> <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">Receptors</td> </tr> <tr> <td style="text-align: center;">Chapter 6: Cultural Heritage</td> </tr> <tr> <td style="text-align: center;">North of the River Thames</td> </tr> <tr> <td> <p>54 56 non-designated medium-value archaeological assets (29, 104, 117, 219, 342, 356, 442, 482, 595, 643, 3553, 3567, 3572, 3575, 3589, 3592, 3594, 3598, 3601 3619, 3624, 3627, 3670, 3671, 3675, 3677, 3682, 3713, 3722, 3723, 3726, 3729, 3732, 3733, 3820, 3835, 3836, 3841, 3848, 3870, 3902, 3903, 3904, 3905, 3906, 3907, 3908, 3914, 3916, 3918, 3920, 3926, 3936, 3940, 3959, 4763)</p> </td> </tr> </table> <p>Changes to the first column of Table 17.3 of ES Chapter 17 is amended as follows:</p> <p><u>Visual effects – South of the River Thames. Section references are set out in ES Figure 2.4 (Environmental Masterplan)</u></p> <p><u>Construction (as identified in column 3):</u> <i>Section 3 and 4 (page 23)</i></p> <ul style="list-style-type: none"> • Row for Very large adverse: 1 Representative Viewpoints, 1 Residential receptor or group 	Receptors	Chapter 6: Cultural Heritage	North of the River Thames	<p>54 56 non-designated medium-value archaeological assets (29, 104, 117, 219, 342, 356, 442, 482, 595, 643, 3553, 3567, 3572, 3575, 3589, 3592, 3594, 3598, 3601 3619, 3624, 3627, 3670, 3671, 3675, 3677, 3682, 3713, 3722, 3723, 3726, 3729, 3732, 3733, 3820, 3835, 3836, 3841, 3848, 3870, 3902, 3903, 3904, 3905, 3906, 3907, 3908, 3914, 3916, 3918, 3920, 3926, 3936, 3940, 3959, 4763)</p>	Deadline 1
Receptors							
Chapter 6: Cultural Heritage							
North of the River Thames							
<p>54 56 non-designated medium-value archaeological assets (29, 104, 117, 219, 342, 356, 442, 482, 595, 643, 3553, 3567, 3572, 3575, 3589, 3592, 3594, 3598, 3601 3619, 3624, 3627, 3670, 3671, 3675, 3677, 3682, 3713, 3722, 3723, 3726, 3729, 3732, 3733, 3820, 3835, 3836, 3841, 3848, 3870, 3902, 3903, 3904, 3905, 3906, 3907, 3908, 3914, 3916, 3918, 3920, 3926, 3936, 3940, 3959, 4763)</p>							

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p><u>Visual effects – North of the River Thames</u></p> <p><u>Construction:</u> <i>Section 9 (page 25)</i></p> <ul style="list-style-type: none"> • Row for Moderate adverse: 2 Representative Viewpoints, 2 Residential receptors or groups, 2 Recreational routes or groups, 2 Transport routes or groups, + 2 Other receptors or groups <p><i>Section 11 (page 26)</i></p> <ul style="list-style-type: none"> • Row for Large adverse: 7 Representative Viewpoints, 13 14 Residential receptors or groups, 1 Recreational route or group, 6 Transport routes or groups, 2 Other receptors or groups • Row for Moderate adverse: 3 Representative Viewpoints, 8 Residential receptors or groups, 2 Transport routes or groups, 3 4 Other receptors or groups <p><u>Visual effects – North of the River Thames</u></p> <p><u>Operation (as identified in column 3):</u> <i>Section 11 (page 43)</i></p> <ul style="list-style-type: none"> • Row for Large adverse effect in opening year reducing to moderate adverse effect in design year: 4 Representative Viewpoints, 6 7 Residential receptors or groups, 2 Transport routes or groups, 1 Other receptor or group Moderate adverse effect in opening year reducing to slight adverse effect in design year: 5 Representative Viewpoints, 6 Residential receptors or groups, 2 Recreational routes or groups, 4 Transport routes or groups, + 2 Other receptors or groups <p>The second column of the 'Private property and housing' north of the River Thames row in Table 17.8 is amended as follows; with no amendment to the associated columns.</p>	

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date						
		<p style="text-align: center;">Table 17.8 Summary of likely significant effects detailed in Chapter 13: Population and Human Health</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">Land use and accessibility effects – North of the River Thames</th> </tr> <tr> <th style="width: 20%;">Receptors</th> <th>Description of impact</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">Private property and housing</td> <td> <p>Demolition of 2631 properties north of the River Thames as follows:</p> <ul style="list-style-type: none"> • 7, 8, 9 and 10 Woolings Close, Baker Street • 5 and 6 Woolings Row, Baker Street • Murrells Cottage, Stanford Road • Thatched Cottage, Baker Street • Gammon Staples Farmhouse, Baker Street • The Thatches, Stanford Road • 1 and 2 Grays Corner Cottage, Baker Street • 1–2 Whitfield Cottages Whitfield Cottage, Barn View and Stable View, Stifford Clays Road • 1–4 Bridge Cottages, Ockendon Road • Larwood Cottage, Ockendon Road • The Rosary, Ockendon Road • Yellow Stock Mews, 1-5 Yellow Stock Mews, Ockendon Road • Estate House, Ockendon Road • 1–2 Cherry Orchard Cottages, Ockendon Road • Alde Cottage • Welcome Service Station (residential) <p>The impact on these private properties, which are defined as being of very high sensitivity, would be of major magnitude.</p> </td> </tr> </tbody> </table>	Land use and accessibility effects – North of the River Thames		Receptors	Description of impact	Private property and housing	<p>Demolition of 2631 properties north of the River Thames as follows:</p> <ul style="list-style-type: none"> • 7, 8, 9 and 10 Woolings Close, Baker Street • 5 and 6 Woolings Row, Baker Street • Murrells Cottage, Stanford Road • Thatched Cottage, Baker Street • Gammon Staples Farmhouse, Baker Street • The Thatches, Stanford Road • 1 and 2 Grays Corner Cottage, Baker Street • 1–2 Whitfield Cottages Whitfield Cottage, Barn View and Stable View, Stifford Clays Road • 1–4 Bridge Cottages, Ockendon Road • Larwood Cottage, Ockendon Road • The Rosary, Ockendon Road • Yellow Stock Mews, 1-5 Yellow Stock Mews, Ockendon Road • Estate House, Ockendon Road • 1–2 Cherry Orchard Cottages, Ockendon Road • Alde Cottage • Welcome Service Station (residential) <p>The impact on these private properties, which are defined as being of very high sensitivity, would be of major magnitude.</p>	
Land use and accessibility effects – North of the River Thames									
Receptors	Description of impact								
Private property and housing	<p>Demolition of 2631 properties north of the River Thames as follows:</p> <ul style="list-style-type: none"> • 7, 8, 9 and 10 Woolings Close, Baker Street • 5 and 6 Woolings Row, Baker Street • Murrells Cottage, Stanford Road • Thatched Cottage, Baker Street • Gammon Staples Farmhouse, Baker Street • The Thatches, Stanford Road • 1 and 2 Grays Corner Cottage, Baker Street • 1–2 Whitfield Cottages Whitfield Cottage, Barn View and Stable View, Stifford Clays Road • 1–4 Bridge Cottages, Ockendon Road • Larwood Cottage, Ockendon Road • The Rosary, Ockendon Road • Yellow Stock Mews, 1-5 Yellow Stock Mews, Ockendon Road • Estate House, Ockendon Road • 1–2 Cherry Orchard Cottages, Ockendon Road • Alde Cottage • Welcome Service Station (residential) <p>The impact on these private properties, which are defined as being of very high sensitivity, would be of major magnitude.</p>								
<p>6.1 Environmental Statement - Chapter 17 - Summary [APP-155]</p>	<p>The Chapter 17 summary requires updating to reflect the ES updates to Chapter 7 set out within this ES</p>	<p>ES Chapter 17 is amended to reflect the ES updates set out within this ES Addendum and the ES Addendum at Deadline 6.</p> <p>The first column of Table 17.3 of ES Chapter 17 is amended as follows: <u>Visual effects – South of the River Thames. Section references are set out in ES Figure 2.4 (Environmental Masterplan)</u></p>	<p>Deadline 7</p>						

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Addendum at Deadline 6 and 7.</p>	<p><u>Construction (as identified in column 3):</u> <i>Section 3 and 4 (page 23)</i></p> <ul style="list-style-type: none"> Row for Very large adverse: 1 Representative Viewpoint, 42 Residential receptors or groups <p><i>Section 3 and 4 (page 24)</i></p> <ul style="list-style-type: none"> Row for Large adverse: 2 Representative Viewpoints, 34 Residential receptors or groups, 3 Recreational routes or groups <p><u>Visual effects – North of the River Thames</u></p> <p><u>Construction (as identified in column 3):</u> <i>Section 9 (page 24)</i></p> <ul style="list-style-type: none"> Row for Large adverse: 45 Representative Viewpoints, 3 Residential receptors or groups, 3 Recreational routes or groups, 2 Transport routes or groups <p><u>Visual effects – South of the River Thames</u></p> <p><u>Operation (as identified in column 3):</u> <i>Section 1 (page 37)</i></p> <ul style="list-style-type: none"> New row to be added for 'Large adverse effect in opening year reducing to moderate beneficial effect in design year': 1 Representative Viewpoint <p><i>Section 1 (page 38)</i></p> <p>Remove row for 'Slight adverse effect in opening year increasing to moderate beneficial effect in design year': 1 Representative Viewpoint</p>	
<p>6.1 Environmental Statement - Chapter 17 - Summary [APP-155]</p>	<p>An update is required to Table 17.8 to align with a correction made in ES Chapter 13 removing reference to a Public Right of Way.</p>	<p>The row relating to FP30 within Table 17.8 on Page 79 of ES Chapter 17 is deleted:</p> <p>Table 17.8 Summary of likely significant effects detailed in Chapter 13: Population and Human Health</p> <p>Receptors - FP30</p> <p>Description of impact – Utility over-head works and road construction works would require temporary closure of the route for approximately two years. Once</p>	<p>Deadline 8</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>the new Muckingford Road bridge is completed a temporary diversion would be created with surface improvements. The impact on this medium sensitivity receptor would be of major magnitude.</p> <p>Construction/ operation – Construction</p> <p>Summary of key mitigation - The temporary diversion route would be in place until construction works are complete or until it is safe to reopen the route via the proposed new alignment.</p> <p>How mitigation is secured in DCO - Design Principles CoCP REAC</p> <p>Significance of residual effect - Moderate adverse</p>	
<p>6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Table 17.2 of Chapter 17 Summary requires updating in response to the updates made to ES Chapter 6 at Deadline 9.</p>	<p>The second row of Table 17.2 of ES Chapter 17 is updated as follows:</p> <p>Table 17.2 Summary of likely significant effects detailed in Chapter 6: Cultural Heritage</p> <p>Receptors - 443 medium-value non-designated archaeological assets (774, 775, 1302, 1306, 1362, 1372, 1396, 1474, 1579, 1584, 1595, 1599, 1600, 1604, 1606, 1607, 1608, 1620, 1622, 1813, 1820, 2291, 2308, 3640, 3642, 3643, 3655, 3663, 3667, 3740, 3742, 3743, 3745, 3749, 3751, 3773, 3774, 3793, 3802, 4427, 4428, 4558, 4595, 4745)</p> <p>Description of impact - Construction of the Project associated earthworks, earthworks to create Chalk Park, the Southern Tunnel Entrance compound, temporary storage stockpiles 1 and 2, and utility diversion works would result in the permanent truncation or removal of these assets. The impact on these medium-value assets would be of moderate magnitude.</p> <p>Construction/ operation - Construction</p> <p>Summary of key mitigation - Archaeological excavation and recording.</p> <p>How mitigation is secured in DCO - Archaeological Mitigation Strategy and Outline WSI</p> <p>Significance of residual effect - Moderate adverse</p>	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates identified in ES Addendum only.	Table 17.3 of ES Chapter 17 Summary requires updating in response to the updates made to ES Chapter 7 at Deadline 9.	Table 17.3 of ES Chapter 17, as amended previously at Deadlines 1 and 7, is updated as follows: The first column of Table 17.3 of ES Chapter 17 is amended: <u>Visual effects – South of the River Thames</u> <u>Operation (as identified in column 3):</u> <i>Bluebell Hill Nitrogen Deposition Compensation Site (page 37)</i> <ul style="list-style-type: none"> Row for Neutral effect in opening year increasing to moderate beneficial effect in design year: 21 Representative Viewpoints 	Deadline 9
6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates identified in ES Addendum only.	Table 17.4 of ES Chapter 17 Summary requires updating in response to the updates made to ES Chapter 8 at Deadline 9.	Table 17.4 of ES Chapter 17 is updated with the insertion of a new row on page 53, above the row for Bridge Woods, Burham LWS, as follows: Receptors - The Wilderness ASNW Description of impact - Habitat loss (0.44ha representing 100% of the ASNW at this site) due to the new A122 Lower Thames Crossing alignment conflicting with the southern section of the woodland. Construction/ operation - Construction Summary of key mitigation / compensation / enhancement - Compensatory woodland planting would be provided to compensate, in part, for the loss of this habitat. Ancient woodland compensation planting totalling 32ha is proposed north of the River Thames, focused principally on a 30ha area of planting at Hole Farm and Folkes Farm, either side of the M25 just north of junction 29. How mitigation is secured in DCO - Design Principles REAC Significance of residual effect – Large adverse	Deadline 9
6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates	Table 17.4 of ES Chapter 17 Summary requires updating in response to the updates made to ES Chapter 8 at Deadline 9.	Table 17.4 page 48, rows 1 and 4, column 4, and Table 17.4 page 53, row 1 column 4 are updated as follows: Table 17.4 Summary of likely significant effects detailed in Chapter 8: Terrestrial Biodiversity Summary of key mitigation/compensation/enhancement - Landscape-scale habitat creation across eightseven sites north and south of the River Thames that offset habitat degradation through the creation of approximately 240205ha	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
identified in ES Addendum only.		of new wildlife-rich habitat. The locations of these areas are designed to link existing retained semi-natural and designated habitats to strengthen the network of designated habitats at a landscape scale.	
6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates identified in ES Addendum only.	Table 17.5 of ES Chapter 17 Summary require updating in response to the updates made to ES Chapter 10 at Deadline 9.	The rows relating to Best and most versatile (BMV) land within Table 17.5 on Page 58 of ES Chapter 17 is updated as follows: Table 17.5 Summary of likely significant effects detailed in Chapter 10: Geology and Soils Chapter 10: Geology and Soils Receptors - Best and most versatile (BMV) land Description of impact – Construction phase loss of 846.62 770.94ha of BMV land during the construction phase. The impact on these very high valued resources would be of major magnitude. Receptors - BMV land Description of impact – Permanent loss of 539.22 507.77ha of BMV land following reinstatement of land required temporarily. The impact on these very high valued resources would be of major magnitude.	Deadline 9
6.1 Environmental Statement - Chapter 17 - Summary [APP-155] Document not re-issued. Updates identified in ES Addendum only.	Table 17.10 of ES Chapter 17 Summary requires updating in response to the updates made to ES Chapter 16 at Deadline 8.	The rows relating to intra-project effects within Table 17.10 of ES Chapter 17 is updated as follows: Table 17.10 Summary of likely significant effects detailed in Chapter 16: Cumulative Effects Assessment Row on page 94 Receptors - Westcourt ward Description of impact – Receptors located on and around Thong Lane and Rochester Road where there would be combined temporary adverse construction phase dust and emissions, noise, visual and human health effects. Construction/ operation - Construction Summary of key mitigation - No additional mitigation measures beyond those proposed in the topic chapters. How mitigation is secured in DCO - n/a	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>Significance of residual effect - Very Large adverse Row on page 97 Receptors - Orsett ward Description of impact – Receptors on Stanford Road at and around the Whitecroft where there would be adverse combined effects from construction phase dust and emissions, noise, visual and human health effects. Construction/ operation - Construction Summary of key mitigation - No additional mitigation measures beyond those proposed in the topic chapters. How mitigation is secured in DCO - n/a Significance of residual effect – Large adverse Row on page 101 Receptors - Orsett ward Description of impact – Receptors located on Stanford Road at and around the Whitecroft where adverse air quality, noise, visual and human health effects would combine. Construction/ operation - Construction Summary of key mitigation - No additional mitigation measures beyond those proposed in the topic chapters. How mitigation is secured in DCO - n/a Significance of residual effect – Large adverse</p>	

3.19 ES Non-Technical Summary

3.19.1 The following changes have been made during Examination to ES Non-Technical Summary (NTS), via the ES Addendum only, as set out in Table 3.15. The NTS forms a summary of the ES, as submitted, in October 2022. It reflects a point in time, and is not sufficiently detailed to be used for decision making or to guide future stages of detailed design or construction. Further updates would be made to this document in response to changes made to the ES chapters at Deadline 9; however, this document has not since been brought up to date. The NTS has not been re-issued and remains as a summary of the ES as written for the DCO application.

Table 3.15 Updates to Non-Technical Summary (NTS)

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
6.4 Environmental Statement - Non-Technical Summary (NTS) [APP-486] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 3.3.6, bullet point e. requires revision to reflect the amendments made to ES Chapter 6: Cultural Heritage.	Paragraph 3.3.6, bullet point e. of the NTS is amended to: e. Complete or partial removal of 54 56 medium-value non-designated buried archaeological sites to the north of the River Thames.	Deadline 1
6.4 Environmental Statement - Non-Technical Summary (NTS) [APP-486] Document not re-issued. Updates identified in ES Addendum only.	Paragraph 3.11.10, bullet point a requires revision to reflect the amendments made to ES Chapter 13: Population and Human Health (and ES Chapter 2: Project Description)	Paragraph 3.11.10, bullet point a. of the NTS is amended to: a. Permanent adverse effects on private property and housing as a result of demolition of 30 35 properties, permanent acquisition of land from five properties and temporary possession of land from a further property.	Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>6.4 Environmental Statement - Non-Technical Summary (NTS)</p> <p>[APP-486]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>NTS Figure 1 requires amendment to update Order Limits shown, in relation to:</p> <p>Changes MRC01 and MRC03 [CR1-002]</p> <p>Amendments EA04 and EA05 [CR2-002]</p> <p>Amendment EA07 [REP5-001]</p>	<p>Sheets 3, 4 and 7 of Figure 1: Lower Thames Crossing general arrangement drawing, within the NTS, are amended as follows:</p> <p>Update to Order Limits.</p> <p>The figure is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9
<p>6.4 Environmental Statement - Non-Technical Summary (NTS)</p> <p>[APP-486]</p> <p>Document not re-issued. Updates identified in ES Addendum only.</p>	<p>NTS Plate 2.5 requires amendment to update Order Limits and locations of Muckingford Road and Low Street Lane Utility Logistics Hubs shown, in relation to:</p> <p>Change and MRC03 [CR1-002]</p> <p>Amendments EA04 and EA05 [CR2-002]</p> <p>Amendment EA07 [REP5-001]</p>	<p>Plate 2.5 within the NTS is amended as follows:</p> <p>Update to Order Limits.</p> <p>Update to Utility Logistics Hubs (ULH11 and ULH 12) .</p> <p>The document is not re-issued, Order Limits shown on these pages should be read with reference to ES Addendum Figure 1.</p>	Deadline 9
<p>6.4 Environmental Statement - Non-Technical Summary (NTS)</p> <p>[APP-486]</p>	<p>Paragraph 3.3.6, bullet point b. requires revision to reflect the amendments made to ES Chapter 6: Cultural Heritage.</p>	<p>Paragraph 3.3.6, bullet point b. of the NTS is amended to:</p> <p>e. Complete or partial removal of 54 56 medium-value non-designated buried archaeological sites to the north of the River Thames.</p>	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
Document not re-issued. Updates identified in ES Addendum only.		b. Complete or partial removal of 44-43 medium-value non-designated buried archaeological sites to the south of the River Thames resulting in permanent adverse effects.	
<p>6.4 Environmental Statement - Non-Technical Summary (NTS) [APP-486] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Paragraphs 3.5.6 and 3.5.7 require revision to reflect the amendments made to ES Chapter 8: Terrestrial Biodiversity</p>	<p>Paragraph 3.5.6 of the NTS is amended to: Likely significant effects on terrestrial biodiversity during construction are predicted as follows:</p> <ul style="list-style-type: none"> a. Permanent habitat loss at Shorne and Ashenbank Woods SSSI, including ancient woodland, located to the south of the River Thames. Ancient woodland habitat loss at Claylane Wood, Rainbow Shaw LWS, The Wilderness ASNW, Codham Hall Wood LWS, and Codham Hall Wood West SINC. Habitat loss within local wildlife sites at Lower Street Pit LWS and Blackshots Nature Area LWS. b. Loss of habitat supporting valuable groups of terrestrial invertebrates, and increased mortality of terrestrial invertebrate groups to the north of the River Thames. c. Permanent loss of 6 veteran trees, three from the south and three from north of the River Thames. <p>Paragraph 3.5.7 of the NTS is also amended to: The key operational effect would be the reduction in quality of designated sites following increased nitrogen deposition occurring as a result of changes in traffic volumes and speeds along roads affected by the operation of the new road. Significant adverse effects would be compensated by the creation of new areas of semi-natural habitat, predominantly woodland and grassland, which would increase the overall area of these habitats and link up similar existing habitats and designated sites, building resilience into that network. Overall, approximately 246205ha of new habitat would be created to offset the significant adverse effects summarised below:</p>	<p>Deadline 9</p>
6.4 Environmental Statement - Non-	Paragraphs 3.11.6 and 3.11.10 require revision	Paragraph 3.11.6 of the NTS is amended to:	Deadline 9

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
<p>Technical Summary (NTS) [APP-486] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>to reflect the amendments made to ES Chapter 13: Population and Human Health</p>	<p>During construction, approximately 4,805 1733ha of land within agricultural landholdings would be affected, approximately 727 701ha of this would be returned to agricultural use by the end of the construction phase. Compensation for affected agricultural landholdings would be payable in line with the Statutory Compensation Code. The design includes elements to reduce potential adverse effects on agricultural land through restricting construction access to agricultural land and training construction workers to reduce disturbance to agricultural activities.</p>	
<p>6.4 Environmental Statement - Non-Technical Summary (NTS) [APP-486] Document not re-issued. Updates identified in ES Addendum only.</p>	<p>Tables 3.1 and table after paragraph 4.1.1 require revision to reflect the amendments made to ES Chapter 16: Cumulative Effects Assessment</p>	<p>Table 3.1 of the NTS is amended as follows: Table 3.1 Locations of likely significant inter-project effects Row on page 48 Location - Westcourt ward Likely significant intra-project effects on receptors during construction - Along and around Thong Lane and Rochester Road Likely significant intra-project effects on receptors during operation - Along the eastern edge of Gravesend and on Thong Lane Row on page 49 Location - Orsett ward Likely significant intra-project effects on receptors during construction –</p> <ul style="list-style-type: none"> • In and around Baker Street • Along Stanford Road • Along Stifford Clays Road • Along Hornsby Lane • On Stanford Road Aat and around the Whitecroft • At the western edge of Orsett • To the north of the ward 	<p>Deadline 9</p>

Document reference	Reason for amendment	Environmental Statement amendment	Amendment date
		<p>Likely significant intra-project effects on receptors during operation –</p> <ul style="list-style-type: none"> • In and around Baker Street • Along Hornsby Lane • On Stanford Road Aat and around the Whitecroft • At the western edge of Orsett • Along Stifford Clays Road • To the north of the ward <p>The table located after paragraph 4.1.1 of the NTS is amended as follows: Row on page 55, only bullet for intra-project effects for Westcourt ward construction effects is updated</p> <p>Topic - Cumulative effects</p> <p>Likely significant effects Construction - Westcourt ward – Very Large adverse significant effects for some residential receptors in one location in the ward</p>	

4 Summary

- 4.1.1 This document has been prepared to provide a record of updates made to Environmental Statement documents throughout the Examination of the DCO application by the Examining Authority during 2023.
- 4.1.2 The information presented in this ES Addendum demonstrates that although there have been updates to the content of ES documents, the overall conclusions presented in the Environmental Statement continue to reflect a reasonable worst case, and the assessments presented remain robust.

References

Kent Downs AONB Unit (revised and published 2023). Kent Downs AONB Landscape Character Assessment Update 2020. Accessed November 2023. Available from: <https://kentdowns.org.uk/wp-content/uploads/2023/02/Kent-Downs-AONB-Landscape-Character-Assessment-2020.pdf>.

Planning Inspectorate (2019). Advice Note Seventeen: Cumulative Effects Assessment.

Planning Inspectorate (2023). Lower Thames Crossing Examination Library.

Visit Britain (2022). Annual Survey of Visits to Visitor Attractions.

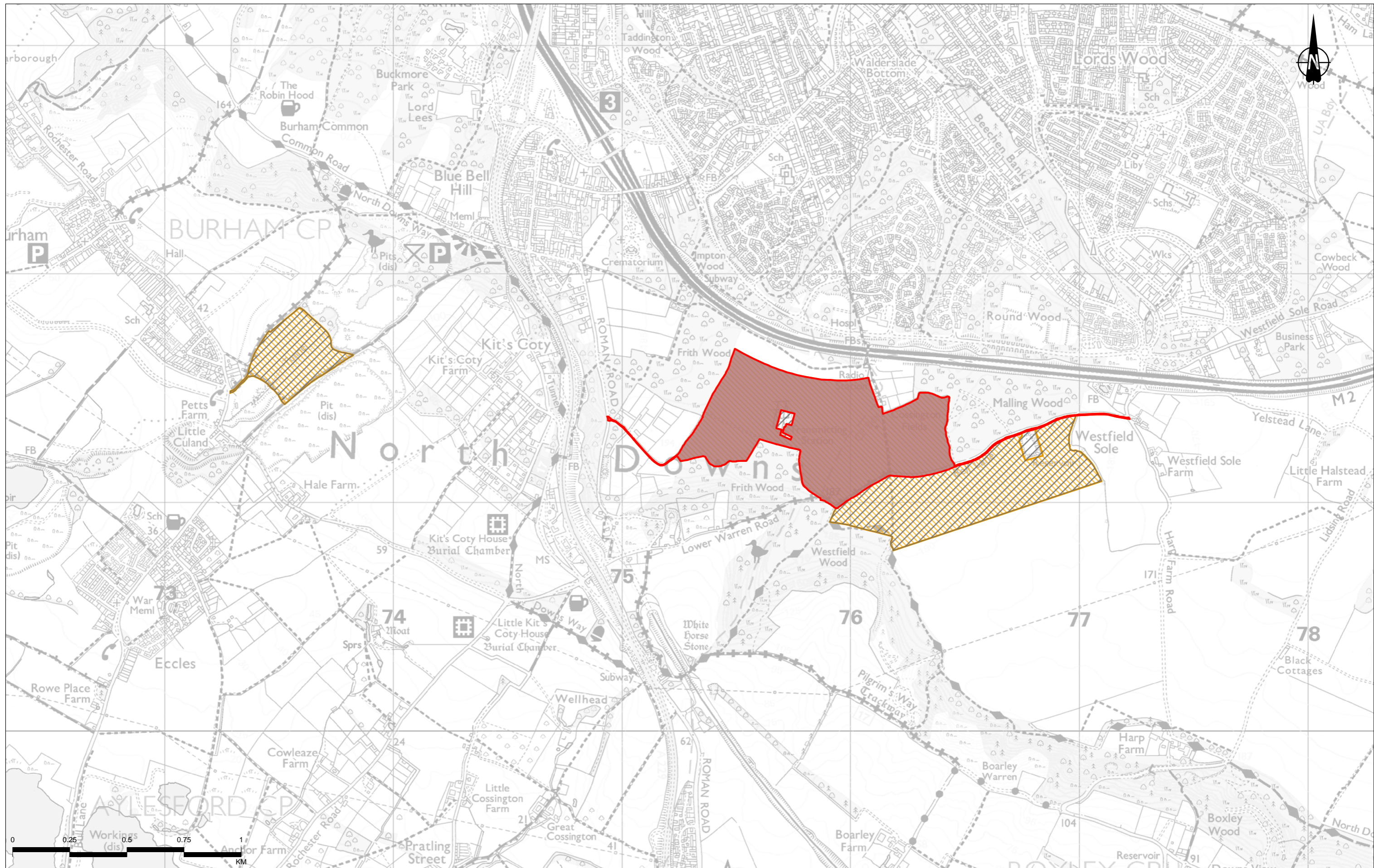
Figures

Figure 1 ES Addendum update to information in figures and plates

- 4.1.1 ES Addendum Figure 1 has been prepared to aid the understanding of the changes to Order Limits, nitrogen deposition compensation areas and Utility Logistics Hubs (ULHs). It shows the following as submitted in the DCO application in October 2022 and as presented at Deadline 9:
- a. Order Limits
 - b. Nitrogen deposition compensation proposals
 - c. ULH locations
- 4.1.2 All figures and plates updated via the ES Addendum should be read with reference to ES Addendum Figure 1.

Figure 2 Shorne and Ashenbank Woods SSSI boundary update

- 4.1.3 Figure 2 has been prepared to present the revised boundary for Shorne and Ashenbank Woods SSSI, as provided by Natural England in the Written Representation at Deadline 1 [[REP1-262](#)], Figure 4.2. The boundary for this SSSI as shown on the following ES documents should be read with reference to this Figure 2.
- a. ES Figures 2.3, 5.1, 5.2, 5.3, 5.5, 5.6 and 8.1
 - b. ES Appendices 8.14 and 14.7
 - c. Plate A.1 of the ES Addendum



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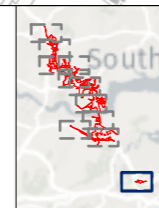
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Legend

- Order Limits - DCO Application (as at Deadline 9)
- Order Limits - DCO Application (October 2022)
- Utilities Logistics Hub - DCO Application (as at Deadline 9)
- Utilities Logistics Hub previous location, now moved (as at Deadline 9)

Compensation area for nitrogen deposition

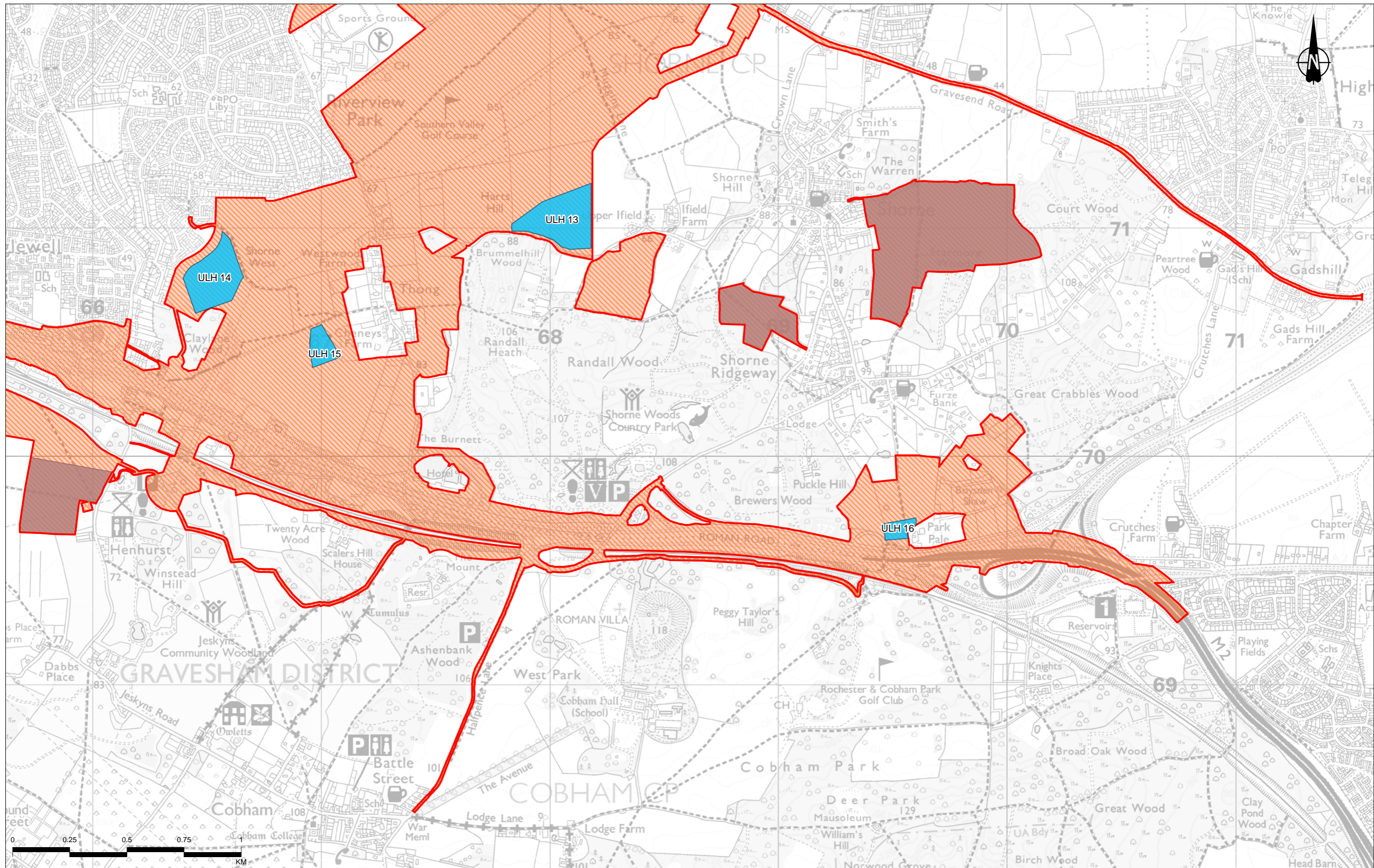
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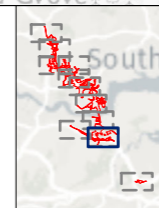
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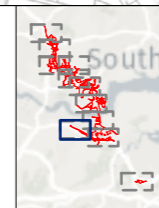
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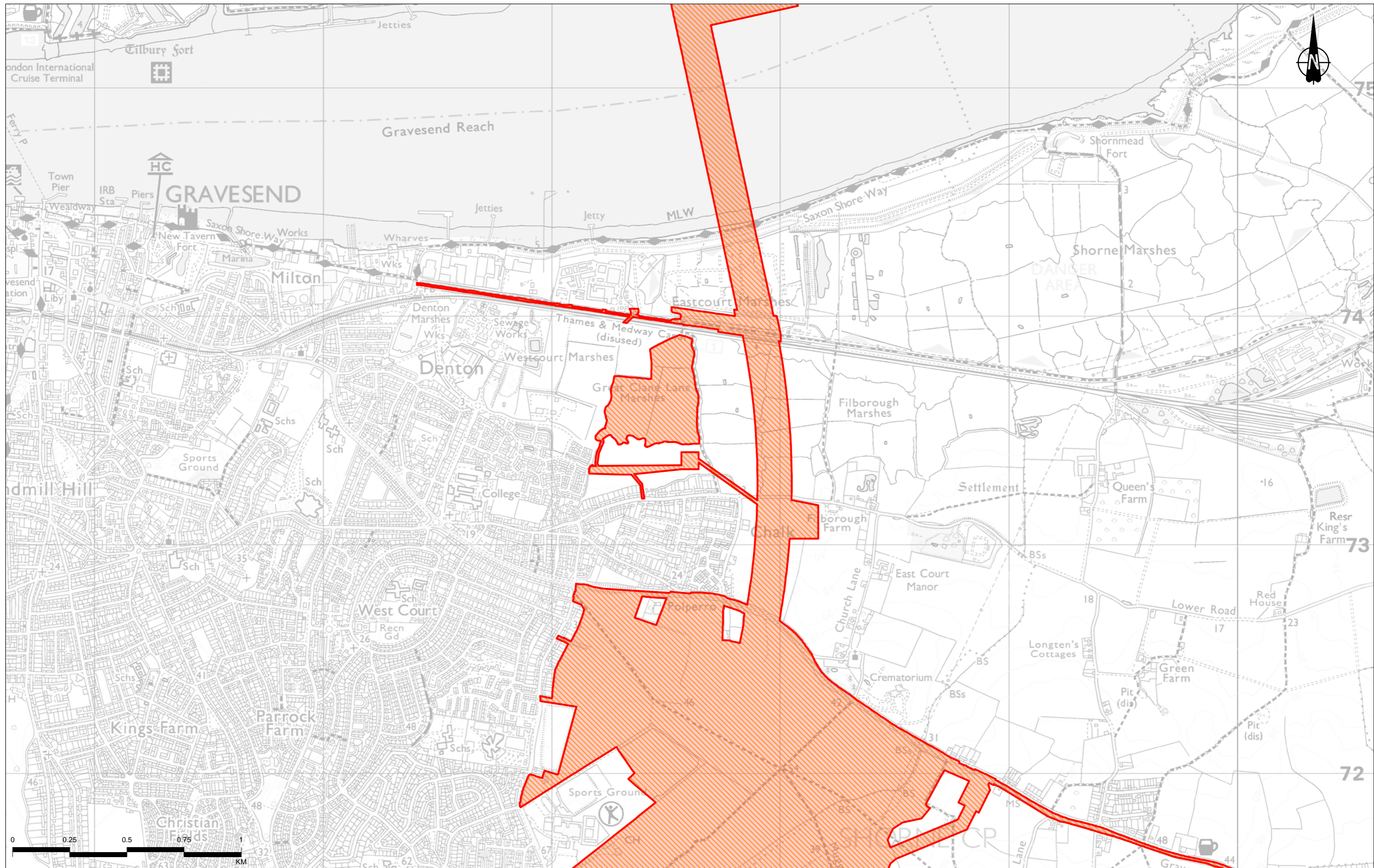
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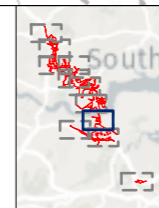
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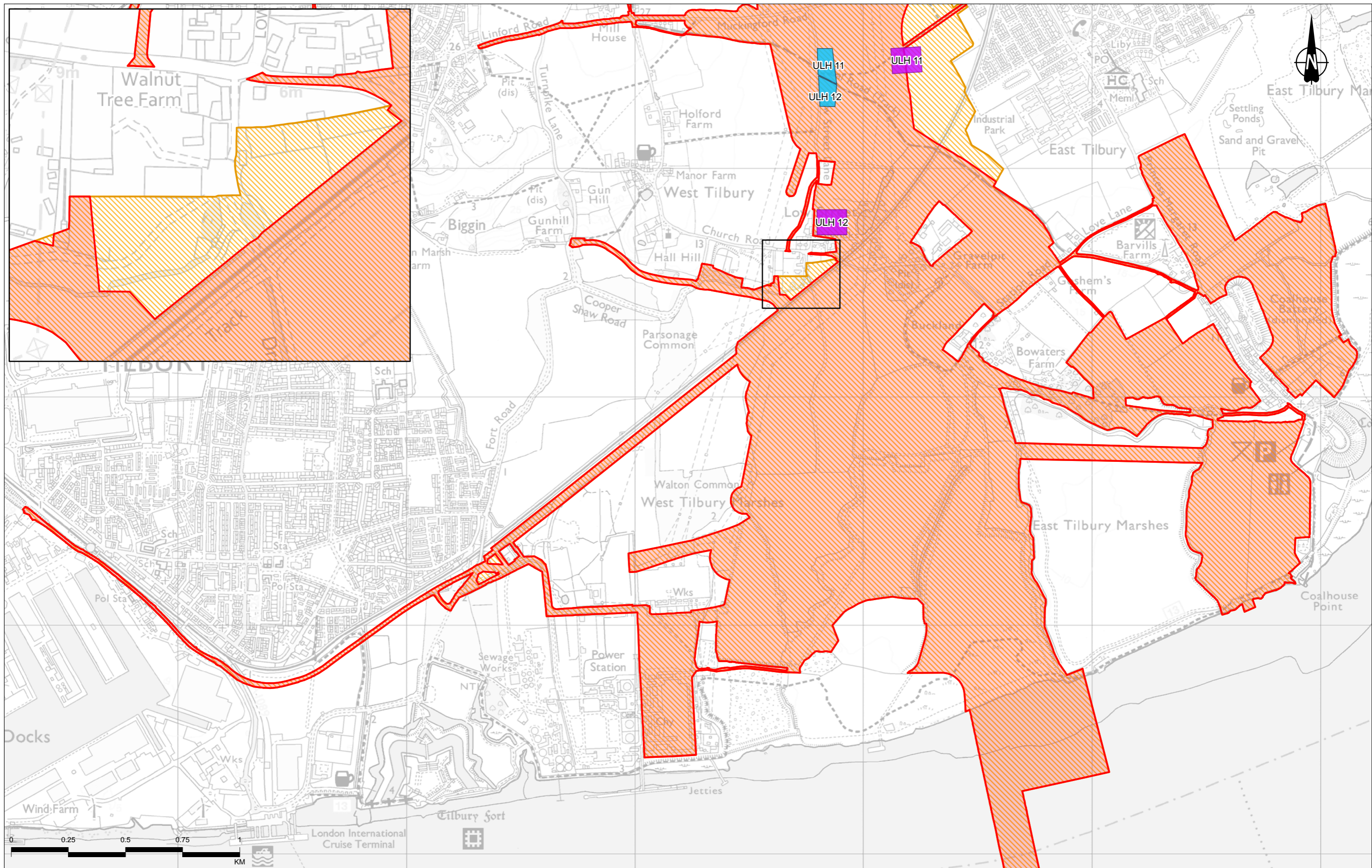
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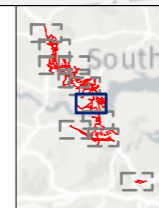
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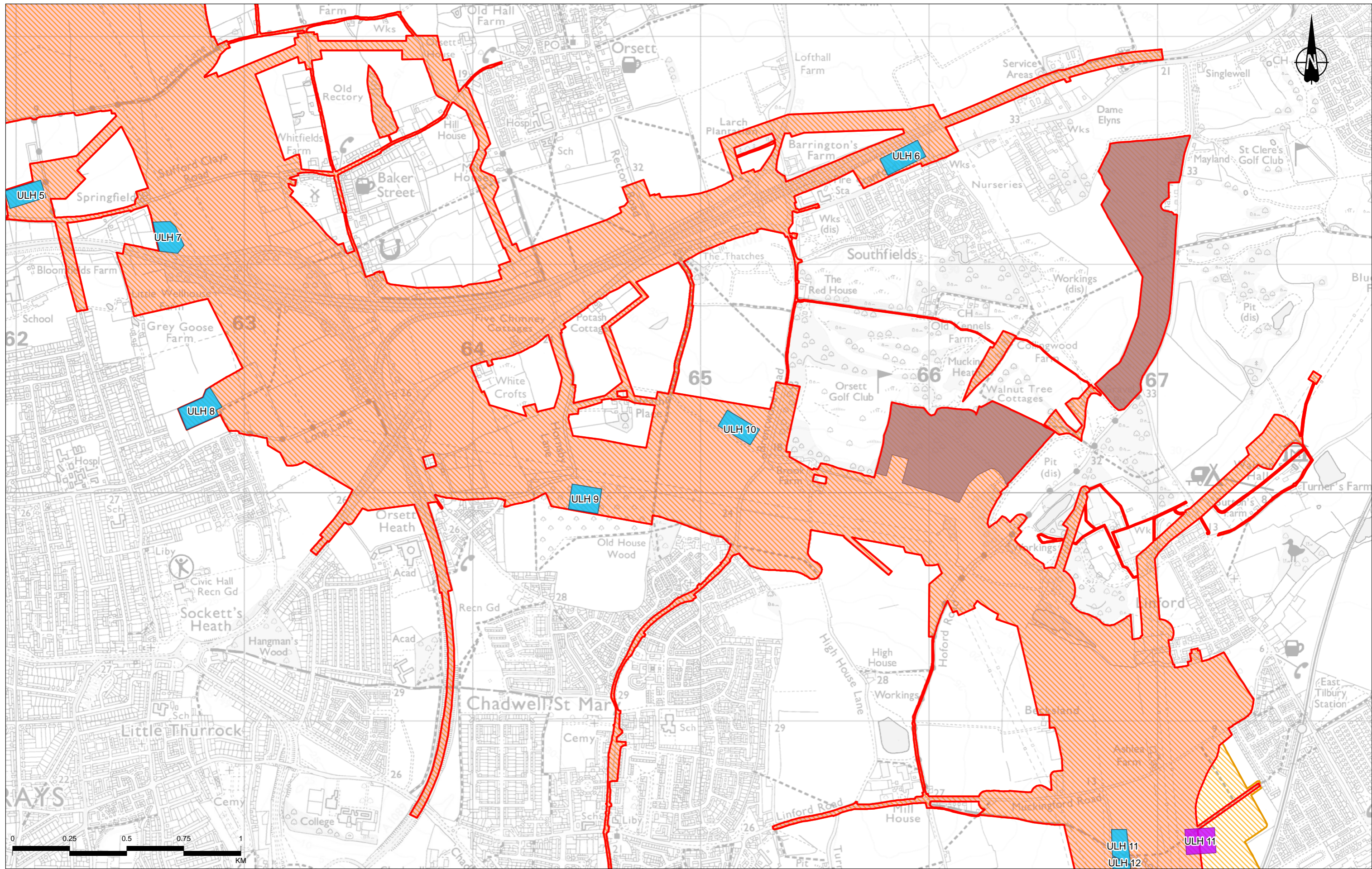
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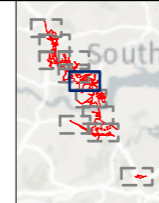
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Compensation area for nitrogen deposition

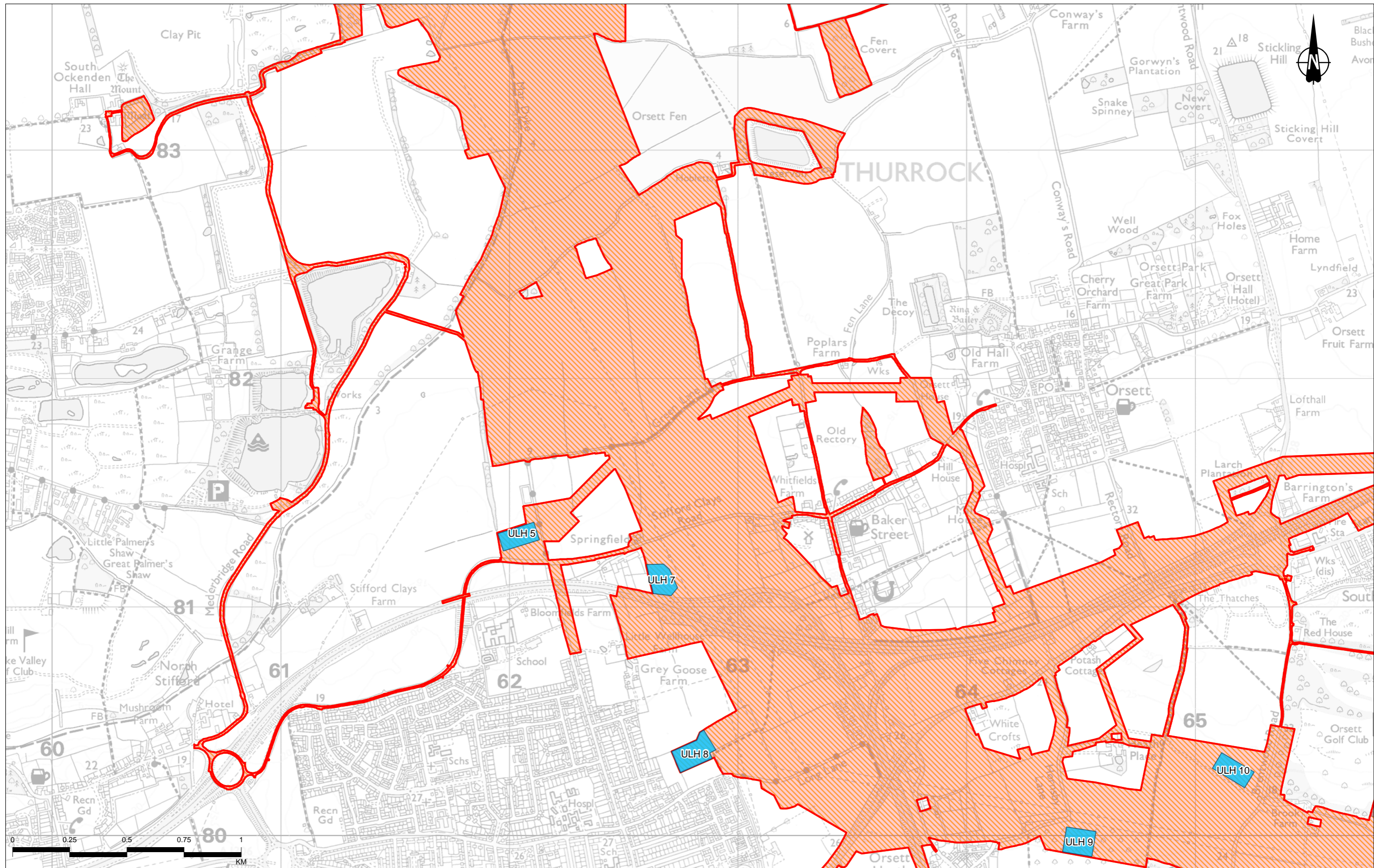
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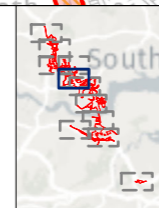
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Compensation area for nitrogen deposition

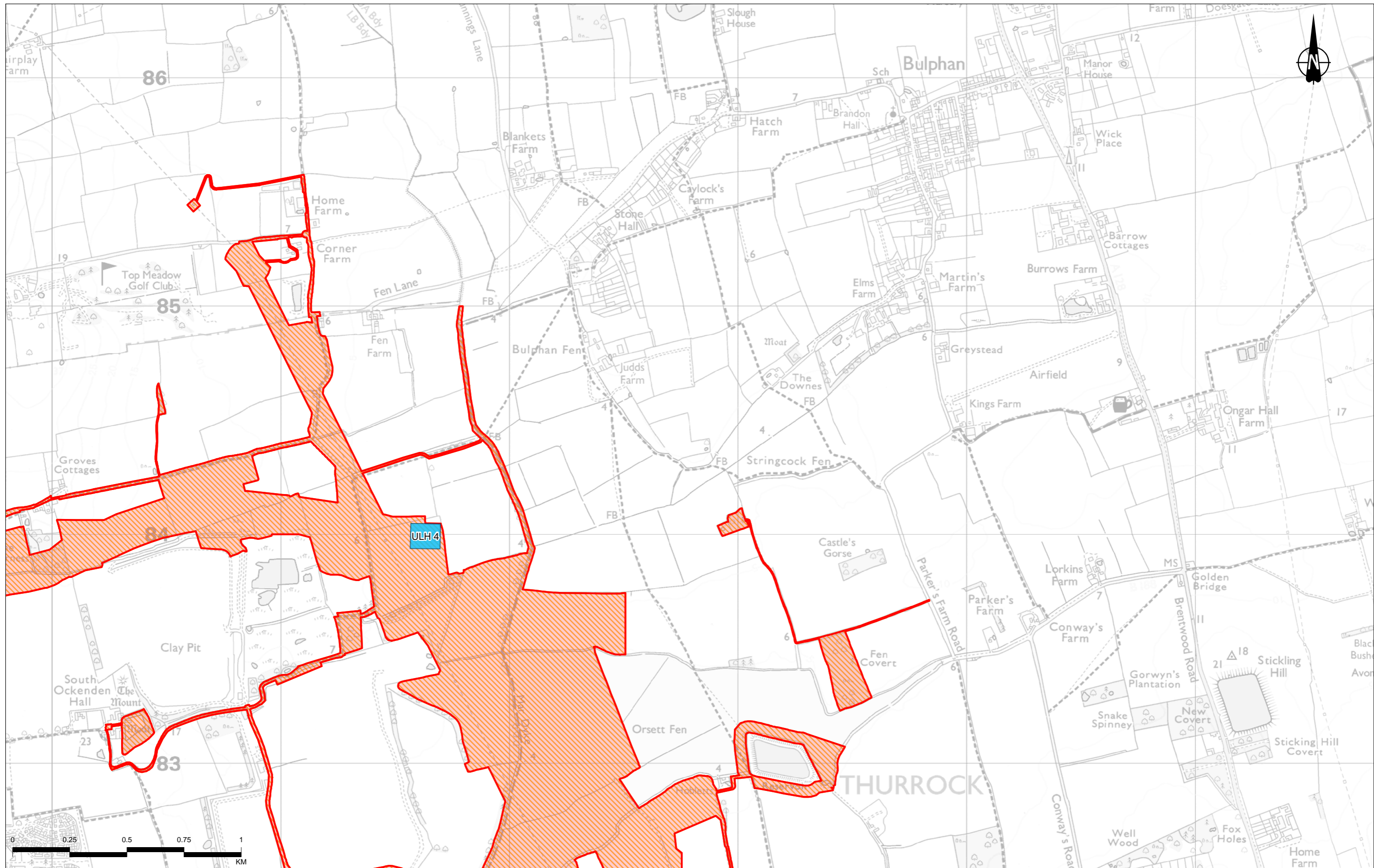
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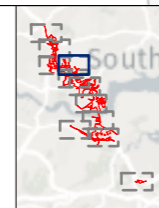


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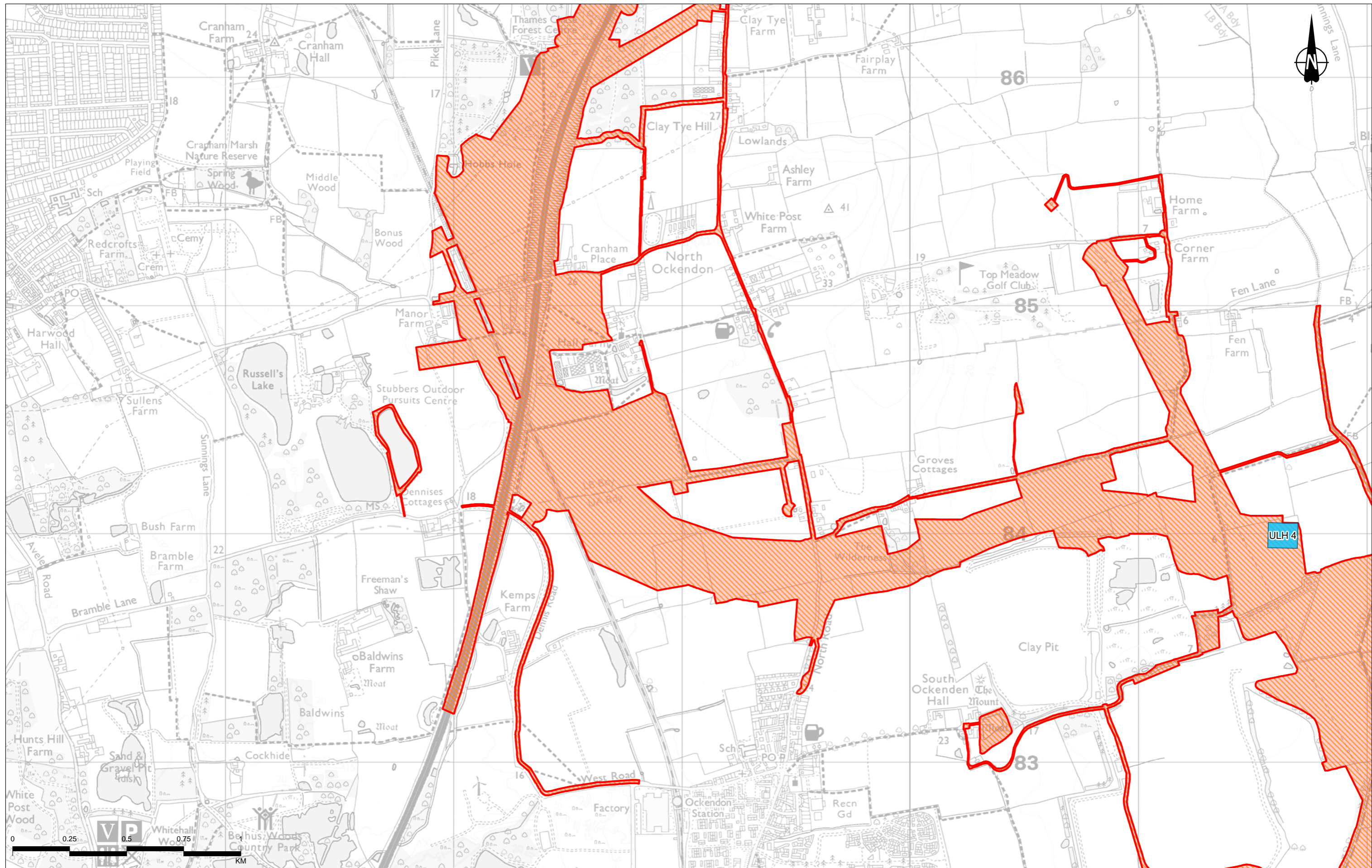
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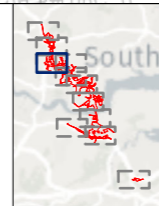
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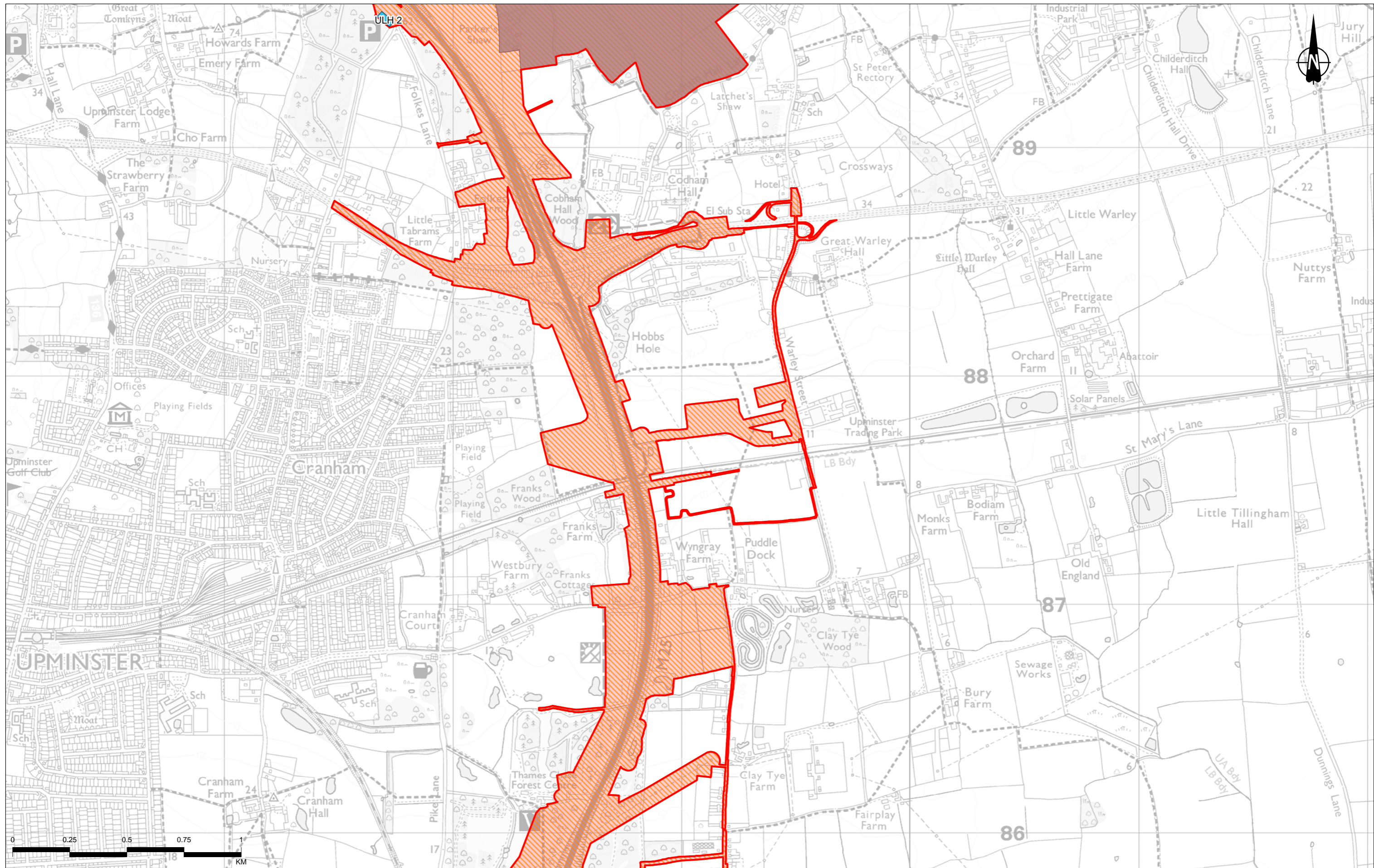
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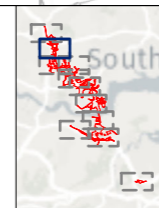
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Compensation area for nitrogen deposition

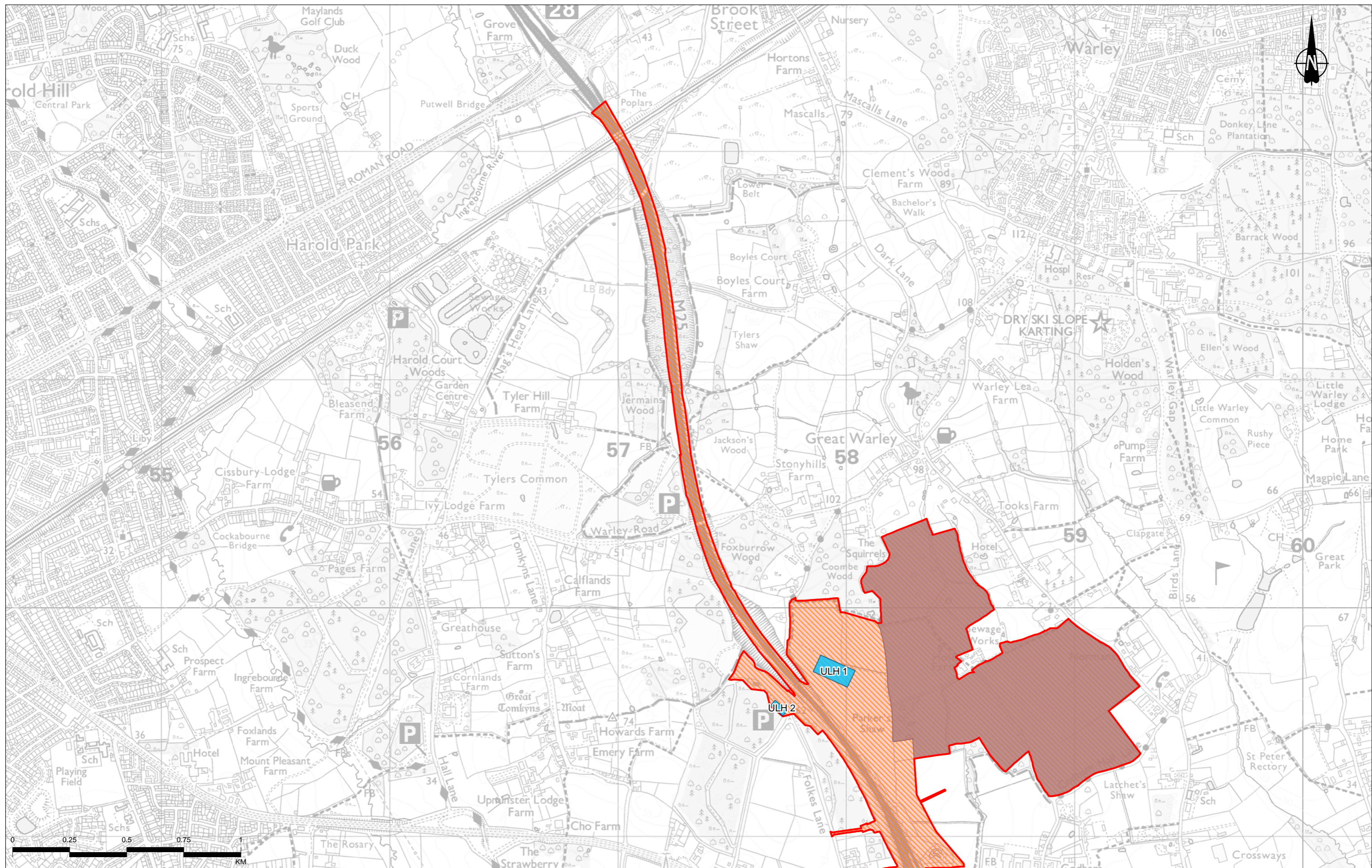
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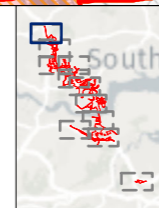
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Compensation area for nitrogen deposition

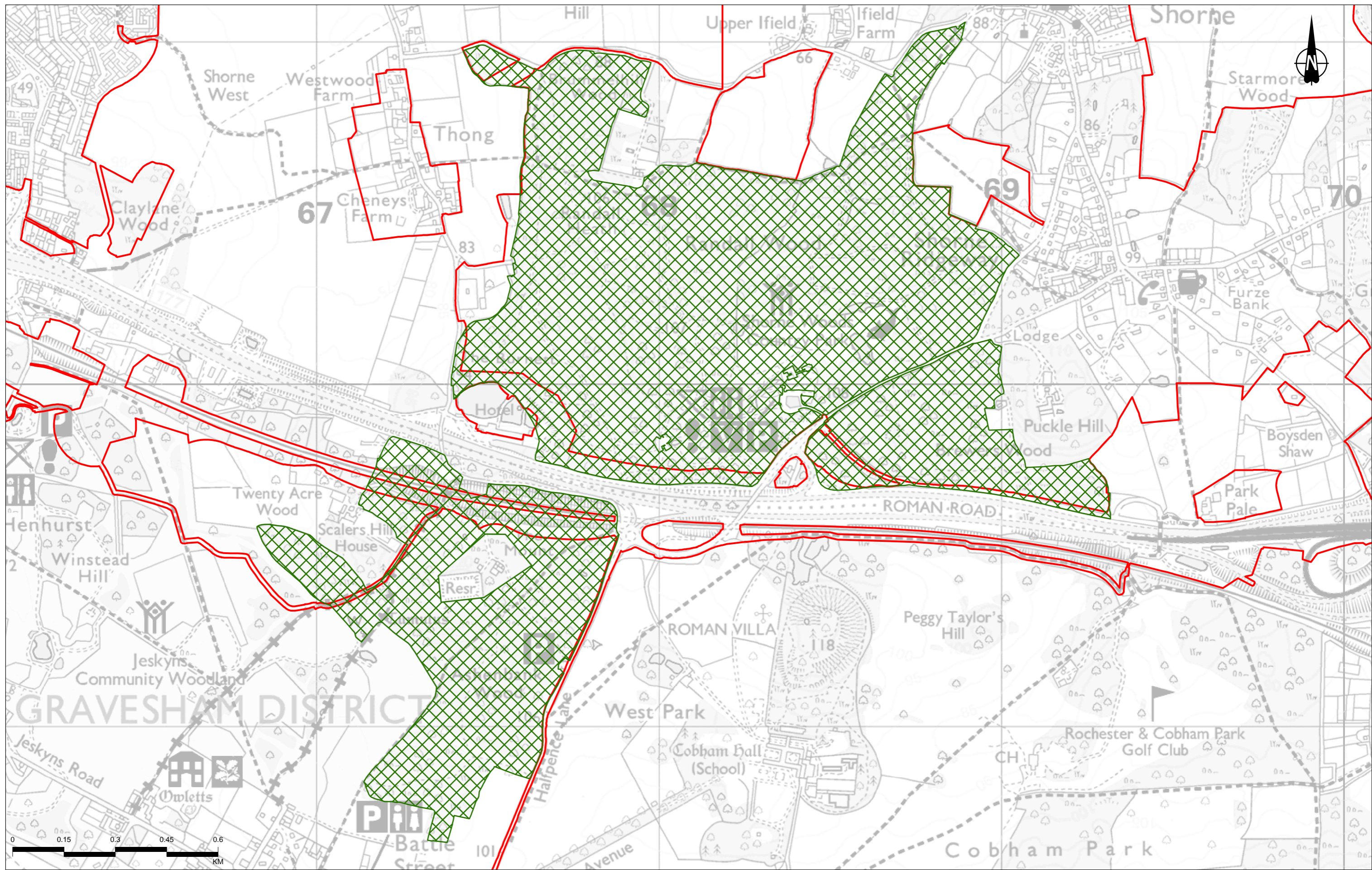
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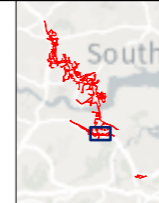


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The SSSI boundary has been digitised from information Natural England submitted in their Written Representation at Deadline 1 [REP1-262], Figure 4.2.

- Legend**
- Order Limits - DCO Application (as at Deadline 9)
 - Shorne and Ashenbank Woods SSSI



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national highways

Project
LOWER THAMES CROSSING

Status	PINS SUBMISSION	Original Size	A3	Revision	P01
Application Document Number	TR010032/EXAM/9.8	Scale	1:10,000		
Drawing Title	Figure 2 - Shorne and Ashenbank Woods SSSI boundary revision				
Drawing Number	HE540039-CJV-EGN-SZP_EGNE00000000-DR-LE-80004				

Appendices

Appendix A Recreational Pressure on Designated Sites

A.1 Introduction

- A.1.1 This Appendix has been prepared in response to comments made by Natural England (NE) in relation to nationally designated nature conservation sites. Specifically, NE's Relevant Representation states that *'Natural England does not endorse the direct loss of habitat from the Shorne and Ashenbank Woods Site of Special Scientific Interest resulting from this scheme. We advise that further information is required to understand the potential impacts from recreational users and the nature, scale and effectiveness of the measures proposed for all direct and indirect impacts to the SSSI'*.
- A.1.2 This relates directly to comments made within NE's Statement of Common Ground (SoCG) with the Applicant and which have been an area of ongoing discussion between the two parties:
- a. Item 2.1.80 of the SoCG with Natural England states that *'a number of new and diverted public rights of way are proposed within the Shorne and Ashenbank Woods SSSI to the south of the A2 which also requires surfaced tracks to be installed. The Environmental Statement has not provided an assessment of the potential for direct and indirect impacts from these proposals to the SSSI resulting from factors such as increased recreational activity and loss of habitat to the surfacing, for example'*.
 - b. Item 2.1.42 of the SoCG with Natural England states that *'Natural England would expect the potential recreation impacts to the SSSI from a car park proposal to be assessed as part of the ES'*.

Update at Deadline 9

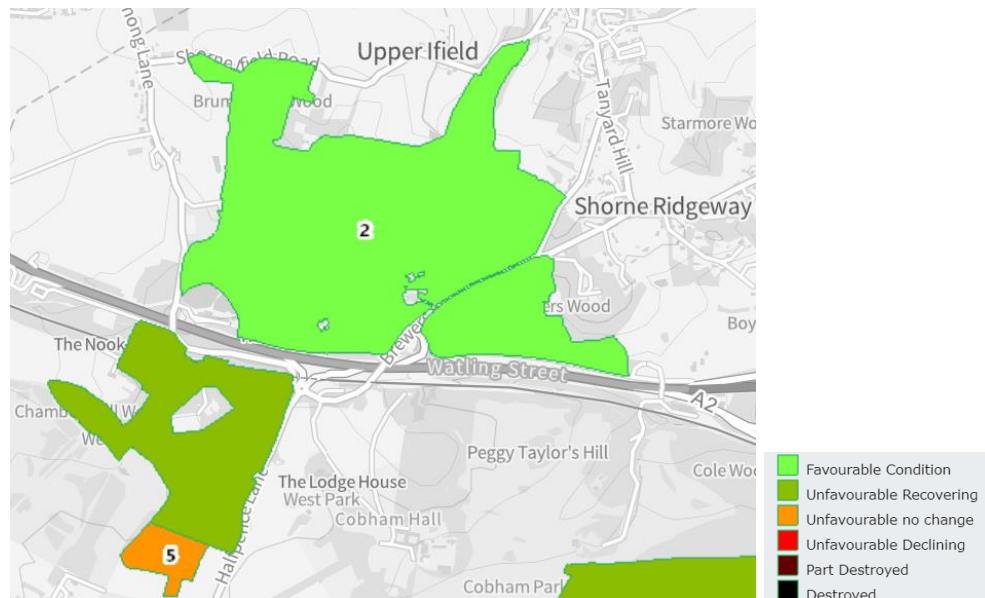
- A.1.3 The information presented in this Appendix reflects the acceptance of Project Amendment EA08 Thong Lane Car Park removal [[REP6A-023](#)]. The effects previously associated with provision of Thong Lane car park are no longer relevant and have been removed.

A.2 Shorne and Ashenbank Woods SSSI

- A.2.1 The Shorne and Ashenbank Woods SSSI covers an area of around 185ha, including sections to the north and south of the A2. The reasons for notification of the SSSI are given as *'Shorne and Ashenbank Woods form a complex of ancient and plantation woodland and include a variety of stand-types associated with Tertiary gravels, clays, and sands. The site supports an important and diverse invertebrate fauna, especially its Coleoptera (beetles), Hemiptera (true bugs), and Odonata (dragonflies)'*.

A.2.2 The boundary for the SSSI is shown in Plate A.1, together with current status. The status of each of the three areas shown on the figure has been updated at different times. The figure shows that the areas of the SSSI to the north of the A2 (classified as Randall Wood and Brewers Wood) are in favourable condition (these areas were last surveyed / updated in 2010 according to Natural England data accessed online; prior to this survey, both Randall Wood and Brewers Wood were categorised as ‘unfavourable recovering’ in 2005). To the south of the A2, the majority of the SSSI (classified as Ashenbank Wood) has been categorised as ‘unfavourable recovering’ (last surveyed / updated in 2016, with no change in category since the previous survey undertaken in 2008). A small portion of the designation to the south of the A2 (Ashenbank Wood – south) is categorised as ‘unfavourable no change’ (the only survey recorded took place in 2008).

Plate A.1 Site boundary and condition status for Shorne and Ashenbank Woods SSSI¹



Source: Magic Map (Natural England, 2023) © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2023.

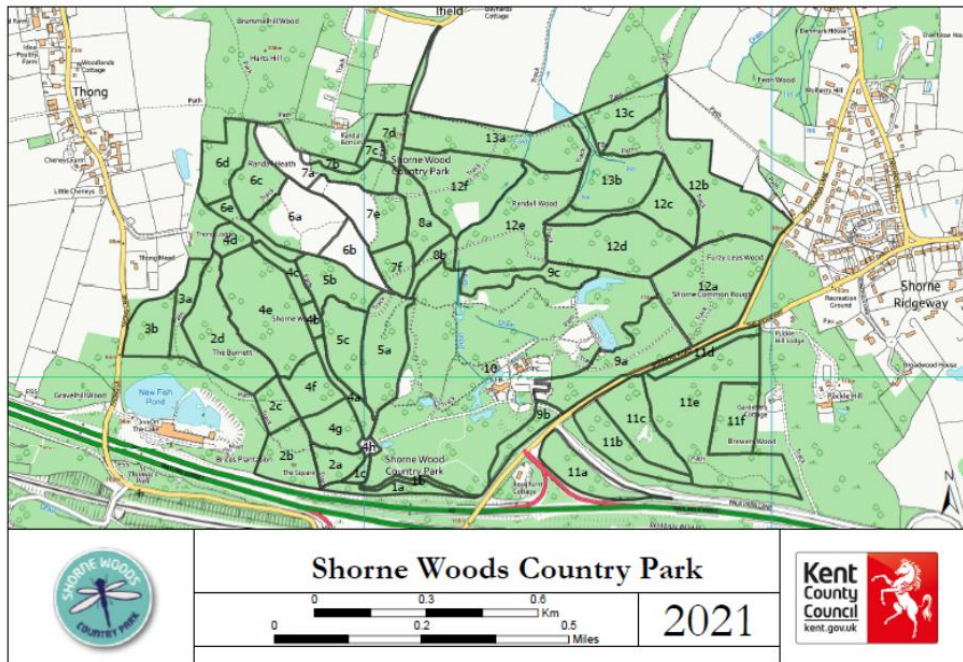
A.2.3 Part of the site is owned and managed by Kent County Council as Shorne Woods Country Park (SWCP), with the remainder in the ownership of the Woodland Trust. The SWCP Management Plan 2021-2026 (which was updated in 2022) highlights that the management strategy at SWCP is based on four areas, the first being the requirement to manage the site regarding its

¹ The information presented for Shorne and Ashenbank Woods SSSI should be read with reference to Figure 2 in this ES Addendum, which shows the most up to date SSSI boundary, as provided by Natural England in the Written Representation at Deadline 1 [REP1-262], Figure 4.2.

designation as a SSSI and the second with regards to the use of the site as a Country Park providing a recreational and education facility.

- A.2.4 Management of SWCP is focused on 13 main ‘compartments’ as shown in Plate A.2, each of which has their own management strategy and objectives.

Plate A.2 Compartment map of SWCP



Source: *Shorne Woods Country Park Management Plan 2021-2026, Kent County Council*

- A.2.5 Management objectives of SWCP include ‘to provide a site on which a variety of activities can be enjoyed within a countryside environment without damaging the ecological interest of the site’; objectives relating to visitor management include ‘to maintain, improve and extend the path network throughout the site via a programme of regular maintenance and upgrade works’ (SWCP Management Plan, 2022). The main compartment within which public recreation activities take place is Compartment 10 (shown on Plate A.2 as in the central / southern area of the Country Park). The Management Plan notes that education of, and provision of information for visitors will be a key strategy in resolving any conflict between management objectives.

- A.2.6 The remainder of the SSSI is in the ownership of the Woodland Trust and comprises Ashenbank Woods to the south of the A2. Ashenbank Woods has an area of just under 30ha and comprises areas of ancient semi-natural woodland, wood pasture and old parkland areas. Approximately 7ha of the historic parkland is maintained as a series of open glades, managed through cattle grazing and manual cutting programme (Ashenbank Wood Management Plan 2020-2025, Woodland Trust). The long-term policy for Ashenbank Wood as set

out in the Management Plan, is for it to *‘continue to act as an important heritage, conservation and recreational space in the local landscape’*.

Existing recreational use

Shorne Woods Country Park

- A.2.7 Recreational use in the SSSI is focused around SWCP to the north of the A2. SWCP is KCC’s flagship Country Park. Facilities include a visitor centre and café (opened in 2006), amenity block (opened in 2012) ‘changing place’ and rain shelter (installed in 2021) and parking for over 300 cars. The café and visitor centre are open 363 days a year. Although there is a requirement to pay for car parking, access to the site itself is free of charge.
- A.2.8 The Country Park supports an extensive range of recreational facilities including:
- a. A woodland arboretum
 - b. Trim trail, orienteering courses and geocache locations
 - c. Signed woodland walks, horse-riding and cycle route
 - d. Loan of three Tramper mobility vehicles for visitors
 - e. Picnic sites, adventure play areas and younger children play areas
 - f. Woodland interpretation, including that installed in Brewers Wood in 2014 as part of a Lottery-funded project.
- A.2.9 There are a variety of footpaths and permissive paths in and around the Country Park, these include six waymarked trails of varying lengths and ease of use as well as one statutory public footpath (NS167) which is also a permissive bridleway in sections and follows the northern boundary of the site. Most paths are unsurfaced (with the exception of the ‘easy access’ trail and sections of the permissive bridleway / cycle path). The 2021 improvements at the site, funded through a European funding programme, included path improvements to improve access from the car park to the easy access trails and for wider walks into the woodlands on surfaced paths.
- A.2.10 Two longer distance routes also pass directly through SWCP. These are:
- a. the Timeball and Telegraph Trail, which is a long-distance path running from Timeball Tower near Deal in Kent to the Royal Observatory in Greenwich. The route runs in an east–west direction on the southern side of the River Thames, passing directly through Shorne Woods Country Park
 - b. the Darnley Trail is a 10.5km route which links the Jeskyns Community Woodland with the wider countryside, including to SWCP and Ashenbank Wood.

- A.2.11 Horse boxes can use part of the existing car park at SWCP subject to prior bookings or alternatively are required to park at Cyclopark (to the south of the A2) and use the bridleway network that links local sites. The car park is also available for a small amount of coach parking (up to a maximum of four, with booking required in advance). The car park includes an overflow area; evidence from KCC has highlighted that the car park at SWCP is currently operating at capacity.
- A.2.12 No recent (post-Covid) visitor data is available for SWCP. The Management Plan (updated in 2022) provides qualitative information from visitor surveys undertaken in 2004 and 2007 and annual visitor numbers for the period 2010/11 to 2014/15. The latter data has been based on count information from the car park and therefore does not include people who may walk or cycle to the Country Park. The visitor data does not show huge variation across the five year period, ranging between 296,325 visitors in 2012/2013 through to 353,066 visitors in 2013/2014. Visitor numbers to an outdoor attraction such as SWCP are likely to be subject to external factors such as the weather.
- A.2.13 The SWCP Management Plan notes that *'due to the popularity of the park during the lockdown, the park was able to access funding for path resurfacing so the existing easy access paths were resurfaced and the muddiest of the paths in the wider woods were surfaced to allow year-round access'*.
- A.2.14 The Shorne Woods Country Park Management Plan 2021-2026 refers to previous visitor surveys which suggested that around a fifth of visits to the site were regular visits (i.e. once a week or more) and that the majority of visitors stayed for between one and two hours. Again, the majority of visitors taking part in the surveys said they were local to the area. The 2009 visitor survey suggested that SWCP had a different user demographic to other KCC parks, based on Office for National Statistics (ONS) Approximated Social Grade data (a socio-economics classification which classifies individuals according to employment status). The visitor survey showed that nearly a third of users of SWCP were categorised as social class DE (which corresponds to the lowest social grade, and is defined as including people in semi-skilled and unskilled manual occupations, unemployed people and lowest grade occupations) compared with only 12-13% at other parks; this is likely to be related to the demographic of the local area, with wards along the eastern fringe of Gravesham also exhibiting higher proportions of residents within the DE social grade (for example Riverside, Westcourt and Singlewell wards show 38.2%, 34.2% and 33.4% respectively of residents within the DE social grade,

compared to 27.7% for Gravesham overall and 23.2% for Kent)². Car ownership tends to be lower for people in lower social groupings.

Ashenbank Woods

- A.2.15 Ashenbank Woods has six access points for members of the general public. The wood is classified by the Woodland Trust as a 'category A' site, which expects a high level of public access, defined as 15-20 visitors using one entrance every day. The main entrance and car park (which has space for approximately fifteen vehicles) is located at the eastern edge of the wood off Halfpence Lane. There is an established network of both surfaced and unsurfaced pathways in place through the woods, which total around 3.5km. A waymarked trail starts at the car park and provides a walking route of approximately fifty minutes duration. There is also a direct path link to Jeskyns Community Woodland from the south-west of the site. The Darnley Trail passes through part of Ashenbank Woods. The site is also used by local forest schools with regular events held for primary and secondary age children.
- A.2.16 The Management Plan for Ashenbank Woods describe the site as 'well-used', with principal groups including local residents, dog walkers, nature enthusiasts and ramblers. Due to the small size of the car park, the majority of visitors access the site from other locations. Some of the constraints highlighted in the Management Plan in relation to recreation use of the Woods include:
- a. the high visitor numbers and fairly compact size of the wood mean that it often feels congested, and can become quickly impacted by issues such as dog waste.
 - b. grazing on site has been problematic due to management of livestock welfare at a busy site with numerous dog walkers, who despite having the option to walk in a cattle free compartment will still choose to walk in close proximity to the cattle.

The wider area

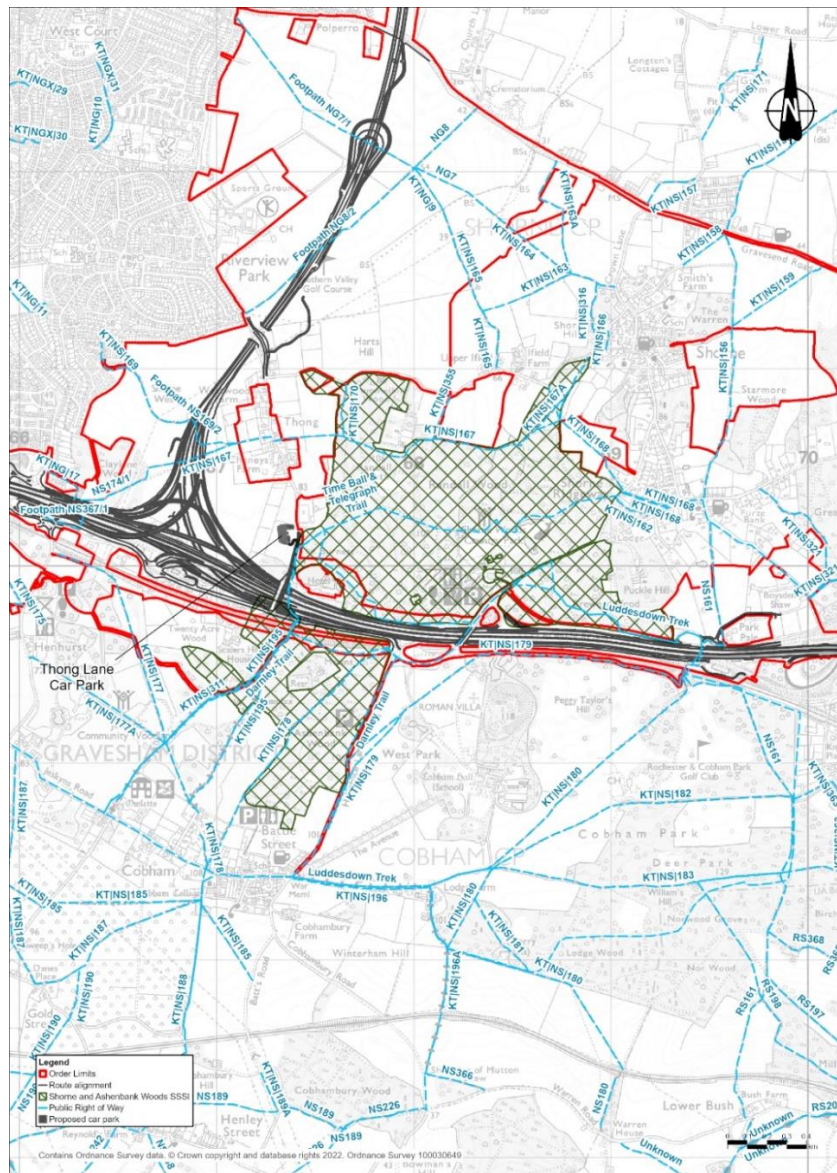
- A.2.17 To the west of the Shorne and Ashenbank Woods SSSI is Jeskyns Community Woodland. Jeskyns opened in 2007 and is approximately 149ha in size. The woodland is managed and maintained by Forestry England and includes woodlands, orchards, ponds, play areas and a café. There is a 6km horse trail within the site, together with dog activity areas and trails. Interpretation boards inform visitors of the wildlife, planting, restoration and archaeology of the area. The site is host to a range of user groups and has recently become a focus for the Forest Schools Programme.

² (Office for National Statistics, Census 2011 – that at the time of preparing this note, updated data from the 2021 Census was not available in relation to this variable).

- A.2.18 There are walking and cycling routes in close proximity, connecting Jeskyns Community Woodland with the wider countryside and to nearby sites such as Shorne Woods Country Park and Ashenbank Woods. There is parking on-site (pay and display) for approximately 200 vehicles (including horse boxes).
- A.2.19 Although a relatively new area of community woodland (and consequently parts of the site are quite open), it is already proving to be a popular family destination for informal recreation purposes. The Annual Survey of Visits to Visitor Attractions 2021 records a total of 878,626 visitors to Jeskyns in 2021, making it one of the most visited attractions in the region³.
- A.2.20 Existing walking, cycling and horse-riding routes in and around the Shorne Woods and Ashenbank SSSI are shown in Plate A.3 which is taken from Chapter 13 of the Environmental Statement submitted for the Project.

³ It should be noted that although country parks are included in the survey findings, they are excluded from the most visited lists on the basis that it is not possible to exclude those who have visited the park in such a way that falls outside the 'visitor attraction' definition (Visitor Attraction Trends in England 2021 Full Report, September 2022)

Plate A.3 Walking, cycling and horse-riding routes in the vicinity of the Shorne Woods and Ashenbank SSSI



A.2.21 Prior to the submission of the Development Consent Order application in 2022, user surveys were undertaken in August and September 2019 to establish the level of use of specific PRowWs and minor roads that would be affected by the Project during construction and operation. The survey locations included minor roads and associated footways intersected by the Project, and PRowWs (including footpaths, cycleways, bridleways and byways) either intersected or otherwise affected by the Project. The user surveys comprised a combination of user counts and questionnaire surveys. User survey locations were informed by factors including the observed level of use from a walkover survey in April 2018, consultation with local authorities to establish the importance of particular links/routes, and level of impact as a result of the Project. Routes that were surveyed in the vicinity of the Shorne and Ashenbank Woods SSSI included:

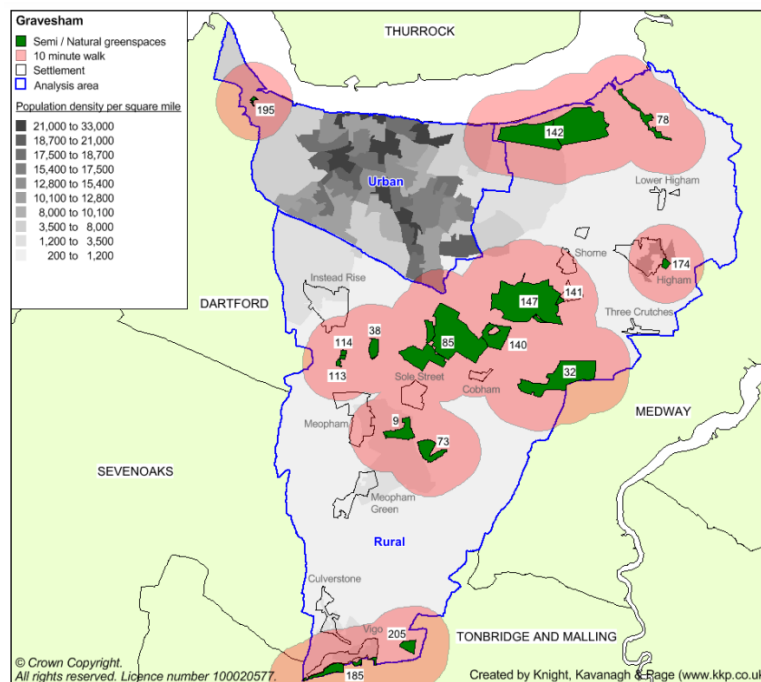
- a. Along Thong Lane – three pedestrians and nine cyclists were recorded here on a Sunday in August in 2019
- b. Footpath NS174 – the footpath is located to the north of the A2, connecting the National Cycle Network Route 177 to links with Footpath NS167 and passing in a north-east to south-west direction through Claylane Wood. The 2019 survey outlined that there were 40 pedestrian users of the route, along with two cyclists, again on a Sunday during August in 2019.

A.2.22 Usage of the National Cycle Network Route 177 itself has been estimated as high (around 40 users per day), from observation and understanding of nearby route usage.

Likely catchment area for visitors

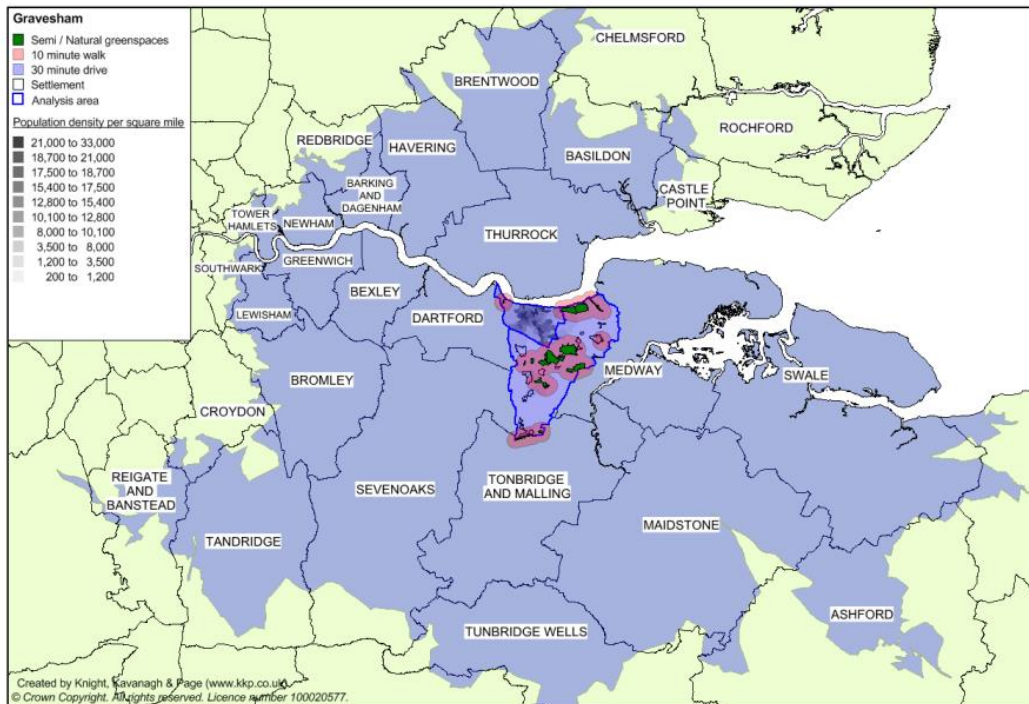
A.2.23 In relation to the likely catchment area for users of Shorne and Ashenbank Woods, this was set out in the Open Space Assessment prepared for Gravesham Borough Council by Knight, Kavanagh and Page in 2016. Guidance on appropriate walking distance and times is published by Fields In Trust (FIT) in its document Beyond the Six Acre Standard (2015); using this guidance, Plate A.4 shows 10-minute walk times to areas of natural and semi-natural space (Shorne Woods Country Park and Ashenbank Woods are shown on the figure as numbers 147 and 140 respectively). The urban areas of Gravesend fall just outside of this catchment for both parts of the site.

Plate A.4 Natural and semi-natural space within a 10-minute walk time



Source: Gravesham Borough Council Open Space Assessment Report (Knight, Kavanagh and Page, 2016)

Plate A.5 Natural and semi-natural greenspace within a 30-minute drivetime



Source: Gravesham Borough Council Open Space Assessment Report (Knight, Kavanagh and Page, 2016)

A.2.24 Plate A.5 then shows an estimated 30-minute drivetime from areas of natural and semi-natural greenspace within Gravesham Borough Council, which includes from SWCP and Ashenbank Woods. The figure shows a very large potential catchment area for the sites.

Wider visitor trends

A.2.25 Visitor numbers are likely to have changed over the last few years as a result of behavioural changes arising from the Covid-19 pandemic. The People and Nature Survey for England (Natural England, 2021) gathered information on people’s experiences and views about the natural environment, and its contributions to health and wellbeing. During April to June 2020, some adults in England were getting outside more often than usual, with 40% of adults reporting that they had spent more time outside since the COVID-19 restrictions began and 31% exercising more in outdoor spaces. The main reasons people gave for visiting natural spaces were for fresh air, physical and mental health, and to connect with wildlife/nature.

A.2.26 Shorne and Ashenbank Woods form part of the northernmost extent of the Kent Downs Area of Outstanding Natural Beauty (AONB). The AONB Management Plan 2021-2026 notes that “over visiting’ has rapidly become an issue across the AONB particularly at countryside with heritage sites. Visitor site car parks are often full by mid-morning on a sunny weekend and the visitor experience at

risk of declining, along with erosion to paths, damage to the historic, natural and cultural heritage as well as loss of tranquillity'. In response, the AONB is seeking to improve facilities that promote off season visiting, encourage sustainable tourism and promote new sites and visitor resources so reducing pressure on honey pot destinations (Kent Downs AONB Management Plan, 2021-2026).

A.3 Summary of proposals

A.3.1 Natural England has highlighted two aspects of the Project in relation to recreational activity – the creation of a new car park with facilities for horseboxes and a cycle hub proposed at Thong Lane; and the nature of the proposed surfacing for a number of new and diverted public rights of way within the Shorne and Ashenbank Woods SSSI to the south of the A2. Further detail relating to these areas is drawn together in this section.

Thong Lane car park (no longer proposed)

A.3.2 Following the acceptance of Project Amendment EA08 Thong Lane Car Park removal [[REP6A-023](#)], there is no longer a proposal for a car park to be provided at Thong Lane.

Walking, cycling and horse riding proposals

A.3.3 New public rights of way proposed in the vicinity of the Shorne and Ashenbank Woods SSSI are shown on Plate A.6. Proposed PRowS are shown in orange, with proposed off-road WCH tracks in dark blue and proposed off-road pedestrian / cycle tracks shown in light blue. All existing PRowS are shown in yellow, with existing permissive routes within the Country Park shown in white. The proposed car park at Thong Lane is shown at numbered point five in the figure.

Plate A.6 Preliminary design: WCH routes in the M2/A2/A122 Lower Thames Crossing Junction area



Source: Project Design Report E: Part E Design for Walkers, Cyclists and Horse Riders [[APP-512](#)]

A.3.4 Plate A.6 shows a new east-west route passing through Ashenbank Woods and on to Jeskyns Community Woodland. This is the route for the diversion of NCR177, where existing tracks shall be temporarily resurfaced appropriately for road cycle use (as set out in Design Principle S1.05 [**Document Reference 7.5 (7)**]). The nature of new sections is described in the Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [[APP-512](#)] as follows:

- a. To the west of the Halfpence Lane roundabout the existing track along the northern edge of Ashenbank Woods will have its surface made suitable for cyclists through to the connection with the southern side of the existing green bridge over HS1. This section through Woodland Trust land is part of the Darnley Trail and includes permissive use for walkers, cyclists and horse riders, the designation of this track will remain unchanged. Once the new roadside alignment of NCR177 is available improvements to the surface will be removed at the request of the landowner. Article 35 of the draft DCO [**Document Reference 3.1 (11)**] relates to the temporary use of land for carrying out the authorised development.
- b. NCR177 remains south of HS1 with a length of the surface of byways NS195 and NS311 permanently improved to bring the route south of Chambers Hill Wood and into Jeskyns Community Woodland. Due to the

increased cycle traffic for the duration of the works, access for motor vehicles will be prohibited on these byways. Following the opening of the alternative roadside route, restrictions will be lifted.

- c. There is an existing network of routes through Jeskyns Community Woodland with a variety of permitted users and surface types, including a dedicated horse-riding trail close to the northern boundary, this connects NS311 to the western part of the site. An existing unmade track from NS311 through the eastern part of the site will be surfaced and made available to pedestrians and cyclists as a permissive track, horse riders will continue to use the existing horse-riding trail. The new pedestrian-cycle track will terminate at footpath NS177, a small part of this will be made available to cyclists. There is an existing pedestrian track linking NS177 to the site car park, cyclists will be given permissive use of this track. The existing horse-riding trail crosses this track east of the car park. The section of this track west of this point will also permit equestrian use and will connect this horse-riding trail with Henhurst Road close to the junction with Church Road. The proximity of this route to the car park and cafe offers both an opportunity for recreational cyclists to join NCR177 at Jeskyns Community Woodland and for NCR177 users travelling through Jeskyns to purchase refreshments.

- A.3.5 The surface through Ashenbank Wood and Jeskyns Community Woodland shall be removed once the permanent route is complete if required by the landowners, and the quality of the existing track shall be restored.

Design and surfacing of WCH routes

- A.3.6 The Preliminary Design recognises the existing and potential use, in addition to the existing landscape character, of WCH routes and promotes a sympathetic approach rather than the application of a standard approach that may not be appropriate.
- A.3.7 Specific information relating to types of surface will be provided at detailed design stage. At Preliminary Design stage, a number of design principles have been developed which are of relevance to WCH routes in the vicinity of Shorne and Ashenbank Woods SSSI (Design Principles [**Document Reference 7.5 (7)**]).
- A.3.8 General design principles for WCH routes are detailed in Table 4.1 of the Design Principles [**Document Reference 7.5 (7)**], with principles of specific relevance including PEO.03 and PEO.04. Principle PEO.03 relates to detailed design, stating that *'surfacing, signage, boundary treatments and access controls shall be designed with the intent of being efficient and integrated, appropriate to the type of usage permitted and appropriate to its surrounding*

context as much as is reasonably practicable'. Principle PEO.04 goes on to state that:

- a. WCH routes shall be designed in accordance with the following standards:
 - i. DMRB standard CD 143 Designing for walking, cycling and horse-riding (Highways England, 2021a)
 - ii. DMRB standard CD 195 Designing for cycle traffic (Highways England, 2021b)
 - iii. Local Transport Note 1/20 Cycle infrastructure design (Department for Transport, 2020)
- b. In addition to the above, WCH routes should consider the following guidance (up to the DCO submission date):
 - i. Local Cycling and Walking Infrastructure Plans - Technical Guidance for Local Authorities (Department for Transport, 2017)
 - ii. Sustrans Design Manual – Handbook for cycle-friendly design (2014) and
 - iii. British Horse Society advice notes.

A.3.9 In all type of location both the landscape context and the types of user will be paramount in defining the types of surfaces to be used at detailed design stage. This is secured in the Project Design Principles [**Document Reference 7.5 (7)**].

A.3.10 Paragraph 3.4.14 of the Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [[APP-512](#)] states that *'in order to maintain the rural character of the area west of Thong, and when considering that recreation usage is anticipated to be higher than commuter usage, it is important that surface finishes appropriate to context and meeting the requirements of expected users are considered during detailed design.'*

A.4 Assessment of impacts to the Shorne and Ashenbank Woods SSSI

A.4.1 This section provides an assessment of the likely impacts associated with the creation of new, temporary WCH routes to the south of the A2, on the Shorne and Ashenbank Woods SSSI.

Visitor impacts associated with Thong Lane car park (no longer proposed)

- A.4.2 Following the acceptance of Project Amendment EA08 Thong Lane Car Park removal [[REP6A-023](#)], there is no longer a proposal for a car park to be provided at Thong Lane, and therefore there would be no associated impacts.

Visitor impacts associated with new WCH routes to the south of the A2

- A.4.3 The new WCH routes to the south of the A2 relate to the creation of a temporary diversion route for NCR177 as set out in Section 1.3. Both direct and indirect pathways for recreational impacts arising from the creation of the new WCH routes have been identified:
- a. Direct pathways resulting from a change in visitor numbers and associated effects relating to physical damage (e.g. soil compaction from bike tyres).
 - b. Indirect pathways may relate to aspects of visitor behaviour such as littering or disturbance of wildlife.

Direct impacts

- A.4.4 Data from WCH surveys undertaken in 2019 showed approximately 100 cyclists in the vicinity of the Brewers Road / Halfpence Lane / A2 slip lane area over the course of a weekday 12-hour period. This aligns with the likely use of the cycle infrastructure in this location as commuter-focused. During the construction phase of the Project, a diversion for the NCR177 has been proposed, with the creation of a section of route through Ashenbank Woods and on to Jeskyns Community Woodland, before rejoining the current alignment of the cycleway further to the west. Although both the temporary and permanent diversions to NCR 177 involve increased travel distances, these are not considered to be significant in terms of affecting their level of use by cyclists in terms of the overall distances typically travelled by cyclists using the route; both the temporary and permanent diversion routes allow for improved user experience.
- A.4.5 It is assumed therefore that a worst-case use level for NCR 177 through the section of Ashenbank Woods could therefore be in the order of 100 cyclists per day; usage may be concentrated in morning and evening commute periods and is therefore unlikely to conflict with other leisure users of the trail. As noted previously, an appropriate temporary surfacing would be created on the section of the route through Ashenbank Wood, which would be removed on completion of the works at the request of the Woodland Trust (as set out in Article 35 of the draft DCO [**Document Reference 3.1 (11)**] which relates to the temporary use of land for carrying out the authorised development).

- A.4.6 Leisure use of the temporary cycle route through Ashenbank Woods is not considered to be significantly different from that currently experienced (as the route is already a permissive walking, cycling and horse-riding route as part of the Darnley Trail). There may be a minor increase in user numbers due to increased awareness once the new temporary surface is completed.

Indirect impacts

- A.4.7 Indirect impacts potentially caused by a rise in user numbers may relate to littering; issues of this nature are considered to be able to be dealt with through visitor information and awareness raising campaigns which form part of the Woodland Trust's existing approach to managing Ashenbank Woods.

A.5 Summary

- A.5.1 In summary, no significant effects on the Shorne and Ashenbank Woods SSSI are considered likely to arise as a result of new WCH routes to the south of the A2. The principal reasoning behind this conclusion is as follows:
- a. Potential indirect effects associated with visitor behaviour (e.g. littering or not picking up dog faeces) are considered to be able to be effectively managed through existing management processes and procedures (for example visitor information boards).
 - b. Temporary impacts associated with the use of the diverted cycle route through Ashenbank Woods during the construction phase are not considered to be significant. An appropriate surfacing will be created for the duration of the use, which will be removed upon completion of the works.

Appendix B Cumulative inter-project effects update

B.1 Introduction

- B.1.1 The assessment of cumulative inter-project effects is presented in Environmental Statement Chapter 16: Cumulative Effects Assessment [[APP-154](#)].
- B.1.2 As set out within Section 16.3 of Environmental Statement Chapter 16, the inter-project effects assessment used a ‘cut-off date’, after which no further online planning application searches were included in the long-and shortlists. This was to allow sufficient time for the subsequent assessment work to be completed to a fixed date, prior to submission of the DCO application. The inter-project effects assessment and its associated conclusions are therefore based on searches of the numerous local authority websites undertaken up to 31 May 2022.
- B.1.3 In line with the approach in Planning Inspectorate (2019) Advice Note Seventeen (Cumulative effects assessment relevant to nationally significant infrastructure projects) further searches have been undertaken since the cut-off date to identify new developments that have come forward and relevant new information on developments previously considered in the Environmental Statement. These searches followed the same methodology as set out in Section 16.3 of Environmental Statement Chapter 16. This resulted in an updated shortlist of other developments requiring assessment or re-assessment of the potential for inter-project effects in combination with the Project.
- B.1.4 This Appendix summarises the results of the updated inter-project effects assessment; with particular focus on where significant effects have been identified that are in addition to those currently presented in Environmental Statement Chapter 16 as submitted for the DCO application.

B.2 Signposting to the DCO application

- B.2.1 This appendix and the associated assessment work that has been undertaken since the submission of the DCO application, provides an update to the environmental information presented in the following Application Documents:
- a. 6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [[APP-154](#)]
 - b. 6.2 Environmental Statement - Figure 16.2 - Developments in the Cumulative Shortlist [[APP-330](#)]

- c. 6.3 Environmental Statement - Appendix 16.1 - Long List of Developments [\[APP-483\]](#)
- d. 6.3 Environmental Statement - Appendix 16.2 - Short List of Developments [\[APP-484\]](#)

B.2.2 It is not intended that the documents listed a. to d. above will be updated or reissued to incorporate the further assessment work that has been undertaken in 2023. This appendix instead presents a record of the material updates to the conclusions of the above Application Documents that have been identified, for transparency and understanding during Examination.

B.3 Inter-project effects assessment update

B.3.1 An update to the inter-project cumulative effects assessment was undertaken in April 2023 in line with the methodology set out within Section 16.3 of Environmental Statement Chapter 16: Cumulative Effects Assessment [\[APP-154\]](#). This included first updating the long list of developments (as presented in Environmental Statement Appendix 16.1: Long List of Developments [\[APP-483\]](#)) to be considered as part of the April 2023 update. These were then shortlisted to take forward any identified new developments requiring assessment or previously assessed developments that have notably changed and require a review and update of the previous assessment. This shortlisting process included developments in the long list that had previously been scoped out of the shortlist, but where the information available within local authority planning portals has since been updated and is considered notable and relevant, such developments have now been shortlisted. Where development changes were minor (for example a non-material amendment to the proposals) and based on professional judgement considered unlikely to result in a significant change to the original assessment conclusions, these were not shortlisted for reassessment.

B.3.2 The April 2023 inter-project effects assessment update relates to further online searches covering the period between 31 May 2022 and end of February 2023. Based on the data available at the time of undertaking this inter-project effects assessment update, the following were identified:

- a. New information in relation to 21 developments previously assessed and presented in the Environmental Statement Chapter 16.
- b. 55 new developments shortlisted for assessment in the April 2023 update.

Summary of inter-project effects assessment update conclusions

B.3.3 Table B.1 below provides a summary of any changes to significant effects for each environmental topic, as identified in the inter-project cumulative effects assessment of the updated shortlist.

Table B.1 Significant inter-project effects arising from additional or updated developments

Topic	Potential for new or different significant effects
Air quality	No change to significance of air quality effects during construction or operation from the updated inter-project effects assessment.
Cultural heritage	Two additional shortlisted developments were identified with the potential to result in significant adverse inter-project effects for cultural heritage receptors during construction. One of these developments was also identified with the potential to result in an additional significant adverse inter-project effects for cultural heritage receptors, during operation, which was not identified in the ES at DCO submission.
Landscape and visual	Three additional shortlisted developments were identified with the potential to result in additional significant adverse inter-project effects for landscape and visual receptors, during construction, which were not identified in the ES at DCO submission. No change to significance of landscape and visual effects during operation
Terrestrial biodiversity	No change to significance of terrestrial biodiversity effects during construction or operation from the updated inter-project effects assessment.
Marine biodiversity	No change to significance of marine biodiversity effects during construction or operation from the updated inter-project effects assessment.
Geology and soils	Nine additional shortlisted developments were identified with the potential to contribute to significant adverse inter-project effects on soils during construction, due to the potential for permanent loss of best and most versatile (BMV) land.
Material assets and waste	The additional 55 shortlisted developments were identified with the potential to contribute to significant adverse inter-project effects on regional landfill capacity during the construction of the Project.
Noise and vibration	No change to significance of noise and vibration effects during construction or operation from the updated inter-project effects assessment.
Population and human health	One updated development was identified as having the potential to now result in moderate and significant beneficial (previously considered to be negligible) inter-project effects on population and human health receptors during operation, in relation to employment opportunities.
Road drainage and the water environment	No change to significance of road drainage and the water environment effects during construction or operation from the updated inter-project effects assessment.
Climate	No change to significance of climate effects during construction or operation from the updated inter-project effects assessment.

B.3.4 Table B.2 provides further detail on the nature of the significant effects identified and the developments to which these inter-project effects relate. Table B.2 also sets out the resulting changes to the conclusions presented in ES Chapter 16 Table 16.12.

Table B.2 New significant inter-project effects since DCO submission

Topic	Development and effect	Update to significance reported in ES Chapter 16 Table 16.12
Cultural heritage	One development (Thurrock Hydrogen Plant, Thurrock Council Planning Application Reference: 22/00812/SCR) was assessed to have the potential for moderate adverse and significant inter-project effects during both construction and operation on the setting of Tilbury Fort scheduled monument, West Tilbury Conservation Area, East Tilbury Conservation Area, listed buildings located within and near the conservation areas.	No change to conclusion of moderate adverse significant effects on the identified heritage assets during construction and operation. Key aspects of setting of the heritage assets are not affected by the potential development such as views across the Thames for Tilbury Fort and key associations with nearby defensive structures.
Cultural heritage	One development (East Havering Datacentre and Ecology Park, London Borough of Havering Planning Application Reference number not available) was assessed to have the potential for moderate adverse and significant inter-project effects on archaeology during construction and historic landscapes adjacent to the Project during construction and operation.	No change to conclusion of moderate adverse significant effects on archaeology and historic landscapes during construction. Potential for significant moderate adverse inter-project effects on historic landscapes in the vicinity of the proposed development during operation, that were not identified in the ES at DCO submission.
Landscape and visual	One new development (Land Adjacent Blackshots Stadium and Stanford Road Grays, Thurrock Council Planning Application Reference: 21/01309/FUL) was assessed to have the potential for moderate adverse and significant inter-project effects on local landscape character and visual amenity effects on receptors within the Zol including residential properties at the edge of Grays, Treetops School and Thurrock Rugby Club during the construction of the Project.	Potential for additional significant moderate adverse inter-project effects on local landscape character and visual amenity effects on receptors during construction.
Landscape and visual	One new developments (East Havering Datacentre and Ecology Park, London Borough of Havering	Potential for additional significant moderate

Topic	Development and effect	Update to significance reported in ES Chapter 16 Table 16.12
	<p>Planning Application Reference number not available) was assessed to have the potential for moderate adverse and significant inter-project effects on local landscape character and visual amenity effects on receptors within the Zol including residential properties east of Ockendon Road/Clay Tye Road, isolated residential properties along Fen Lane, the local PRow network, Fen Lane and Top Meadow Golf Club during the construction of the Project.</p>	<p>adverse inter-project effects on local landscape character and visual amenity effects on receptors during construction.</p>
Landscape and visual	<p>One development (Land off Muckingford Road, Linford, Thurrock Council Planning Application Reference: 16/01232/OUT) was assessed to have the potential for large adverse and significant inter-project effects on landscape and visual receptors within the Zol including residential properties along the edge of East Tilbury and Linford, isolated residential properties along Station Road and Love Lane, the local PRow network, Muckingford Road and the Tilbury Loop railway line during the construction of the Project.</p>	<p>Potential for additional significant large adverse inter-project effects on local landscape character and visual amenity effects on receptors during construction.</p>
Geology and soils	<p>Nine new developments included in the updated shortlist were assessed to result in very large adverse and significant inter-project effects on soils within the Zol during construction, due to the potential for permanent loss of best and most versatile (BMV) land during construction. These additional developments are as follows:</p> <ul style="list-style-type: none"> • Brentwood Borough Council Local Plan Allocation R06: Land off Nags Head Lane, Brentwood • Thurrock Council 22/00812/SCR: Thurrock Hydrogen Plant • Thurrock Council 21/01309/FUL: Land Adjacent Blackshots Stadium and Stanford Road, Grays • Thurrock Council 23/00188/FUL: Land South of Mollands Lane, South Ockendon • Brentwood Borough Council 22/01243/OUT: Land to South of Childerditch Industrial Estate • Brentwood Borough Council 22/01205/FUL: Cheale Meats Ltd Orchard Farm • London Borough of Havering P1724.21: Land to the East of Warley Substation • Thurrock Council 16/01232/OUT: Land off Muckingford Road, Linford • East Havering Datacentre and Ecology Park 	<p>No change to conclusion of very large adverse inter-project effects due to permanent reduction in the size of the BMV agricultural land resource as a result of construction of the Project and other developments.</p>

Topic	Development and effect	Update to significance reported in ES Chapter 16 Table 16.12
Material assets and waste	The additional 55 new developments included in the updated shortlist were assessed to result in moderate adverse and significant inter-project effects on regional landfill capacity during the construction of the Project.	No change to conclusion of moderate adverse inter-project effects due to the scale of the anticipated permanent reduction in existing regional landfill capacity.
Population and human health	One development (Land South of East Horndon Hall Tilbury Road West Horndon development. Brentwood Borough Council Planning Application Reference: 19/00315/OUT) was assessed to have the potential for moderate beneficial and significant inter-project on population and human health receptors during operation, in relation to employment opportunities.	No change to overall conclusion of moderate beneficial inter-project effects in relation to employment creation.

References

Planning Inspectorate (2019). Advice Note Seventeen: cumulative effects assessment relevant to nationally significant infrastructure projects. Accessed May 2023.

<https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advicenotes/advice-note-17>

Appendix C Review of a single TBM tunnelling methodology

C.1 Introduction

- C.1.1 This Appendix has been prepared to provide clarification on the flexibility within the construction methodology regarding the use of tunnel boring machinery (TBM). It provides a review of any potential associated changes to construction effects reported in Application Documents 6.1 to 6.4 Environmental Statement [APP-138 to APP-486] submitted as part of the Development Consent Order (DCO) application for the A122 Lower Thames Crossing (the Project) in October 2022.
- C.1.2 This Appendix has been prepared in response to the action identified by the Examining Authority at Issue Specific Hearing 1 (ISH1) on 21 June 2023. The agenda for the hearing [EV-014] included item 4c)ii ‘What is the effect on construction duration and environmental effects of the proposed use of a single tunnel boring machine (TBM)?’. This issue was discussed during the hearing as documented in the Transcript [EV-023] and in 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183]. It was agreed during ISH1 that further information would be provided in writing. The Action Points from ISH1 - 21 June 2023 [EV-023a] identified Action Point 2 as follows:

“The Applicant is requested to provide a tabulated addendum to the ES, reviewing the construction effects changes consequent on the possible effect of changing from the use of 2 tunnel boring machines (TBMs) to 1 TBM. The duration of works and the effects experienced by receptors should be expressly considered. Effects and conclusion changes (if any) should be tabulated for each component of the Environmental Statement (ES) analysis. This request imports no judgement by the ExA on the question of whether this amounts to a change to the project as applied for. It is made in the interests of ensuring that any possible implications for the ES and the project Rochdale Envelope are identified.”

C.2 Background

- C.2.1 The DCO application set out an environmental assessment based on a scenario where two TBMs would be used. This Appendix takes account of the flexibility within the tunnelling methodology and the assessments submitted as part of the DCO application, which enables the use of a single TBM if appropriate.

- C.2.2 The Appendix outlines out how the works would be undertaken if a single TBM were to be used; starting and finishing at the North Portal, rather than two TBMs both starting at the North Portal and ending at the South Portal, as presented in 6.1 Environmental Statement - Chapter 2 - Project Description [[APP-140](#)]. It subsequently reviews and demonstrates that the construction effects and conclusions reported within the ES are correct and applicable to both the single and two TBM scenarios.
- C.2.3 Using a single TBM could deliver several efficiencies, particularly in terms of significant cost savings and a reduction in material use. In comparison with the two TBM approach, using a single TBM would result in a saving of approximately 38,000 tonnes of carbon (CO₂e) by using less machinery and the associated reduction in hardstanding, the slurry treatment plant and the segment production facilities.
- C.2.4 The single TBM method for tunnel construction would involve no physical changes to the permanent works of the Project's footprint presented in the DCO application and the plans which form part of it. It would not require the Applicant to seek new powers over land to deliver the works.
- C.2.5 The overall construction programme set out in the DCO application would remain the same, whether the tunnels are constructed with one or two TBMs. The single TBM methodology provides an opportunity to bring the start of the first tunnel drive forward in the programme by approximately 10 months; as the quantum of temporary works required to construct the launch structure portal is reduced under a single TBM scenario compared to a two TBM scenario. The opportunity to start the tunnel drive earlier under the single TBM methodology does not, however, change the overall duration of the tunnelling elements of the construction programme as set out in the DCO application.
- C.2.6 The duration of tunnelling activities under a single TBM scenario is longer than a two TBM scenario. Tunnel boring with a single TBM would last approximately 32 months in total, whereas the two TBM scenario would take 21 months. This equates to a tunnel boring programme difference of approximately 11 months between the scenarios. The single TBM scenario would start 10 months earlier than the two TBM scenario. This results in a difference of approximately one month duration between the two scenarios, without any further intervention. The tunnel fit out works would, however, be completed in a different sequence, which would absorb the one month difference between the two tunnel boring programmes.
- C.2.7 The alternative single TBM methodology is therefore deliverable as part of the Project design and DCO application as submitted.

- C.2.8 The Applicant would, however, like to provide clarity to Interested Parties and the Examining Authority that the assessment of construction effects reported in the ES is representative of both methodologies. The assessment provided within the DCO application presents a reasonable worst-case scenario in terms of likely significant construction effects arising from either a single or two TBM methodology.

Summary of engagement and consultation

- C.2.9 A notification of proposed change was submitted to the Examining Authority in March 2023 [[AS-082](#) and [AS-083](#)] which included three proposed changes to the Project and a clarification on the construction methodology regarding the use of TBMs.
- C.2.10 A targeted non-statutory consultation (referred to as the ‘Minor Refinement Consultation’) was carried out by the Applicant between 17 May 2023 and 19 June 2023 on the three proposed changes, and the clarification regarding a single TBM construction methodology. This consultation sought to ensure that all parties with a potential interest were made aware of the proposed changes and clarification and had the opportunity to provide comments on the consultation material in advance of the submission of the formal change application to the Examining Authority. Responses received through the consultation have subsequently been considered and where possible answers have been provided to stakeholders.
- C.2.11 Within the Applicant’s Deadline 1 Cover Letter [[REP1-001](#)] Annex C further information was provided regarding the clarification relating to the methodology for the tunnel construction including an explanation of the Applicant’s assessment that to use one or two TBMs does not constitute a change to the application. This is because it was apparent from discussions held at the hearings in June 2023 that there remained uncertainty amongst some stakeholders that the option to use a single TBM is already included within the flexibility applied for in the DCO.
- C.2.12 In response to the comments made by Gravesham Borough Council, the Applicant has provided the following commitment “*The tunnel boring machinery will be serviced from the North Portal. Material excavated by the tunnel boring machinery will be generated as a slurry and this will be transferred by pipeline through the tunnel to the North Portal for placement. Similarly tunnel segments and major services required to operate the tunnel boring machinery and erect the tunnel segments will be supplied from the North Portal.*”
- C.2.13 This is proposed to be secured via 6.3 Environmental Statement - Appendix 2.2 - Code of Construction Practice, First Iteration of Environmental Management Plan (Version 2.0) (Tracked and Clean) [[REP1-156](#) and [REP1-157](#)] of which Chapter 7 is the Register of Environmental Actions and Commitments (REAC).

The commitment has the reference MW009. This was submitted at Deadline 1. This commitment is applicable whether one or two TBMS are utilised.

- C.2.14 It was agreed during ISH1 that further information would be provided in writing by the Applicant; with the requirement set out as Action Point 2. This Appendix provides the response to that Action Point.

The Applicant's position

- C.2.15 The Applicant's position is that the use of a single TBM for the tunnel drive, if deemed appropriate by the Contractor, would not constitute a change to the DCO application. No change is required to the draft DCO or other application materials.
- C.2.16 As set out in 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)], the Applicant does not consider this to be a change for the following reasons:
- a. The use of a single TBM is within the scope of the environmental assessments prepared for the Environmental Statement – i.e. it does not result in materially new or materially different effects.
 - b. The DCO application contains no constraint or commitment (either in the draft DCO or control plans) that requires the use of two TBMs. Thus, the application contains a proportionate degree of construction flexibility, which includes flexibility to employ a single TBM.
 - c. The decision on construction methodology, in terms of one or two TBMs, has not been made at this stage and would be made at detailed design and delivery stage.
 - d. It is commonplace for major DCO applications to allow for an appropriate degree of construction flexibility, and indeed in the case of a public project it is very much in the public interest, allowing for projects to be delivered at best value to the public purse – provided always that the controls provided for in the suite of DCO documents are adhered to.
- C.2.17 The Transport Assessment [[REP4-148](#) to [REP4-152](#) and [APP-530](#) to [APP-538](#)] and Environmental Statement [[APP-138](#) to [APP-486](#) (as updated and reported in the Environmental Statement Addendum (as updated for version 2 and submitted at Deadline 2))] provide conclusions that remain robust for the purpose of making a decision on the Project irrespective of whether a single TBM or two TBMs are used. While there would be a small number of differences in the logistics associated with a single TBM approach, there would be no new or different significant environmental effects arising in comparison to those assessed and presented in the DCO application.

C.3 Scenario for assessment

- C.3.1 The scenario for assessment of the alternative methodology is described below. This makes comparison with the two TBM methodology as described in 6.1 Environmental Statement - Chapter 2 - Project Description [[APP-140](#)]. All references to dates in this description of the scenario relate to the dates used in the Application Documents and do not take account of the rephrasing of construction announced by the Ministerial Statement in March 2023. Further information on the Ministerial Statement is provided in Appendix D.
- C.3.2 As described within the Notification of Proposed Changes to the Planning Inspectorate [[AS-083](#)], the single TBM would be driven from the north to excavate and construct the first tunnel and, after arrival at the southern tunnel entrance compound, the TBM would be turned around so that it could complete the second tunnel drive back to the North Portal. Following the construction of the tunnels, the tunnel boring machinery would be decommissioned and removed from the northern tunnel entrance compound using the strategic road network and the River Thames from the nearby port facilities. All servicing of the south to north tunnel drive would be provided from the northern tunnel entrance compound through the earlier constructed tunnel.
- C.3.3 The size of the permanent North and South Portals would remain unchanged from that proposed in the DCO application and assessed within the ES. All activities servicing the tunnel construction, including utility supplies, disposal of excavated material and slurry treatment would remain in the northern tunnel entrance compound as assessed within the DCO application.
- C.3.4 The excavated material from the second tunnel drive would be pumped as slurry back through the first tunnel to the northern tunnel entrance compound for treatment and subsequent use in the permanent earthworks landscaping at Tilbury Fields; following the same approach proposed for the two TBM methodology and as assessed within the DCO application.
- C.3.5 Under the single TBM scenario there is opportunity for a reduction in the size of the temporary North Portal structure used to launch the single TBM; as less space would be needed to launch one TBM than two. The reception structure for the returning TBM is still required on completion of the drives, but this element of the structure would be constructed in parallel with the drives. There is also the opportunity for the slurry plant in the northern tunnel entrance compound to be smaller in size to accommodate only a single TBM. This slurry plant would however operate for a longer duration while tunnel arisings are being removed from the tunnel drives consecutively rather than in parallel.

- C.3.6 Under the single TBM scenario, no change would be required to the southern tunnel entrance compound beyond the temporary works needed to turn the single TBM around, which would be undertaken within the footprint of the South Portal as previously set out and assessed within the DCO application.
- C.3.7 The single TBM scenario would not change the traffic management measures required for the Project, nor would it change the provision of mitigation measures set out within the DCO application. The single TBM scenario would introduce a small variation in the number of construction compound vehicles in comparison to the two TBM scenario. The total number of such vehicles associated with the tunnels' construction is however consistent with the traffic volumes already assessed in the ES and traffic assessments. Further detail on the changes within the traffic modelling is provided under the 'Traffic model review' heading below.
- C.3.8 Table C.1 below provides a summary of key information on the single TBM approach of relevance to the assessment of environmental effects in comparison with what has been presented in the ES as submitted.

Table C.1 Key information on single TBM approach

Single TBM approach details
<ul style="list-style-type: none"> • Construction of the tunnel structures using a single TBM rather than two separate TBMs. • All activities servicing the tunnel construction (temporary utilities, tunnel arisings removal, slurry treatment etc) would remain in the northern tunnel entrance compound. • In general, cross passage construction would commence from the south, moving north once the TBM has started driving back north. An exception may be preparatory works and formation of openings which may commence from the north following the progress of the first TBM drive. It is only the sequence that changes, with the method of cross passage construction remaining the same for both scenarios. • TBM power and water supply would be provided from the northern tunnel entrance compound for both the single and two TBM scenarios and is proposed to be brought on earlier to allow tunnelling to start earlier under the single TBM scenario. • The size of the permanent northern portal would be unchanged. • There may be a reduction in the size of the temporary northern portal structure (up to 50%) used to launch the single TBM as less 'space' is needed to launch a single TBM. The reception structure for the single TBM would be constructed in the northern tunnel entrance compound in parallel with the tunnel drives. • The TBM would require turning around at the southern tunnel entrance compound and repositioning for the drive north. This would be completed using cranes already included in the plant list for the south portal. • The size of the southern portal in the temporary and permanent states would remain unchanged. • The slurry plant in the northern tunnel entrance compound may be smaller in size (anticipated by approximately one third) but would operate for a longer duration while tunnel arisings are being removed from the tunnel. • Decommissioning and removal of the single TBM would occur in the northern tunnel entrance compound, rather than in the southern tunnel entrance compound for the two TBM scenario.

- Traffic volumes would generally remain consistent with that assessed in the DCO application, the exceptions being:
 - only one TBM would be delivered to and then removed from the northern tunnel entrance compound via the Port of Tilbury. Delivery of the single TBM via the River Thames would reduce river vessel requirements, compared to the delivery of two TBMs.
 - TBM(s) would no longer be removed from the southern tunnel entrance compound. River vessel movements to remove the TBM would be reduced for the single TBM, and via the northern tunnel entrance compound.
 - It is anticipated there would be a small reduction in construction workforce numbers and associated traffic volumes in construction phases 5 to 8 at the northern tunnel entrance compound associated with operating a single TBM. There would be a small increase in phases 2 to 4. In phases 3 and 4 these increases are not deemed to be significant. The increases in phase 2 would be in the order of 230 two-way trips. The decreases in two-way trips in phases 5 to 8 are approximately 100, 120, 200, and 100 in each phase respectively.
 - There would be a small workforce increase at the southern tunnel entrance compound (assumed 20 percent / less than 80 staff) to facilitate the tunnelling and cross-passage construction from the south. It is however intended that, where feasible, staff movements would be planned from the northern compound through the completed first drive. The net effect in total workforce and associated traffic volumes at the southern tunnel entrance compound is a decrease in phase 7 and a negligible increase in phase 8; with no change in any other phase.
 - There would be a minor increase in traffic volumes during construction phase 2 (of the traffic model) due to the increased number of workers at the northern tunnel entrance compound. However, the increase predicted in phase 2 would lead to a level of impact which is less than the impact modelled for phase 3 in the DCO application and does not represent a material change requiring additional traffic management measures or mitigation. It remains less than the assessed peak traffic numbers in phase 4. There would also be a minor decrease in traffic volumes in phases 5 to 8.

Key assumptions

- All materials (segments etc.) and utilities would be supplied from the northern tunnel entrance compound through drive 1 (north to south drive).
- All excavated material would be sent as slurry back to the northern tunnel entrance compound via drive 1 for treatment and placement at Tilbury Fields.
- The duration of earthwork activities at Tilbury Fields would likely be extended but would be at a lower intensity and remain within the overall DCO application programme.
- No change to the overall site power requirement (excluding TBM power which is reduced for a single TBM).
- No changes to other utilities required for the tunnels scope.
- TBM decommissioning and removal is anticipated to require the same number of Heavy Goods Vehicles and Abnormal Indivisible Loads as delivery.
- No significant increase in craneage required at the southern tunnel entrance compound as a large tower crane was already included for the southern portal assumptions.
- No increase in permanent works materials required at the southern tunnel entrance compound.
- The excavation of the South Portal cutting remains as per the DCO schedule.
- Launch cradle, shove frame and other relevant plant from the northern tunnel entrance compound would be relocated to the southern tunnel entrance compound, via the first tunnel for re-use in the southern tunnel entrance compound.
- Use of the River Thames for transportation would be reduced for the delivery of a single TBM.

Alternative dates based on single TBM methodology

- New programme for power and water to be available in January 2026 (to align with the earlier tunnelling activities under the single TBM methodology). The scope and design of the TBM power and water supply works would remain as per the DCO application.
- Reduced temporary works associated with single launch structure would allow a reduced timeframe for TBM set up.
- It is anticipated that by starting the tunnel drive earlier, the overall programme of works for tunnel construction would be similar using either methodology.
 - Drive 1 could commence approximately 10 months earlier than the programme presented in the DCO application.
 - Drive duration including the period for U-Turn and TBM head refurbishment would be approximately 32 months. The total drive duration for the two TBMs approach would be approximately 21 months.
 - Drive end in the single TBM scenario would be approximately one month later than for the two TBM approach.
 - The tunnel fit out works would, however, be completed in a different sequence, which would absorb the one month difference between the two tunnel boring programmes.

Traffic model review

- C.3.9 Information on the DCO application construction traffic modelling, and the associated construction assumptions is provided in 7.9 Transport Assessment [[REP4-148](#) to [REP4-152](#)]. Using a single TBM rather than two machines would result in a change in staffing patterns at the northern and southern tunnel entrance compounds; primarily because a single TBM requires fewer staff to operate than two machines. The single TBM scenario would consequently introduce a small variation in the number of construction compound vehicles in each construction phase in comparison with the two TBM scenario.
- C.3.10 An assessment of potential traffic changes resulting from minor changes in workforce numbers associated with the use of a single TBM was undertaken by the Applicant in January 2023.
- C.3.11 Construction traffic demand levels were averaged over each of the 11 construction phases as considered in the DCO application, so that the model is predicting the average condition within each construction phase. The same assumptions regarding workforce shift arrangements (as set out in the Framework Construction Travel Plan [[Document Reference 7.13 \(6\)](#)]) were applied in the modelling review undertaken for the single TBM scenario.
- C.3.12 The 11 construction phases are shown in Table C.2 and remain the same as for the DCO application.

Table C.2 Construction modelling eleven phase system

Phase	Start	End	Duration (Months)
Phase 1	01/01/2025	31/08/2025	8
Phase 2	01/09/2025	28/02/2026	6
Phase 3	01/03/2026	31/05/2026	3
Phase 4	01/06/2026	31/10/2026	5
Phase 5	01/11/2026	31/03/2027	5
Phase 6	01/04/2026	31/08/2027	5
Phase 7	01/09/2027	31/03/2028	7
Phase 8	01/04/2028	30/11/2028	8
Phase 9	01/12/2028	31/03/2029	4
Phase 10	01/04/2029	31/07/2029	4
Phase 11	01/08/2029	31/12/2030	17

- C.3.13 The assessment of potential traffic changes under the single TBM scenario concluded the following key points of relevance to the consideration of environmental effects during construction.
- C.3.14 As shown in Table C.3, for the southern tunnel entrance compound only construction phases 7 and 8 would see a change in demand; with construction phase 7 seeing a reduction in traffic trip numbers. The small increase in trips for construction phase 8 of approximately 5 two-way trips in the AM peak and interpeak, attributed to changes in workforce, is not considered a significant change. The existing assessment provided as part of the DCO application therefore represents a worst-case in relation to traffic associated with the southern tunnel entrance compound.
- C.3.15 As shown in Table C.4, for the northern tunnel entrance compound only construction phases 2-4 have an increase in traffic numbers; also attributable to minor changes in workforce. The small increases for construction phase 3 (56 two-way trips in the AM peak and interpeak) and phase 4 (4 two-way trip in the AM and Interpeak) are not considered a significant change. There is also an increase in traffic in construction phase 2 associated with a single TBM compared to the previous assessment, however the level of impact is no worse than that expected for construction phase 3 (as documented in the Transport Assessment [[REP4-148](#) to [REP4-152](#)]) and therefore the increase is not considered significant overall.

- C.3.16 In terms of level of construction traffic impact, the existing two TBM construction modelling already provides all the information required to assess what the impact would be in a single TBM scenario, except that the level of impact in construction phase 2 within Tilbury only would be closer in scale to what is reported in phase 3 for the DCO application. Construction traffic during the most intensive construction phase of the single TBM scenario would be slightly lower than for the most intensive phase of the two TBM scenario.
- C.3.17 Given that in all other phases there is a negligible increase in staff flow or a large decrease, it is concluded that the two TBM modelling already carried out represents a robust worst-case assessment of both the single and two TBM scenarios.

Table C.3 Changes to staff movements in southern tunnel entrance compound under the single TBM scenario

	Construction Phase	1	2	3	4	5	6	7	8	9	10	11
Absolute change in number of trips (from the two TBM scenario)	AM_origin (away from site)	0	0	0	0	0	0	-24	6	0	0	0
	AM_destination (to site)	0	0	0	0	0	0	-34	-1	0	0	0
	Interpeak_origin	0	0	0	0	0	0	-24	6	0	0	0
	Interpeak_destination	0	0	0	0	0	0	-24	-2	0	0	0
	PM_origin	0	0	0	0	0	0	-10	-6	0	0	0
	PM_destination	0	0	0	0	0	0	0	0	0	0	0

Table C.4 Changes in staff movements in northern tunnel entrance compound under the single TBM scenario

	Construction Phase	1	2	3	4	5	6	7	8	9	10	11
Absolute change in number of trips (from the two TBM scenario)	AM_origin (away from site)	0	114	28	2	-52	-69	-108	-55	0	0	0
	AM_destination (to site)	0	114	28	2	-52	-69	-108	-55	0	0	0
	Interpeak_origin	0	114	28	2	-52	-69	-108	-55	0	0	0
	Interpeak_destination	0	114	28	2	-52	-69	-108	-55	0	0	0
	PM_origin	0	0	0	0	0	0	0	0	0	0	0
	PM_destination	0	0	0	0	0	0	0	0	0	0	0

C.4 Assessment of environmental effects

- C.4.1 A review has been undertaken of the single TBM scenario (as described in Section C.3 of this appendix) to confirm that there would be no new or different likely significant construction effects compared to those reported in the DCO application which presents the two TBM scenario. This review has considered the potential for new or different effects to be experienced by receptors within each environmental discipline under the single TBM scenario; with the conclusions summarised in Table C.5 below. A summary of the significant effects reported within the submitted ES is included first for each discipline.

- C.4.2 The first assessment column (column 3) of Table C.5 summarises the broad elements of the tunnel construction methodology that have potential implications for the conclusion of significant effects for each individual environmental discipline. Where these construction elements are relevant to the consideration of environmental effects for more than one environmental discipline, they are repeated against each relevant discipline.
- C.4.3 The second assessment column (column 4) of Table C.5 describes the implications of the single TBM scenario on each of these construction elements and the consequence on the significant effects as reported in the ES for each environmental discipline.
- C.4.4 The final assessment column (column 5) of Table C.5 summarises whether the effects of a single TBM scenario are consistent with those reported in relation to the two TBM scenario in the ES. The potential for any materially new or different significant effects to be experienced by receptors considered under each environmental discipline is recorded; along with any requirements for changes to mitigation set out within the DCO application.

Table C.5 Environmental assessment of the single TBM scenario

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
Air Quality	There are no significant effects reported in ES Chapter 5 [APP-143] in relation to the TBM or associated tunnel construction activities.	<ul style="list-style-type: none"> • Construction or permanent works footprint. • Overall duration of construction works. • Number and/or type of construction vehicles/ plant required. • Traffic flows associated with construction traffic and traffic management. • River vessel movements associated with construction. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. • The single TBM scenario would increase the required duration of specific construction activities such as the slurry plant and segment factory, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES. • Duration of earthwork activities at Tilbury Fields is likely to be extended but would be at a lower intensity and remain within the overall DCO application programme. These activities would be managed by the same good practice dust management controls set out within the REAC. • The single TBM scenario would not necessitate an increase in the number or change in type of vehicles/plant required during construction to those included within the traffic modelling. • The change in construction traffic flows for the single TBM scenario compared with 	<p>As the single TBM scenario would not change the overall construction footprint, duration or vehicle requirements, and would result in only minor alterations to construction traffic flows within specific phases of the construction programme and a reduction in construction plant requirements; no new or different significant effects on air quality receptors beyond those already assessed in Chapter 5 of the ES [APP-143] are anticipated.</p> <p>As described in Chapter 5 of the ES [APP-143], river vessel movements during the construction phase are expected to have negligible impacts on local air quality based on a worst-case scenario where two TBMs are used. A reduction in river vessel requirements would not result in any new or different significant effects for air quality.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
			<p>those anticipated for the two TBM scenario would not result in an overall increase in vehicle movements to those assumed in the ES, however these movements would occur over a longer period. The overall traffic generation is unlikely to materially change the assessment conclusions drawn for construction traffic air quality and dust under the two TBM scenario.</p> <ul style="list-style-type: none"> • Delivery of the single TBM via the River Thames would reduce river vessel requirements, compared to the delivery of two TBMs considered in the worst-case scenario presented in the DCO application. 	<p>The construction air quality and dust assessment presented in Chapter 5 of the ES [APP-143] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are utilised.</p> <p>No changes would be required to the proposed Traffic Management measures.</p>
Cultural Heritage	<p>A number of significant adverse effects to non-designated archaeological assets have been reported in ES Chapter 6 [REP4-116] in relation to the construction of the northern tunnel entrance and the cut and cover works.</p>	<ul style="list-style-type: none"> • Construction or permanent works footprint. • Depth of excavations • Overall duration of construction works. • Off-site construction traffic noise levels and or visual impacts which could impact the setting of certain heritage assets. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the submitted ES. As a result there would be no change to direct impacts on heritage assets. • There would be no increase to excavation depth requirements for the single TBM scenario. As a result there would be no change to direct impacts on cultural heritage receptors. • The single TBM scenario would increase the required duration of specific construction activities, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities 	<p>As the single TBM scenario would not change the overall construction footprint, excavation depth requirements or duration, and would not result in any change to the setting of heritage assets through changes in noise or visual effects; no new or different significant effects on cultural heritage receptors beyond those already assessed in Chapter 6 of the ES [REP4-116] are anticipated.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
			<p>would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES. Changes to the duration of specific construction activities would be contained within the overall modelled programme of construction works.</p> <ul style="list-style-type: none"> The outputs of the noise and visual impact assessments remain unchanged under the single TBM scenario. No new off-site construction traffic related effects on noise or visual effects with the potential to impact heritage setting are therefore likely to arise from the single TBM scenario. 	<p>The cultural heritage assessment presented in Chapter 6 of the ES [REP4-116] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>
Landscape and Visual	<p>Several significant adverse landscape and visual effects have been reported in ES Chapter 7 [Document Reference 6.1 ES Chapter 7 (2)] in relation to the southern tunnel entrance compound, including construction of the southern tunnel entrance.</p>	<ul style="list-style-type: none"> Construction or permanent works footprint. Overall duration of construction works. Number and/or type of construction plant required. Buildings and storage areas within construction compounds. 	<ul style="list-style-type: none"> The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the submitted ES. There would be no change to buildings, storage areas or other structures in the construction compounds with the potential to alter landscape or visual effects. The single TBM scenario would increase the required duration of specific construction activities, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel 	<p>As the single TBM scenario would not change the overall construction footprint or duration and would not increase construction plant requirements, in particular the use of cranes, and would not require a change in buildings, structures, storage areas or temporary lighting within the construction compounds, and would result in only minor alterations to construction traffic flows within specific phases of the construction programme and a reduction in</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
		<ul style="list-style-type: none"> • Construction traffic and traffic management. • Temporary construction lighting. 	<p>construction works as assessed by the worst-case scenario presented in the ES.</p> <ul style="list-style-type: none"> • The single TBM scenario would not necessitate an increase in the number or change in type of plant required during construction to those included within the traffic modelling. The amount, use and durations of tall plant (including cranes, the most visible above ground element associated with the TBM) remains unchanged at both compounds and remains in line with the DCO assessment. • The change in construction traffic flows for the single TBM scenario compared with those anticipated for the two TBM scenario would not result in an overall increase in vehicle movements to those assumed in the ES, however, these movements would occur over a longer period. The overall traffic generation is unlikely to materially change the assessment conclusions drawn for construction traffic under the two TBM scenario. • The single TBM scenario would not necessitate changes to temporary construction lighting. 	<p>construction plant requirements; no new or different significant effects on landscape and visual receptors beyond those already assessed in Chapter 7 of the ES [Document Reference 6.1 ES Chapter 7 (2)] are anticipated.</p> <p>The landscape and visual assessment presented in Chapter 7 of the ES [Document Reference 6.1 ES Chapter 7 (2)] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>
Terrestrial Biodiversity	A number of significant adverse effects to ecological receptors have been reported in	<ul style="list-style-type: none"> • Construction or permanent works footprint. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in 	As the single TBM scenario would not change the overall construction footprint, duration or vehicle requirements, and

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
	<p>ES Chapter 8 [Document Reference 6.1 ES Chapter 8 (2)] in relation to the northern tunnel entrance compound, including construction of the northern tunnel entrance.</p>	<ul style="list-style-type: none"> • Overall duration of construction works. • Operational noise and vibration levels from the TBM during the tunnel drives. • Off-site construction traffic noise and vibration levels and air quality impacts which could impact biodiversity. 	<p>the submitted ES. As a result there would be no change to direct habitat loss.</p> <ul style="list-style-type: none"> • The single TBM scenario would increase the required duration of specific construction activities, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES. • The single TBM would operate for longer but produce lower levels of underground noise and vibration due to a reduction in the number of TBMs being driven simultaneously. As a result, there would be no change in the assessment of significant effects reported in the DCO application. • The outputs of the noise and air quality assessments remain unchanged under the single TBM scenario. No new off-site construction traffic related effects on noise, vibration or air quality with the potential to disturb biodiversity are therefore likely to arise from the single TBM scenario. 	<p>would result in only minor alterations to construction traffic flows within specific phases of the construction programme and a reduction in construction plant requirements; no new or different significant effects on terrestrial biodiversity receptors beyond those already assessed in Chapter 8 of the ES [Document Reference 6.1 ES Chapter 8 (2)] are anticipated. The terrestrial biodiversity assessment presented in Chapter 8 of the ES [Document Reference 6.1 ES Chapter 8 (2)] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>
Marine Biodiversity	<p>No significant adverse effects to marine ecological receptors have been reported in Chapter 9 [APP-147] in</p>	<ul style="list-style-type: none"> • Construction or permanent works footprint. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. As a result there would be no change to direct habitat loss. 	<p>As the single TBM scenario would not change the overall construction footprint, duration or vehicle requirements, and would result in only minor</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
	<p>relation to the construction of the Project.</p>	<ul style="list-style-type: none"> • Overall duration of construction works. • Operational noise and vibration levels from the TBM during the tunnel drives. • Off-site construction traffic noise and vibration levels and air quality impacts which could impact biodiversity. • River vessel movements associated with construction. 	<ul style="list-style-type: none"> • The single TBM scenario would increase the required duration of specific construction activities, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES. • The single TBM would operate for longer but produce lower levels of underwater noise and vibration due to a reduction in the number of TBMs being driven simultaneously. As a result there would be no change in the assessment of effects reported in the DCO application. • The outputs of the noise and air quality assessments remain unchanged under the single TBM scenario. No new off-site construction traffic related effects on noise, vibration or air quality with the potential to disturb biodiversity are therefore likely to arise from the single TBM scenario. • Delivery of the single TBM via the River Thames would reduce river vessel requirements, compared to the delivery of two TBMs considered in the worst-case scenario presented in the DCO application. 	<p>alterations to construction traffic flows within specific phases of the construction programme and a reduction in construction plant and river vessel requirements; no new or different significant effects on marine biodiversity receptors beyond those already assessed in Chapter 9 of the ES [APP-147] are anticipated.</p> <p>The marine biodiversity assessment presented in Chapter 9 of the ES [APP-147] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
Geology and Soils	<p>No significant adverse effects have been reported in ES Chapter 10 [APP-148] in relation to the TBM and tunnel construction for geology or contamination.</p> <p>A significant effect has been reported for the Project's impacts to best and most versatile land.</p>	<ul style="list-style-type: none"> • Construction or permanent works footprint. • Mobilisation of contamination and/or mobilisation of ground gases due to groundwater control. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. It is anticipated that temporary structures would be reduced and the permanent structure would remain unchanged. As a result there would be no change to land requirements or direct impacts on geology and soils, including best and most versatile land. • The single TBM scenario would not result in any increased risk of mobilisation of contamination to groundwater or ground gases as commitments within the REAC for groundwater control during excavations remain unchanged from the DCO application. 	<p>As the single TBM scenario would not change the overall construction footprint and would not result in any increased risk of mobilisation of contamination or ground gases; no new or different significant effects on geology and soil receptors beyond those already assessed in Chapter 10 of the ES [APP-148] are anticipated.</p> <p>The geology and soils assessment presented in Chapter 10 of the ES [APP-148] is therefore considered to provide a robust assessment based on a scenario where two TBMs are used.</p>
Material Assets and Waste	<p>A significant adverse effect has been reported in ES Chapter 11 [Document Reference 6.1 ES Chapter 11 (2)] against the Project's impact on landfill capacity in the study area.</p>	<ul style="list-style-type: none"> • Volume of materials required. • Volume of waste generated. 	<ul style="list-style-type: none"> • The single TBM scenario has the potential to reduce material and equipment requirements, associated with the slurry treatment plant and the launch structure. This also has the potential to reduce waste generation from the temporary works at the northern tunnel entrance compound. • Material and waste handling associated with the tunnelling activities remain in line with the two TBM methodology, as there is not 	<p>As the single TBM scenario would not change the overall construction material/waste balance, no new or different significant effects on material assets and waste receptors beyond those already assessed in Chapter 11 of the ES [Document Reference 6.1 ES Chapter 11 (2)] are</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
			<p>anticipated to be a change to the construction materials/ waste balance overall. There would be no change to the overall impact on landfill capacity. Material and waste would be managed in line with the measures set out in the DCO application. The assumptions around the use of treated tunnel material remain the same as in the DCO application.</p>	<p>anticipated. There would be no change to the overall significance of effects on landfill capacity.</p> <p>The material assets and waste assessment presented in Chapter 11 of the ES [Document Reference 6.1 ES Chapter 11 (2)] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p> <p>No changes would be required to the Outline Site Waste Management Plan [Document Reference 6.3 ES Appendix 2.2 Annex A (4)] or the Outline Materials Handling Plan [Document Reference 6.3 ES Appendix 2.2 Annex B (5)].</p>
Noise and Vibration	<p>There are no significant effects reported within the locality of these works during construction in ES Chapter 12 [APP-150].</p>	<ul style="list-style-type: none"> • Construction or permanent works footprint. • Overall duration of construction works. • Number and/or type of construction 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. • The single TBM scenario would increase the required duration of specific construction activities such as the slurry plant and segment factory, albeit at a lower intensity than necessary for two machines. Changes 	<p>As the single TBM scenario would not change the overall construction footprint, duration or vehicle requirements, and would result in only minor alterations to construction traffic flows within specific phases of the construction programme and a reduction in</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
		<p>vehicles/plant required.</p> <ul style="list-style-type: none"> • Traffic flows associated with construction traffic and traffic management. • River vessel movements associated with construction. • Operational noise and vibration levels from the TBM during the tunnel drives. 	<p>to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES.</p> <ul style="list-style-type: none"> • The single TBM scenario would not necessitate an increase in the number or change in type of vehicles/plant required during construction to those included within the traffic modelling. • The change in construction traffic flows for the single TBM scenario compared with those anticipated for the two TBM scenario would not result in an overall increase in vehicle movements to those assumed in the ES, however these movements would occur over a longer period. The overall traffic generation is unlikely to materially change the assessment conclusions for construction traffic noise and vibration under the two TBM scenario. • Delivery of the single TBM via the River Thames would reduce river vessel requirements, compared to the delivery of two TBMs considered in the worst-case scenario presented in the DCO application. • The single TBM would operate for longer but would not produce higher levels of underground/underwater noise and vibration than reported in the ES due to a reduction in 	<p>construction plant and river vessel requirements; no new or different significant effects on noise and vibration receptors beyond those already assessed in Chapter 12 of the ES [APP-150] are anticipated.</p> <p>The construction noise and vibration assessment presented in Chapter 12 of the ES [APP-150] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p> <p>The vibration assessment of the use of two TBMs that is reported in Chapter 12 of the ES [APP-150] would be unchanged since the single TBM would not generate higher levels of underwater/underground noise and vibration than the use of two TBMs. The longer use of the single TBM would not introduce new or different significant effects.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
			<p>the number of TBMs being driven simultaneously. As a result there would be no increase to the overall noise and vibration effects reported in the DCO application.</p>	<p>No changes would be required to the proposed Traffic Management measures or delivery of proposed noise mitigation in the REAC.</p>
<p>Population and Human Health</p>	<p>There are no significant effects reported within the locality of these works during construction in ES Chapter 13 [APP-151].</p>	<ul style="list-style-type: none"> • Construction or permanent works footprint. • Overall duration of construction works. • Number and/or type of construction vehicles/plant required. • Traffic flows associated with construction traffic and traffic management. • Construction workforce requirements. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. As a result there would be no change to land take or direct physical impacts on population and human health receptors. • The single TBM scenario would increase the required duration of specific construction activities, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES. As a result there would be no change to the overall impacts on local communities. • The single TBM scenario would not necessitate an increase in the number or change in type of vehicles/plant required during construction to those included within the traffic modelling. • The change in construction traffic flows for the single TBM scenario compared with those anticipated for the two TBM scenario 	<p>As the single TBM scenario would not change the overall construction footprint, duration or vehicle requirements, and would result in only minor alterations to the construction workforce, construction traffic flows within specific phases of the construction programme and a reduction in construction plant requirements; no new or different significant effects on population and human health receptors beyond those already assessed in Chapter 13 of the ES [APP-151] are anticipated.</p> <p>The population and human health assessment presented in Chapter 13 of the ES [APP-151] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
			<p>would not result in an overall increase in vehicle movements to those assumed in the ES, however these movements would occur over a longer period. The overall traffic generation is unlikely to materially change the assessment conclusions drawn for construction traffic under the two TBM scenario. The outputs of the noise and air quality assessments remain unchanged under the single TBM scenario. No new off-site construction traffic related effects on noise, vibration or air quality with the potential to affect population and human health receptors are therefore likely to arise from the single TBM scenario.</p> <ul style="list-style-type: none"> The single TBM scenario has the potential to give rise to a reduction in workforce numbers in the northern tunnel entrance compound associated with the reduced number of TBMs. It also has the potential for a small increase in workforce numbers in the southern tunnel entrance compound (worst case of approximately 20 percent, no more than 80 workers) associated with staffing the cross passage construction. The small potential increase in workforce numbers in the southern tunnel entrance compound is unlikely to change the impacts reported in the ES. 	<p>No changes would be required to the proposed Traffic Management measures, REAC commitments, the Framework Construction Travel Plan [Document Reference 7.13 (6)] or Worker Accommodation Report [APP-551].</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
Road Drainage and the Water Environment	There are no significant effects reported within the locality of these works during construction in ES Chapter 14 [APP-152] .	<ul style="list-style-type: none"> • Construction or permanent works footprint. • Depth level of excavations • Overall duration of construction works. • Flood compensation. 	<ul style="list-style-type: none"> • The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. There would also be no changes to the number of proposed grout blocks associated with the ground protection tunnel. • The groundwater assessment assumed a worst-case scenario for the depth level of excavation for the North Portal for both the temporary and permanent works. There would be no increase to excavation depth level requirements for the single TBM scenario. As a result there would be no change to direct impacts on road drainage or water environment receptors. • The single TBM scenario would not increase the overall duration of works beyond the worst-case scenario presented in the ES. • The single TBM scenario would not alter flood risk or the delivery or effectiveness of requirements for flood mitigation and compensation. 	<p>As the single TBM scenario would not change the overall construction footprint, excavation depth requirements, flood risk or duration; no new or different significant effects on groundwater or surface water receptors beyond those already assessed in Chapter 14 of the ES [APP-152] are anticipated.</p> <p>The road drainage and water environment assessment presented in Chapter 14 of the ES [APP-152] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p> <p>No changes would be required to flood mitigation measures or compensation.</p> <p>The proposed commitments set out in the REAC remain in place for control of groundwater and protection of surface water and groundwater quality.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
Climate	There are no significant effects reported in relation to the tunnel construction in ES Chapter 15 [APP-153] .	<ul style="list-style-type: none"> • Number and/or type of construction vehicles/plant required. • Traffic flows associated with construction traffic and traffic management. • Volume of materials and power required. 	<ul style="list-style-type: none"> • The single TBM scenario would not necessitate an increase in the number or change in type of vehicles/plant required during construction to those included within the traffic modelling. • The change in construction traffic flows for the single TBM scenario compared with those anticipated for the two TBM scenario would not result in an overall increase in vehicle movements to those assumed in the ES, however these movements would occur over a longer period. The overall emissions associated with construction traffic would not change. • The single TBM scenario would be anticipated to result in a reduction in embodied carbon compared to two TBMs. For example due to the reduction in steel consumption and associated supporting facilities. • It is estimated that the single TBM scenario would result in a reduction of 38,000 tCO₂e when compared to a two-TBM scenario. • Under the single TBM scenario peak power would be reduced but power would be required earlier in the programme. There would be no change to emissions as a result of the change to power demand and profile. 	<p>The single TBM scenario would result in a reduction in construction plant requirements, leading to a reduction in embodied carbon. No new or different likely significant effects are anticipated on climate beyond those already assessed in Chapter 15 of the ES [APP-153]. The reduction in emissions associated with a single TBM methodology would represent a minor reduction in overall Project emissions.</p> <p>The construction climate assessment presented in Chapter 15 of the ES [APP-153] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>

Environmental topic	Reported significant effects in the ES	Key construction influences on environmental assessments	Implications of a single TBM methodology	Consistency with significant effects reported in the ES
Cumulative Effects Assessment	<ul style="list-style-type: none"> Several significant cumulative intra-project and inter-project effects have been reported within the locality of these works during construction in ES Chapter 16 [APP-154]. 	<ul style="list-style-type: none"> Construction or permanent works footprint. Overall duration of construction works. Intra-project effects 	<ul style="list-style-type: none"> The single TBM scenario would not increase the footprint of the construction works beyond the worst-case scenario presented in the ES. The single TBM scenario would increase the required duration of specific construction activities, albeit at a lower intensity than necessary for two machines. Changes to the duration of specific construction activities would however be contained within the overall modelled programme of tunnel construction works as assessed by the worst-case scenario presented in the ES. As a result there would be no change to the conclusions of inter-project effects reported in the cumulative effects assessment. The outputs of the various environmental discipline assessments (as captured in this table) remain unchanged under the single TBM scenario. No new significant intra-project effects are therefore likely to arise from the single TBM scenario. 	<p>As the single TBM scenario would not change the overall construction footprint or duration, and would not result in any new or different significant effects for any of the environmental disciplines; no new or different significant intra-project or inter-project effects beyond those already assessed in Chapter 16 of the ES [APP-154] are anticipated. The cumulative effects assessment presented in Chapter 16 of the ES [APP-154] is therefore considered to provide a robust assessment based on a worst-case scenario where two TBMs are used.</p>

C.4.5 In conclusion, the review has confirmed that the ES as submitted, represents the reasonable worst-case scenario in terms of likely significant construction effects arising from either TBM methodology for all receptors groups. The Applicant considers that the ES provides conclusions that remain robust for the purpose of making a decision on the Project irrespective of whether a single TBM or two TBMs are used.

Appendix D Appraisal of effects from the two-year rephasing of construction

D.1 Introduction

D.1.1 This Appendix has been prepared to provide an appraisal of the environmental effects arising from the Ministerial Statement made by the Secretary of State for Transport in March 2023 in relation to the A122 Lower Thames Crossing (the Project). The Ministerial Statement revised the timing of construction and consequently the date for opening the Project to traffic. This appraisal has considered the potential for change in the effects reported in Application Documents 6.1 to 6.4 Environmental Statement [[APP-138](#) to [APP-486](#)] submitted as part of the Development Consent Order (DCO) application for the Project in October 2022.

D.1.2 This Appendix has been prepared in response to the action identified by the Examining Authority at Issue Specific Hearing 1 (ISH1) on 21 June 2023. The agenda for the hearing [[EV-014](#)] included item 4c) ‘*Effects of the two-year rephasing in capital funding*’. This issue was discussed during the hearing as documented in the Transcript [[EV-023](#)] and in 9.10 Post-event submissions, including written submission of oral comments, for ISH1 [[REP1-183](#)]. It was agreed during the hearing that further information would be provided by National Highways in writing. The Action Points from ISH1 - 21 June 2023 [[EV-023a](#)] identified Action Point 1 as follows:

“Following the announcement of a two-year rephasing of the proposed LTC development by the SoST on 9 March 2023, please provide a tabulated addendum to the ES, setting out an appraisal of the effect of the revised construction timing and works duration changes flowing from that announcement, undertaken for each component of the Environmental Statement (ES) analysis. This should include consideration of the time sequence for and outcome of committed elements of Freeport development which it has been suggested will now be delivered concurrently with aspects of the rephased LTC project.”

D.2 Background

Ministerial statement

D.2.1 On 9 March 2023, a Written Ministerial Statement was made by the Secretary of State for Transport. This statement made reference to the Lower Thames Crossing: ‘*To date we have spent over £800 million on planning the Lower Thames Crossing. It is one of the largest planning applications ever, and it is important we get this right. We remain committed to the Lower Thames Crossing, and the development consent order process will be an important*

opportunity to consult further to ensure there is an effective and deliverable plan. In order to allow time for this process and given wider pressures on [Road Investment Strategy] RIS, we will look to rephase construction by two years.'

Summary of engagement and consultation

D.2.2 On 21 March 2023, the Examining Authority asked about the implications of the Ministerial Statement on the Project and the DCO application in their Procedural Decision [[PD-11](#)]. National Highways provided a response to this [[AS-086](#)] on 30 March 2023, which set out the Applicant's position.

D.2.3 The matter was further discussed in ISH 1 as set out above. It was agreed during ISH1 that further information would be provided in writing by the Applicant; with the requirement set out as Action Point 1. This Appendix provides the response to that Action Point.

The Applicant's position

D.2.4 The Applicant's position is as set out in the response on 30 March 2023 [[AS-086](#)] and maintained in subsequent communications. This is as follows:

- a. The Application documents are based on a proposed construction programme and an indicative opening year, summarised in 6.1 Environmental Statement Chapter 2 – Project Description [[APP-140](#)].
'2.5.39 Following the DCO Grant there would be preparatory works, referred to in the draft DCO (Application Document 3.1) as preliminary works taking place in 2024. The main construction period for the Project would start in early 2025, with the road being open for traffic in late 2030.'
- b. The Application documents make clear that *'as with all large projects there is a level of uncertainty over the construction programme, which will be refined once contractors are appointed'*. It is then made clear that *'The 2030 opening year has been selected as the basis for the assessments and is representative of the reasonable worst-case scenario'*.
- c. The Transport Assessment [[REP4-148](#) to [REP4-152](#) and [APP-530](#) to [APP-538](#)] and Environmental Statement [[APP-138](#) to [APP-486](#) (as updated and reported in the Environmental Statement Addendum (as updated for version 2 and submitted at Deadline 2))] provide conclusions that remain robust for the purpose of making a decision on the Project. The Applicant considers that, in line with other DCO applications, the draft DCO permits a period of five years to begin development. Accordingly, the application accommodates a proportionate degree for flexibility around the timing of construction, which would allow for the two-year rephasing. The level of flexibility sought here is no different to the level of flexibility contained in many other, if not all, DCO applications.
- d. No change is required to the draft DCO or other application documents.

D.3 Scenario for assessment

- D.3.1 The proposed rephasing of construction referenced in the Ministerial Statement leads to movement in the indicative start of construction and the ‘open for traffic’ date by two years from 2025 to 2027 and 2030 to 2032 respectively. Preliminary works would start in 2026 instead of 2024. The scenario that is assessed for this Appendix has assumed that there is no funding available for earlier works, and there are no changes to the phasing of works within the construction programme. The construction programme and the assumed durations for individual works elements would remain as outlined in Environmental Statement - Chapter 2 - Project Description [APP-140], but delayed by two whole years. The construction methodology assumed in this scenario is as described in Environmental Statement - Chapter 2 - Project Description [APP-140] and does not take account of the alternative tunnel construction methodology, as discussed in Appendix C of the Environmental Statement Addendum.
- D.3.2 There is no current plan to bring forward any individual works into the two years between 2024 and 2026, and this has not been included in the assessment presented in this Appendix.
- D.3.3 The proposed two year delay to the start of construction would be used to develop detailed designs, prepare construction plans, and discharge the post-consent approvals required as set out in the draft DCO. This would ensure that when works start, they are well planned and can be delivered as quickly and efficiently as possible. As suggested in the Ministerial Statement, this time would be used to allow for further stakeholder engagement to prepare the most effective and deliverable plan for construction of the Project. The assessment of this scenario reflects the reasonable worst-case resulting from the two year change to the construction dates, and does not take into account any opportunities that may arise from detailed design and planning of the revised construction programme.
- D.3.4 There are external factors that would affect the forecasts and projections related to the construction phase and opening year, as set out below. The assessments presented in Section D.4 of this Appendix take these into account where appropriate.
- a. Two years of additional growth in the population and associated traffic levels
 - b. Changes in the vehicle fleet, with an increase in the proportion of the electric fleet
 - c. The timing of the construction and operation of the Project alongside that of other developments

- D.3.5 To allow a 'like for like' comparison of likely significant effects associated with the proposed two-year rephasing communicated in the Ministerial Statement, the scenario that has been assessed is based on the same underlying baseline data that was presented in the ES and which remains valid for the purposes of this assessment.

Traffic modelling and forecasts

- D.3.6 The environmental assessments presented in the DCO application make use of traffic data derived from the Project transport modelling. This modelling identified assessment years for construction (2030) and operation (opening year 2030 and design year 2045). The consequences from a two year delay to the start of construction and a revision to the opening year on the traffic modelling and the environmental assessment of effects related to traffic are considered below.

Construction phase

- D.3.7 The assessment of construction effects has used a representative scenario from the construction modelling using outputs from the Project's transport model. This provides an extensive quantitative assessment of the forecast impact of construction works on the road network, using the same traffic baseline and forecasting work that informs the operational modelling.
- D.3.8 The construction modelling assessment used the 2030 Do minimum (i.e. without the Project) trip demand as the base year for the background (i.e. non-construction) trips. With construction expected to run from 2025 to 2030, this essentially overestimated the amount of traffic in the model for the years 2025 to 2029. The net effect therefore was that the construction modelling assessment reflected a worst-case position and assumed higher levels of traffic during the construction phase than is likely to be the case.
- D.3.9 This scenario assumes that the construction phase would run from 2027 to 2032, which would mean existing flows on the network would likely increase as a result of year on year traffic growth. Continuing to use the existing construction modelling assessment (based on 2030 levels of demand) to represent the impacts under the revised programme, assumes that years 2027 to 2029 would continue to have overestimated levels of traffic, but years 2031 and 2032 would have underestimated levels. The net effect is that the assessments of this scenario, which reflect the construction period as a whole, rather than by individual year, would be based on an overestimate of the amount of traffic, but to a lesser degree.

Operation

- D.3.10 The operational phase transport modelling has forecast a Do Minimum (without the Project) (DM) scenario, where the Project is not built but where changes to the road network and planned development that is forecast to go ahead (whether the Project is built or not) are included. The transport model also predicts the use of both the Project and other parts of the road network if the Project is built (the Do Something (DS) scenario). The transport model predicted traffic conditions on the road network in 2030; the Project's opening year and 2045; the Project's design year which is 15 years after opening.
- D.3.11 As explained in 7.7 Combined Modelling and Appraisal Report [[APP-518](#)] forecasts of traffic conditions in the future were prepared for 2030 and 2045. The level of traffic growth for cars in the future was taken from the Department for Transport National Trip End Model (NTEM), known as the TEMPro 7.2 forecasts.
- D.3.12 The TEMPro 7.2 forecasts for traffic growth for the revised opening year and design year have been identified. The effect of delaying road opening by two years is to add approximately 1.4% to 2.6% (depending on location) extra traffic growth to 2032, compared with growth to 2030. The actual traffic in 2032 is, of course, the same. Growth to 2047, compared with growth to 2045 adds an extra 1.1% to 2.3%. In either scenario, however, the Project would be operating with the same levels of traffic in 2045 and 2047.
- D.3.13 Table D.1 below details the growth levels, based on TEMPro/NTEM v7.2.

Table D.1 Changes to forecast traffic growth from two-year rephasing

	NTEM 7.2 2016 - 2030 growth	NTEM 7.2 2016 - 2032 growth	Difference	NTEM 7.2 2016 - 2045 growth	NTEM 7.2 2016 - 2047 growth	Difference
Basildon	12.2%	13.6%	1.4%	22.8%	24.2%	1.4%
Brentwood	9.5%	10.7%	1.2%	18.1%	19.2%	1.1%
Thurrock	21.1%	23.7%	2.6%	39.2%	41.6%	2.3%
Havering	16.5%	18.6%	2.1%	30.7%	32.4%	1.7%
Dartford	18.0%	20.3%	2.2%	33.1%	35.0%	1.8%
Gravesham	15.7%	17.6%	1.9%	28.4%	30.0%	1.6%
Maidstone	15.5%	17.3%	1.8%	27.9%	29.4%	1.6%
Medway	14.4%	16.0%	1.6%	25.9%	27.4%	1.5%
Sevenoaks	9.1%	10.3%	1.1%	17.4%	18.5%	1.1%
Tonbridge and Malling	14.1%	15.9%	1.7%	26.4%	27.9%	1.5%

Assumptions and limitations

- D.3.14 The scenario described above has been considered in the assessment of the effects from the delay to the start of construction and the revised opening year. These assessments have used the information outlined above related to traffic data, but modelling has not been completed to inform the conclusion of the traffic based assessment. Qualitative assessment based on professional judgement has been used to inform the conclusions set out in Section D.4 of this Appendix.
- D.3.15 There are potential opportunities that could arise as a consequence of the delay to start of construction. These opportunities relate to the additional time available to develop detailed designs, engage with stakeholders and prepare construction plans. These activities may result in opportunities to establish various environmental enhancement and mitigation measures that may reduce impacts on communities and the surrounding environment, or to further develop the design of mitigation measures. These opportunities have not been included in the assessments of the revised scenario, so that the appraisal reflects a revised worst-case scenario.

D.4 Assessment of environmental effects

- D.4.1 An appraisal has been undertaken of the potential for the two year delay scenario (as described in Section C.3 of this Appendix), to change the environmental effects reported in the ES, as submitted with the DCO application. This appraisal has considered the potential for changes experienced by receptors within each environmental discipline; with the conclusions summarised in Table D.2 below.
- D.4.2 The first assessment column in the table identifies the influence that the construction dates and opening year and design year dates have on the assessments presented in the ES. The second assessment column identifies the implications for the assessment conclusions from the changes to the dates.

Table D.2 Environmental assessment of the two-year rephasing

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
Air quality – construction	The air quality assessment presented in 6.1 Environmental Statement - Chapter 5 - Air Quality [APP-143] used outputs from the traffic modelling. The construction traffic modelling presented in the DCO application assumes construction takes place between 2025 and 2030. The base year for background traffic levels used in the construction traffic modelling is 2030 which reflects a reasonable worst-case.	The construction traffic model reflects one scenario allowing for a suitable assessment of the construction impacts. The peak impact on traffic flows from construction related traffic movements would still occur prior to 2030, and the slight increase in baseline traffic in the later stages of the delivery programme would not lead to significant changes in traffic impacts. Therefore, the assessment continues to reflect a reasonable scenario. This would not be expected to result in a material change in the significance of air quality effects reported for the construction phase in the ES.
Air quality – operation human health effects	The operational air quality assessment presented in 6.1 Environmental Statement - Chapter 5 - Air Quality [APP-143] is based on the traffic modelling assuming the opening year is 2030.	Defra have advised that the Emission Factor Toolkit (EFT) v11 used in the assessment presented in the application documents should not be used to generate emission factors post 2030 for local air quality assessments. The current advice from Defra is that the emission factors for between 2031 and 2050 have been provided to support climate assessments and appraisals only. In addition, the latest year available for the background air quality maps, nitrogen oxides (NO _x) sector removal tool and the NO _x to nitrogen dioxide (NO ₂) calculator is 2030. It is however expected that NO _x and Particulate Matter smaller than 10 micrometers (PM ₁₀) per vehicle emissions would be lower in 2032 compared to 2030, as a higher proportion of the national vehicle fleet would be comprised of electric vehicles and vehicles which meet Euro 6/VI emissions standards. This would result in lower air quality impacts than presented in the air quality assessment if it were assumed that there was no change to traffic flows between 2030 and 2032. The effect of delaying road opening by two years is to add approximately 1.4% to 2.6% (depending on location) extra traffic growth to 2032 compared with growth to 2030. This is not expected to result in a material change to the significance of operational air quality effects for human health reported in the ES.

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
Air quality – operation ecological effects	<p>The operational air quality assessment presented in 6.1 Environmental Statement - Chapter 5 - Air Quality [APP-143] is based on the traffic modelling assuming the opening year is 2030.</p>	<p>As described directly above for air quality operation human health effects, the latest NO_x vehicle emission factors available in EFT are for 2030. NO_x emission factors are however expected to be lower in 2032 compared to 2030, and so it is likely that changes in nitrogen deposition would be lower than reported in the air quality assessment given that NO_x is also used to calculate the ammonia (NH₃) contribution to nitrogen deposition (assuming no change to traffic flows between 2030 and 2032).</p> <p>The effect of delaying road opening by two years is to add approximately 1.4% to 2.6% (depending on location) extra traffic growth to 2032 compared with growth to 2030, and this is not expected to result in a material change to the significance of operational air quality effects for ecology reported in the ES.</p>
Cultural Heritage – construction	<p>The cultural heritage baseline, collected from desk-based sources and fieldwork, has been collected at various times during the Project development, between 2017 and 2021. Future baseline is also considered in 6.1 Environmental Statement - Chapter 6 - Cultural Heritage [REP4-116], with the conclusion that little change in baseline is expected without the Project.</p> <p>Aspects of the cultural heritage assessment are based on the noise assessment, which uses traffic data and the date related assumptions as set out in the noise rows of this table.</p>	<p>The revised dates for construction do not impact the cultural heritage baseline used for assessment and consequently this is not expected to result in a material change to the significance of construction related cultural heritage effects reported in the ES.</p> <p>Change in the off-site construction traffic noise assessment could affect assessment of impact through change to setting, for certain heritage assets. However, as set out below in relation to noise effects during construction, it is not anticipated that this would result in materially different effects to those reported in the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
Cultural Heritage – operation	<p>The cultural heritage baseline, collected from desk-based sources and fieldwork, has been collected at various times during the Project development, between 2017 and 2021. Future baseline is also considered in 6.1 Environmental Statement - Chapter 6 - Cultural Heritage [REP4-116], with the conclusion that little change in baseline is expected without the Project.</p> <p>Aspects of the cultural heritage assessment are based on the noise assessment, which uses traffic data and the date related assumptions as set out in the noise rows of this table.</p>	<p>The revised opening year does not impact the cultural heritage baseline used for assessment and consequently this is not expected to result in a material change to the significance of operational phase cultural heritage effects reported in the ES.</p> <p>Change in the operational traffic noise assessment could affect assessment of impact through change to setting, for certain heritage assets. However, as set out below in relation to noise effects during operation, it is not anticipated that this would result in materially different effects to those reported in the ES.</p>
Landscape and visual – construction	<p>Landscape and visual baseline field surveys have been undertaken at multiple stages of the Project development from 2017 until summer 2022. 6.1 Environmental Statement - Chapter 7 - Landscape and Visual [Document Reference 6.1 ES Chapter 7 (2)] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project.</p>	<p>There could be small changes in the landscape and visual future baseline as a result of the delay to the start of construction, for example, the introduction of new features into views or new visual receptors. However, given the relatively short delay, it is not anticipated that there would be notable changes in the landscape and visual baseline.</p> <p>For the main landscape and visual impact assessment, there would therefore be no implications from the delay to the start of construction because, with the exception of Appendix 7.11 (see below), the assessment in Chapter 7 - Landscape and Visual [Document Reference 6.1 ES Chapter 7 (2)] considers the effects of the Project on the baseline landscape and visual receptors which are not anticipated to change notably in two years.</p> <p>For Appendix 7.11 the assessment of construction effects is based on traffic modelling for the construction phase, which uses a 2030 base year. The 2030 base year previously represented a worst-case for background traffic levels and with the</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	<p>Appendix 7.11 Traffic and Noise Effects on the Kent Downs Area of Outstanding Natural Beauty, used outputs from the traffic modelling. The construction traffic modelling presented in the DCO application assumes construction takes place between 2025 and 2030. The base year for background traffic levels used in the construction traffic modelling is 2030 which reflects a reasonable worst-case.</p> <p>The assessments presented in the ES have assumed that the main construction period would start in early 2025, and be complete in late 2030.</p>	<p>change to construction dates represents a mid-point during the construction period. This is still considered to reflect a robust assessment scenario and the assessments presented in Appendix 7.11 remain valid.</p> <p>It is not therefore expected that there would be a material change in the significance of construction landscape and visual effects reported in the ES.</p>
Landscape and visual – operation	<p>Landscape and visual baseline field surveys have been undertaken at multiple stages of the Project development from 2017 until summer 2022. 6.1 Environmental Statement - Chapter 7 - Landscape and Visual [Document Reference 6.1 ES Chapter 7 (2)] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project.</p>	<p>Landscape and visual effects are assessed in the opening year (2030) and 15 years after opening in the design year (2045). Moving the opening year and design year back by two years would not change the current assessment, as limited change is anticipated in the landscape and visual baseline from the delay to road opening.</p> <p>However, for Appendix 7.11 the assessment of operation effects is based on traffic modelling for specific years in 2030 and 2045 which forecasts lower levels of baseline traffic than for the revised 2032 and 2047 dates. The assessment of traffic and noise impacts require a comparison between the DM and DS scenarios, therefore the effect of the two year delay to opening year would apply equally to both scenarios. It is anticipated that the magnitude of change between these scenarios would remain constant meaning it is unlikely to materially change the conclusions of the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	<p>For Appendix 7.11 Traffic and Noise Effects on the Kent Downs Area of Outstanding Natural Beauty, the Project’s transport model has a base year of 2016. This is reported within the Combined Modelling and Appraisal Report - Appendix B - the Transport Model Package (Para 3.1.1 of Application Document 7.7).</p> <p>The assessments presented in the ES have assumed that that the road would be open for traffic in late 2030.</p>	<p>It is not therefore expected that there would be a material change in the significance of construction landscape and visual effects reported in the ES.</p>
<p>Terrestrial biodiversity – construction</p>	<p>The terrestrial biodiversity baseline was established through data collection and field surveys that were undertaken at multiple stages of the Project development from spring 2017 until summer 2022. 6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [Document Reference 6.1 ES Chapter 8 (2)] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project.</p> <p>Aspects of the terrestrial biodiversity assessment are</p>	<p>The baseline used in the terrestrial biodiversity assessment represents a precautionary position on the designated and non-designated sites, the habitats present, and the species that are known to be present within suitable habitats as well as the quality of those habitats.</p> <p>Pre-construction surveys for species, particularly European protected species, would be carried out prior to any construction works to establish a baseline for the submission of a Natural England development species licence, and this would allow for a detailed mitigation strategy to be developed prior to construction. This is detailed in 3.1 Draft Development Consent Order (Version 3.0) (Clean and Tracked) [REP1-042] and [REP1-043] and supported by REAC commitment TB015 in 6.3 Environmental Statement - Appendix 2.2 - Code of Construction Practice, First Iteration of Environmental Management Plan (Version 2.0) (Tracked and Clean) [REP1-156] and [REP1-157].</p> <p>As such, the two-year delay would have minimal change on the baseline of the site, and therefore would likely have no material change to the significance of effects on terrestrial biodiversity receptors as reported in the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	<p>based on the air quality and noise assessments, which use traffic data and the date related assumptions as set out in the air quality and noise rows of this table.</p>	
<p>Terrestrial biodiversity – operation</p>	<p>The terrestrial biodiversity baseline was established through data collection and field surveys that were undertaken at multiple stages of the Project development from spring 2017 until summer 2022. 6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [Document Reference 6.1 ES Chapter 8 (2)] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project.</p> <p>Elements of the terrestrial biodiversity assessment are based on the assessment of effects for air quality and noise. The date-related assumptions set out for those topics, such as those related to traffic data, apply to the information used in the terrestrial biodiversity assessment.</p>	<p>The implications of the two year delay to road opening on the air quality ecological effects are set out in the air quality rows of this table (above).</p> <p>It is anticipated that noise related effects on ecological receptors as a result of the change to opening year would be minimal for the reasons set out below which describe the operational noise related implication of the change to the opening year.</p> <p>As detailed above, the terrestrial biodiversity baseline is not likely to considerably change with the two-year delay to road opening, however further surveys are planned to establish the protected species present prior to any construction works. It is not anticipated that any change in baseline would have implications for operation effects. Overall, it is considered unlikely that there would be material change to the significance of terrestrial biodiversity effects presented in the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
Marine Biodiversity – construction	<p>The marine biodiversity baseline was established through third party data collection and field surveys that were undertaken at multiple stages of the Project development from 2017 until summer 2022. 6.1 Environmental Statement - Chapter 9 - Marine Biodiversity [APP-147] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project.</p>	<p>Baseline conditions of benthic communities in the Thames estuary are known to be relatively stable, and it is assumed that there are no drivers that would result in any significant change to species distribution or density. Given that there would be limited change to the baseline over the timescale of the two year delay to the start of construction, it is not anticipated that there would be a material change to the conclusions presented in the ES.</p>
Marine biodiversity – operation	<p>The marine biodiversity baseline was established through third party data collection and field surveys that were undertaken at multiple stages of the Project development from 2017 until summer 2022. 6.1 Environmental Statement - Chapter 9 - Marine Biodiversity [APP-147] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project. Elements of the marine biodiversity assessment are based on assessment of noise effects. The date-related assumptions set out for the noise assessment, apply to the</p>	<p>Underwater noise from traffic using the tunnels was identified as a potential pathway for effects on marine biodiversity receptors. The assessment concluded that there would not be significant effects on marine biodiversity receptors. The proposed change to the opening year and consequent change to traffic flows would not significantly change the conclusions of the assessment in the DCO application for the reasons set out below which describe the operational noise related implication of the change to the opening year.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	information used in the marine biodiversity assessment.	
Geology and soil – construction	<p>The geology and soils baseline was established through third party data collection and field surveys that were undertaken at multiple stages of the Project development from 2017 until summer 2022. The geology and soils assessment presented in 6.1 Environmental Statement - Chapter 10 - Geology and Soils [APP-148] is based on preliminary works starting in 2024, the main construction activities starting in 2025 and ending in 2030.</p>	<p>The extended time from the baseline used to undertake the assessment on land quality may lead to some uncertainties in the land contamination status at the commencement of construction. For example new sources of contamination arise or deteriorating ground conditions, albeit this is considered a low risk considering the timeframe and not considered to significantly change the conclusions of the DCO application assessment. To address this risk a number of measures are identified in Appendix 2.2 - Code of Construction Practice, First Iteration of Environmental Management Plan (Version 2.0) (Tracked and Clean) [REP1-156 and REP1-157], to manage potential areas of contamination including REAC references GS001, GS002, GS026, GS016, GS027 and GS028.</p> <p>The baseline data used for the assessment of effects on soils remains valid as assessments of effects on agricultural land are based on soil physical properties and these are unlikely to change materially in this timeframe. Poor land management could increase compaction/reduce drainage, but in this timeframe these would be reversible.</p> <p>REAC commitment GS010 in 6.3 Environmental Statement - Appendix 2.2 - Code of Construction Practice, First Iteration of Environmental Management Plan (Version 2.0) (Tracked and Clean) [REP1-156 and REP1-157] sets out proposals for detailed pre-construction soil surveys to be carried out. These surveys would ensure the information is available to support the development of a Soil Management Plan (SMP). This would not change the assessment outcome but would ensure a more robust and complete SMP can be developed prior to construction to ensure the most sustainable handling of soils throughout the construction phase.</p> <p>It is not anticipated that there would be a material change to the significance of construction effects for geology and soils reported in the ES.</p>
Geology and soil – operation	No date related assumptions are used within the operation phase assessment presented in 6.1 Environmental Statement -	There are no anticipated implications arising from the change of opening year. The operational phase assessment for geology and soils receptors is not dependent on the opening year.

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	Chapter 10 - Geology and Soils [APP-148].	Impacts to soils are predominantly realised during the construction phase, therefore, a change in opening year would not introduce new effects. It is not anticipated that there would be a material change to the significance of operational effects on geology and soils reported in the ES.
Material assets and waste – construction	<p>The material assets and waste baseline was established through data collection and was undertaken at multiple stages of the Project development from 2017 until summer 2022. Based on the data available for landfill capacity, the assessment presented in 6.1 Environmental Statement - Chapter 11 - Material Assets and Waste [Document Reference 6.1 ES Chapter 11 (2)] used a future baseline year of 2025.</p> <p>The assessment on material assets is not influenced by construction start and end dates.</p>	<p>Table 11.8 of ES Chapter 11 Material Assets and Waste [Document Reference 6.1 ES Chapter 11 (2)] presents the future baseline for landfill capacity between 2020 and 2030. The waste assessment selected 2025 as the future baseline year as this represented the worst-case scenario in terms of available landfill capacity within the study during the construction phase. A two year change to the start of the construction phase would result in the 2025 future baseline year used in the assessments presented in the DCO application becoming an underestimate of available landfill capacity in the study area. This would have no implications to the reporting of significance of effects on waste receptors reported in Chapter 11 as this continues to reflect a reasonable worst-case. The difference in future baseline capacity is not large enough to change the reported significance, whilst Project waste forecasts would remain in line with those presented in the DCO application.</p> <p>There would be no change in material demand for the Project and the assessment of material assets is not time sensitive, therefore there would be no material change to the significance of effects reported in the ES.</p> <p>It is not anticipated that there would be a material change to the significance of construction effects for material assets and waste reported in the ES.</p>
Material assets and waste – operation	The first 12 months of operation was used as a representative year for forecasting material demand and waste generation. This was irrespective of the date of the opening year.	<p>There are no implications for the change of opening date to the operational assessment of material assets and waste. DMRB LA 110 Material assets and waste (Highways England, 2019) specifies that the environmental assessment should report on the first 12 months of operation to forecast material demand and waste generation. This is not specific to any one year. The change to opening year would not result in a change to the forecast of material demand or waste generation.</p> <p>It is not anticipated that there would be a material change to the significance of operational effects for material assets and waste reported in the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
Noise and vibration – construction	<p>Off site construction traffic noise: The off site (existing road) construction traffic assessment is based upon traffic data for years 2025 to 2030. The construction traffic noise assessment used outputs from the traffic modelling. The construction traffic modelling presented in the DCO application assumes construction takes place between 2025 and 2030. The base year for background traffic levels used in the construction traffic modelling is 2030 which reflects a reasonable worst-case.</p> <p>On site construction noise and vibration: The assessment of noise and vibration effects of site based construction activities (all activities other than construction traffic) is not specifically linked to any base date.</p>	<p>Off site construction traffic noise: A change in construction period to 2027 until 2032, would mean existing flows on the network would likely increase as a result of year on year traffic growth, however the construction generated traffic would remain consistent with that reported previously. As the construction traffic dataset is derived from the 2030 base year, this represents a mid-point during the construction period and is therefore still considered to reflect a robust assessment scenario. The delay to the construction programme is unlikely to materially change the conclusions of the noise assessment.</p> <p>On site construction noise and vibration: As the construction programme is assumed to be moved by two years with no changes to programme and phasing of individual work elements it is not anticipated that there would be significant changes to the noise and vibration effects reported in the DCO application.</p>
Noise and vibration – operation	<p>The noise assessment is based upon an opening year of 2030 and a future assessment year of 2045. This is based on the Project’s transport modelling for these years which provides the traffic data supporting the operational road traffic noise. Other elements of the operational assessment; tunnel ventilation</p>	<p>The change in opening year from 2030 to 2032, means that the operational road traffic noise assessment reflects a baseline of lower traffic levels. The assessment of noise impact requires a comparison between the DM and DS scenarios, therefore the effect of the two year delay to opening year would apply equally to both scenarios. It is anticipated that the magnitude of change between these scenarios would remain constant meaning it is unlikely to materially change the conclusions of the ES.</p> <p>There would be no change to assessment conclusions for other elements of the operational assessment as these are not date related.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	and overhead lines are not related to a specific assessment year.	
Population and human health – construction	<p>Baseline data was collected for the assessment from 2017 until summer 2022. 6.1 Environmental Statement - Chapter 13 – Population and Human Health [APP-151] also considers future baseline i.e. anticipated changes to the existing baseline over time in the absence of the Project. Elements of the population and human health assessment are based on assessment of effects for air quality and noise. The date-related assumptions set out for those topics, such as those related to traffic data, also apply to the information used in the population and human health assessment.</p>	<p>The construction traffic forecasts transition from the worst-case, where baseline traffic levels reflect the final year of construction to a case where baseline traffic forecasts reflects a period in the middle of the construction programme. As set out in the rows in this table for air quality and noise during construction, it is not anticipated that this would result in materially different effects to those reported in the ES and the assessment continues to reflect a robust assessment scenario. There would be no additional impacts to those already reported in the ES in relation to the acquisition of land and associated impacts on community land and assets, agricultural landholdings or on development land and businesses. Delay of the Project for a further two years may have an adverse effect on the mental wellbeing of vulnerable populations in terms of ongoing anxiety and uncertainty; however this is balanced by potential job creation and skills development resulting from enabling works that would take place. This does not change what was reported in the assessment submitted as part of the DCO application, as uncertainty over construction dates was considered as part of the assessment. Overall, it is not anticipated that there would be a material change to the population and human health effects reported in the ES.</p>
Population and human health – operation	<p>6.1 Environmental Statement - Chapter 13 – Population and Human Health [APP-151] assumes preliminary works starting in 2024, the main construction activities starting in 2025 and ending in 2030 with the operational phase starting in 2030 (full year modelled).</p>	<p>Findings from the air quality and noise assessments indicate that the two year delay would not materially change the significance of operational effects to those reported in the ES. As identified in the relevant rows of this table, there would not be any additional implications to those reported in the ES in relation to other topics that form part of the population and human health assessment. Overall, it is not anticipated that there would be a material change to the population and human health effects reported in the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	<p>As for the construction phase, elements of the population and human health assessment are based on assessment of effects for air quality and noise effects. The date-related assumptions set out for those topics, such as those related to traffic data, also apply to the information used in the population and human health assessment.</p>	
<p>Road drainage and the water environment – construction</p>	<p>The construction phase assessments presented in 6.1 Environmental Statement - Chapter 14 - Road Drainage and the Water Environment [APP-152] and the modelling work which supports this are not dependent on date related assumptions. The Project is committed to monitoring groundwater levels at key locations during the pre-construction period, as set out in the REAC within 6.3 Environmental Statement - Appendix 2.2 - Code of Construction Practice, First Iteration of Environmental Management Plan (Version 2.0) (Tracked and Clean) [REP1-156 and REP1-157]. This monitoring would inform the detailed design.</p>	<p>The road drainage and water environment assessment of construction phase effects is not sensitive to a change to the construction years (2027 – 2032), and there would be no material change to the road drainage and water environment effects reported in the ES.</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
Road drainage and the water environment – operation	<p>The surface and groundwater drainage pollution risk assessments presented in 6.1 Environmental Statement - Chapter 14 - Road Drainage and the Water Environment [APP-152] use traffic modelling data for the design year of 2045 (opening year plus 15) in line with DMRB guidance.</p> <p>The Flood Risk Assessment 6.3 Environmental Statement - Appendix 14.6 - Flood Risk Assessment – Parts 1 to 10 [APP-460 to APP-464, REP1-171, APP-466 to APP-468 and REP7-130(referenced in order of Parts)] is based on an opening year of 2030, with climate change allowances applied over the Project’s 100yr lifetime from this date i.e. to 2130.</p>	<p>It is not anticipated that the extra traffic growth in the opening year (and therefore the design year) would change the conclusions of the pollution risks assessment presented in the ES, or warrant any new recommendations with regards to treatment measures.</p> <p>The extension in the road opening date to the end of 2032 would add a very small additional increment to the climate change allowances applied to fluvial and tidal flood levels assessed in the Flood Risk Assessment [APP-460 to APP-464, REP1-171, APP-466 to APP-468 and REP7-130 (referenced in order of Parts)]. However, given the resilience and freeboard built into the design (e.g. flood protection of the north portal, provision for flood compensation), it is not considered that this small increment would have any significant implications.</p> <p>The Project design embeds robust measures for providing treatment of road drainage and for flood protection and mitigation. The road drainage and water environment assessment of operational phase effects is therefore considered to have low sensitivity to a change to the construction years (2027 – 2032) and subsequent operational design year and lifetime. Overall, it is not anticipated that there would be a material change in the significance of road drainage and water environment effects reported for the construction phase in the ES.</p>
Climate / Greenhouse gas (GHG) emissions – construction & operation	<p>The assessment presented in 6.1 Environmental Statement - Chapter 15 – Climate [APP-153] assumes that construction starts in 2025 (2024 for preliminary works) and ends in 2030.</p> <p>It is assumed that the operation phase starts in 2030 (full year modelled).</p>	<p>In ES Chapter 15 [APP-153], an assessment of the Project’s GHG emissions is undertaken against the UK Government’s five-year carbon budgets, as required by the National Policy Statement for National Networks. A two-year delay of the start of the construction period would lead to a decrease in the Project’s GHG emissions in the fourth (2023-2027) carbon budget and an increase in the proportion of the Project’s emissions in the fifth (2028-2032) carbon budget. The two-year re-phase would also result in the removal of two-years of operational phase emissions, which includes emissions from road users, maintenance and repair, from the fifth carbon budget. This would lead to a change in the percentage contribution to these carbon budgets compared to those presented in Table 15.17 of Chapter 15 of the</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
		<p>ES [APP-153], which is also presented in Table D1.1 of Annex D1 to allow comparison. The Project’s contribution to the sixth carbon budget would not change and overall the Project’s total emissions would not change.</p> <p>In relation to road user GHG emissions, three scenarios were presented in Table 15.17 of the ES to give a range of credible outcomes for the impact assessment. These are described in full in paragraphs 15.3.37-15.3.41 of ES Chapter 15 [APP-153] and include a conservative scenario using the current Transport Appraisal Guidance (TAG) and Emission Factor Toolkit (EFT) v11 and two further scenarios which present an upper and lower bound of the Transport Decarbonisation Plan (TDP) (DfT, 2021) implementation and its likely impact on vehicle emissions.</p> <p>Based on a construction period (including preliminary works) from 2026-2032 and using the forecast emissions profile (which is in line with the spend profile for the Project), re-phasing the construction by two years would result in the movement of approximately 710,000 tCO₂e construction phase emissions from the fourth carbon budget period (2023 to 2027) to the fifth carbon budget period (2028 to 2032).</p> <p>Under the TAG EFTv11 scenario, the change of opening year to 2032 would also lead to the removal of approximately 190,000 tCO₂e from the fifth carbon budget, which is equal to the estimated operational phase emissions for 2030 and 2031 presented in ES Chapter 15 [APP-153]. The net difference in GHG emissions in the fifth carbon budget, based on the two-year re-phase, is approximately 515,000 tCO₂e. The results of this change are presented in Table D1.2 (Annex D1), including the two TDP scenarios.</p> <p>Under the more conservative TAG EFTv11 scenario, the Project’s contribution to the fifth carbon budget would increase by 0.03% from 0.053% to approximately 0.082%. Consequently, there would be a corresponding reduction in the Project’s contribution to the fourth carbon budget which would reduce from 0.058% to around 0.023%.</p> <p>Table D1.2 (Annex D1) shows that the two TDP scenarios would result in a reduced contribution in the fifth carbon budget when compared to the TAG EFTv11 derived calculation. The contribution would reduce to 0.081% for the upper bound</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
		<p>and 0.080% for the lower bound. In line with Table D1.1 (Annex D1), the benefits of the TDP upper and lower bound are greater during the sixth carbon budget.</p> <p>It should be noted that the two-year delay to the start of construction also provides further opportunities for additional reductions in emissions. The industry leading framework for carbon management and continuous improvement set out in the Carbon and Energy Management Plan [Document Reference 7.19 (4)] and secured through the 22 carbon commitments presented in Appendix E of the Carbon and Energy Management Plan provides a strong mechanism for driving and learning from evolving best practice, delivering emissions savings throughout detailed design and construction.</p> <p>Overall, it is not anticipated that there would be a material change in the significance of effects on climate / GHG emissions as reported in the ES as a result of the two-year rephasing of construction.</p>
Climate / resilience – construction & operation	<p>The assessment presented in 6.1 Environmental Statement - Chapter 15 – Climate [APP-153] assumes that construction starts in 2025 (2024 for preliminary works) and ends in 2030. It is assumed that the operation phase starts in 2030 (full year modelled).</p>	<p>The delay in the start of the construction of the Project would not change the assessment or the outcome of the assessment. The extension in the road opening date to the end of 2032 would add a very small additional increment to the climate change allowances applied to fluvial and tidal flood levels assessed in the Flood Risk Assessment. However, given the resilience and freeboard built into the design (e.g. flood protection of the north portal, provision for flood compensation), it is not considered that this small increment would have any significant implications.</p> <p>The assessment of the Project’s vulnerability to climate change for the operation phase has been based on a reasonable worst-case using the latest upper projections (RCP8.5) from UKCP18. ES Chapter 15 [APP-153] and ES Appendix 15.3 [APP-482] demonstrates that the Project design is resilient to future climate change.</p> <p>Overall, it is not anticipated that there would be a material change in the significance of effects on climate and resilience as reported in the ES.</p>
Cumulative Effects Assessment – construction and operation	<p>The assessments presented in 6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154] assume start of construction in 2025 with</p>	<p>Inter-project effects</p> <p>Some of the developments that have been included in the inter-project effects assessment would have completed their construction phase prior to the revised start date for construction of the Project. The assessment of overlapping</p>

Environmental topic	Date related influences on environmental assessments	Implications of the change to construction start date and revised opening year
	<p>completion of construction and road opening in 2030.</p> <p>Further date related assumptions for individual topics feeding into the cumulative assessment are as set out above.</p>	<p>construction phases would still represent an assessment of the reasonable worst-case.</p> <p>A two year delay to the start of construction would mean that additional developments within the inter-project effects search area are likely to come forward, and additional and more detailed information may be made available for those already identified. Local Plans that are currently in development may also be finalised, with the associated site allocation information made available. This may result in additional cumulative inter-project effects; however it is only possible to identify these effects where there is available information on these developments. An update to the assessment of inter-project effects from new and updated developments up until a revised cut-off date of the end of February 2023 has been undertaken and was reported in Appendix B of 9.8 ES Addendum [REP1-181]. The environmental effects identified in Appendix B are not a direct consequence of the effects of the two-year delay, but as a result of newly available information. It should be noted that developments that were not considered in the cumulative inter-project effects assessment presented in the DCO application because they were not known about, or where only limited information was available, would be required to consider the Project as part of their own cumulative inter-project effects assessment.</p> <p>Intra-project effects</p> <p>As reported in the rows above, no material changes to the assessment conclusions for the environmental topic chapters have been identified. It is therefore not anticipated that there would be material change to the assessments reported in 6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154].</p> <p>The intra-project effects assessment of effects on people is based primarily on the information from the air quality, visual, noise and population and human health assessments. Implications from the change in construction dates and opening year on the conclusions of these assessment could have resulting impacts on the conclusions of the intra-project effects assessment, however no material change has been identified for any of these topics. It is therefore anticipated that there would be no material change to the conclusions of the intra-project effects assessment presented in ES Chapter 16.</p>

- D.4.3 In conclusion, the appraisal has confirmed the Applicant’s position that the ES as submitted, reflects a worst-case scenario and accommodates a proportionate degree for flexibility around the timing of construction, which would allow for the two-year rephasing of construction. The Applicant considers that the ES provides conclusions that remain robust for the purpose of making a decision on the Project, despite a change to the dates for construction and opening of the road to traffic.

D.5 In combination effects with the Thames Freeport development

- D.5.1 Action Point 1 from ISH1 [\[EV-023a\]](#) on 21 June 2023 related to the two-year rephasing included the following requirement: “... *This should include consideration of the time sequence for and outcome of committed elements of Freeport development which it has been suggested will now be delivered concurrently with aspects of the rephased LTC project.*”
- D.5.2 A review has been undertaken from available information on the committed elements of the Freeport development. There is currently no publicly available information for the Freeport development, such as a planning application, masterplan or similar document, that would support an appraisal of effects at the level of detail requested by the Action Point.
- D.5.3 The Freeport development has been included in the inter-project effects assessment presented in 6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [\[APP-154\]](#) and 6.3 Environmental Statement - Appendix 16.2 - Short List of Developments [\[APP-484\]](#). The assessment was based on the limited information available on the proposed development, which includes information provided by Thurrock Council as a Local Plan projection.
- D.5.4 The Freeport development is not included in the operational or construction transport models for the Project. While information has been supplied to National Highways on the anticipated traffic flows, no information has been provided on anticipated mitigation proposals on the highway network that would be required to support the proposals. Further information on the consideration of traffic associated with the Thames Freeport is contained within Annex E.9 of 9.10 Post-event submissions, including written submission of oral comments for ISH1 [\[REP1-182\]](#).
- D.5.5 Without further information no additional conclusions can be drawn beyond those presented in the inter-project effects assessment in 6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [\[APP-154\]](#) and 6.3 Environmental Statement - Appendix 16.2 - Short List of Developments [\[APP-484\]](#).

- D.5.6 It is assumed that appropriate consents would be obtained for the Freeport development and any environmental assessments would include a cumulative assessment in combination with the Project. It is assumed that appropriate mitigation measures for adverse effects would be proposed as part of these consent applications and associated environmental assessments. In the event that works are undertaken as part of the Freeport development using any permitted development rights, it is assumed that these would not result in significant environmental effects.
- D.5.7 Dialogue is ongoing between the two projects and the position at the time of the DCO application is set out in 7.17 Interrelationship with other Nationally Significant Infrastructure Projects and Major Development Schemes [[APP-550](#)]. This dialogue will continue throughout the DCO Examination, detailed design and construction phases, as set out in the 7.17 Interrelationship with other Nationally Significant Infrastructure Projects and Major Development Schemes [[APP-550](#)].

Annex D1 Greenhouse gas emissions

D1.1.1 Additional information to support the text included in Appendix D Table D.2 on greenhouse gas emissions compared to relevant carbon budgets is provided in Table D1.1 and Table D1.2. Table D1.1 provides a replica of Table 15.17 of ES Chapter 15 Climate [APP-153] for comparison purposes. Table D1.2 shows the modelled construction and operational phase emissions compared to relevant carbon budgets following the two-year delay to the start of construction and opening year.

Table D1.1 Modelled construction and operational phase emissions compared to relevant carbon budgets as presented in Table 15.17 of ES Chapter 15 Climate [APP-153]

Project phase	Modelled total GHG emissions over relevant carbon budgets (tCO ₂ e) (DS* scenario)	Net Project GHG emissions over relevant carbon budgets (tCO ₂ e) (DS* - DM*)	Net Project GHG emissions per relevant carbon budget (tCO ₂ e)**		
			Fourth (2023 to 2027)	Fifth (2028 to 2032)	Sixth (2033 to 2037)
Construction	1,762,967	1,762,967	1,148,319	614,648	N/A
TAG GHG workbook / EFT v11*** with operation and maintenance					
Operation	76,122,688	746,624	N/A	284,451	462,173
Total	77,885,655	2,509,726	1,148,319	899,099	462,173
Percentage contribution to carbon budget			0.058%	0.053%	0.048%
Transport Decarbonisation Plan upper bound estimate with operation and maintenance					
Operation	52,512,613	579,934	N/A	254,700	325,234
Total	54,275,580	2,342,902	1,148,319	869,348	325,234
Percentage contribution to carbon budget			0.058%	0.051%	0.034%
Transport Decarbonisation Plan lower bound estimate with operation and maintenance					
Operation	30,281,202	346,082	N/A	167,476	178,607
Total	32,044,169	2,109,049	1,148,319	782,123	178,607
Percentage contribution to carbon budget			0.058%	0.046%	0.019%
* DM = Do Minimum scenario; DS = Do Something scenario					
** The presented numbers are the result of model calculations. They should still be considered as estimates, however.					
*** TAG GHG Workbook (DfT, 2022a) and EFT v11 (Defra, 2021)					

Table D1.2 Modelled construction and operational phase emissions compared to relevant carbon budgets following two-year delay to start of construction and opening year

Project phase	Modelled total GHG emissions over relevant carbon budgets (tCO ₂ e) (DS* scenario)	Net Project GHG emissions over relevant carbon budgets (tCO ₂ e) (DS*- DM*)	Net Project GHG emissions per relevant carbon budget (tCO ₂ e)**		
			Fourth (2023 to 2027)	Fifth (2028 to 2032)	Sixth (2033 to 2037)
Construction	1,762,967	1,762,967	440,234	1,322,733	0
TAG GHG workbook / EFT v11 with operation and maintenance					
Operation	50,344,740	556,392	0	94,219	462,173
Total	52,107,707	2,319,360	440,234	1,416,952	462,173
Percentage contribution to carbon budget			0.023%	0.082%	0.048%
Transport Decarbonisation Plan upper bound estimate with operation and maintenance					
Operation	36,202,253	405,583	0	80,349	325,234
Total	37,965,220	2,168,550	440,234	1,403,082	325,234
Percentage contribution to carbon budget			0.023%	0.081%	0.034%
Transport Decarbonisation Plan lower bound estimate with operation and maintenance					
Operation	19,572,899	229,163	0	50,557	178,607
Total	21,335,866	1,992,130	440,234	1,373,290	178,607
Percentage contribution to carbon budget			0.023%	0.080%	0.019%
* DM = Do Minimum scenario; DS = Do Something scenario					
** The presented numbers are the result of model calculations. They should still be considered as estimates, however.					

Appendix E Chapter 15: Climate

E.1 Introduction

Updates since the DCO application, October 2022

- E.1.1 Since the Environmental Statement (ES) was submitted in October 2022, the Applicant has continued to explore ways in which GHG emissions can be reduced on the Project. The Applicant has progressed the procurement of the three design and build contracts and has received PAS 2080:2016 accreditation.
- E.1.2 This addendum provides an overview of the implications of both changes.
- E.1.3 These changes have been reflected in updates of the following documents:
- Carbon and Energy Management Plan (Version 2.0), submitted at Deadline 7 [[REP7-150](#)]
 - Planning Statement Appendix I (Version 2.0), submitted at Deadline 7 [[REP7-138](#)]

Procurement phase of design and build contractors

- E.1.4 The tender process required the Contractors to consider the Project carbon model and commit to a carbon limit aligned to the Project-wide carbon limit of 1.763 million tCO_{2e}, secured through CBN04 in Version 1 of the Carbon and Energy Management Plan [[APP-552](#)]. The process asked them to commit to this limit or a lower limit and to explain how they would go beyond this and construct the Project for the lowest practicable carbon emissions.
- E.1.5 Through the confidence gained via engagement during the tender process, the Applicant is able to commit to a lower construction phase carbon limit, secured through an update to CBN04 in Appendix E of Version 2 of the Carbon and Energy Management Plan (submitted at Deadline 7 [[REP7-150](#)]), down from 1.76 million tCO_{2e} to 1.44 million tCO_{2e}.

PAS2080:2023 Carbon Management in Infrastructure

- E.1.6 In its response to ExQ2_Q2.1.1 [[REP6-107](#)], the Applicant confirmed that its corporate carbon management system and Project specific carbon management system were both independently verified as meeting the requirements of PAS 2080:2016 in 2022. Both its corporate carbon management system and Project specific carbon management system are being independently audited against PAS 2080:23 in November 2023. As highlighted in the response to ExQ2_Q2.1.1 [[REP6-107](#)], Table A.1 of

the revised PAS2080 specification includes further guidance on the allocation of land use change. The revised PAS2080 suggests that the sequestration associated with land use change should preferably be allocated to the project phase in which the uptake occurs, rather than when the land use change takes place. Making this change would not alter the assessment of the Project's total GHG emissions, only the timing of emissions. This is acknowledged within the notes of Table 15.14 of ES Chapter 15 [APP-153], which states, "*The net emissions from land use change have been included in the construction stage as all the works to create the landscaping occur during this phase. Allocating the sequestration benefit to the operational phase would not materially change the conclusions of the assessment of significance.*"

- E.1.7 To align with the updated PAS 2080 guidance, the Applicant has reallocated the carbon sequestration gains resulting from land use change (such as tree growth) to the operational phase.
- E.1.8 The updated carbon limit of 1.44 million tCO₂e takes account of the reallocation of land use change emissions.

E.2 Assessment methodology

- E.2.1 Table E.1 is a clarification of how the changes to the revised PAS2080 specification have been reflected in the Project's GHG emissions quantification. The changes to the table, compared to Table 15.2 of ES Chapter 15 [APP-153], are reflected in red text in Table E.1.
- E.2.2 The changes to the specification do not affect the assessment methodology and make no difference to the overall outcome of the assessment of the significance of the effects of the Project's GHG emissions on climate. This is set out in Section E.3.

Table E.1 Life cycle stages included within the Project GHG emissions assessment, aligned to PAS2080: 2023

DMRB Main stage of Project life cycle	PAS 2080 (BSI, 2023) Sub-stage of life cycle and module	Sources of GHG emissions	Activity data
PAS 2080 Before use stage			
Construction stage (construction phase)	A-0 Pre-construction	<ul style="list-style-type: none"> Preliminary studies and works such as strategy and brief development, architecture, design efforts, EIA and cost planning. These functions are largely office based. 	<ul style="list-style-type: none"> Staff travel estimates Actual data and analysis
	Product stage A-1 Raw material supply A-2 Transport A-3 Manufacture	<ul style="list-style-type: none"> Embodied GHG emissions associated with the raw material assets required to construct the Project. 	<ul style="list-style-type: none"> Estimation of the quantity (tonnes) or volume (m³) of material assets including both temporary and permanent works.
	Construction process stage A-4 Transport of materials to and from works site A-5 Construction / Installation processes	<ul style="list-style-type: none"> Transport of construction material assets and equipment from point of purchase to the works site Transport of workers Transport of materials and equipment onsite Emissions associated with construction and installation processes (including fuel and electricity consumption) of the temporary works, ground works, landscaping and permanent works Materials storage and any energy or otherwise need to maintain necessary environmental conditions Emissions associated with site water demand, including water treatment Waste management activities (transport, processing, final disposal) associated with waste arising from the Project 	<ul style="list-style-type: none"> Estimation of the quantity (tonnes) or volume (m³) of material assets, including both temporary and permanent works Type of material assets required (e.g., concrete) Transport distances (km) of material assets Transport distances (km) of Project staff to the work site Volume (m³) of waste generated (both construction and demolition) Water usage (m³) Fuel and energy usage associated with plant, equipment, site operations and processes

DMRB Main stage of Project life cycle	PAS 2080 (BSI, 2023) Sub-stage of life cycle and module	Sources of GHG emissions	Activity data
		<ul style="list-style-type: none"> Potential identified scenarios that may materialise during construction activities that may result in a carbon impact 	<ul style="list-style-type: none"> Project-specific calculation of emissions per million pounds of spend (tCO₂e/£)
	Land use change	<ul style="list-style-type: none"> Vegetation waste or soil disturbance during the construction stage Sequestration losses calculated over the 60-appraisal period associated with land use change. 	<ul style="list-style-type: none"> Earthworks activity data, soil and waste handling procedures. Baseline habitat mapping (ES Chapter 8: Terrestrial Biodiversity) Post development design models and information such as engineering and landscape plans. <p>The latter two identify the areas moving from one land use category to another. Land use change emission factors derived from Emissions and Removals Greenhouse Gases from Land Use, Land Use Change and Forestry for England, Scotland, Wales and Northern Ireland: 1990-2012 Report (NAEI, 2014) are applied to the relevant land use change.</p>
PAS 2080 Use stage			
Operation 'use' stage (to extend 60)	B-9 Use of the infrastructure by road users	<ul style="list-style-type: none"> Vehicles using the highways infrastructure. 	<ul style="list-style-type: none"> Transport emissions

DMRB Main stage of Project life cycle	PAS 2080 (BSI, 2023) Sub-stage of life cycle and module	Sources of GHG emissions	Activity data
<p>years from the Project opening year in line with appraisal period) (operational phase)</p>	<p>B-1, B-2, B-3, B-4 and B-5 Operation and maintenance, including repair, replacement and refurbishment and land use change</p>	<ul style="list-style-type: none"> This sub-stage includes the following aspects: Energy – represents the GHG emissions resulting from the fuel and electricity used by the Project’s infrastructure (e.g., lighting, signals, technology, pumps) and activities conducted as part of routine maintenance. Raw materials – represents the GHG emissions resulting from providing the material assets required by the Project so that it can operate and deliver its service, for example material assets used for maintenance, repair and cleaning. 	<ul style="list-style-type: none"> Fuel and energy usage associated with the Project’s infrastructure Water usage (m³) Estimation of the quantity (tonnes) or volume (m³) of material assets required for maintenance and cleaning Volume (m³) of waste generated (both maintenance and cleaning)
		<ul style="list-style-type: none"> Sequestration gains associated with land use change - representing the influence of land use change through the Project’s planting proposals and ongoing sequestration of carbon each year during the operational phase. 	<ul style="list-style-type: none"> Baseline habitat mapping (ES Chapter 8: Terrestrial Biodiversity) Post development design models and information such as engineering and landscape plans. <p>The latter two identify the areas moving from one land use category to another. Land use change emission factors derived from Emissions and Removals Greenhouse Gases from Land Use, Land Use Change and Forestry for England, Scotland, Wales and Northern Ireland: 1990-2012 Report (NAEI, 2014) are applied to the relevant land use change.</p>

E.3 Assessment of likely significant effects

Construction phase emissions

- E.3.1 The new maximum construction phase emissions are calculated to be approximately 1.44 million tCO_{2e} in line with CBN04 (Appendix E of the Carbon and Energy Management Plan submitted at Deadline 7 [REP7-150]). This is a reduction from the figure of 1.763 million tCO_{2e} as reported in the ES Chapter 15 [APP-153].
- E.3.2 During the procurement of the design and build contracts, the Applicant included carbon as a key criterion in the tender evaluation (in line with commitment CBN01 in the Carbon and Energy Management Plan [APP-552]). The Applicant presented bidders with a carbon limit aligned to the Project-wide maximum level of construction emissions (1.763 million tCO_{2e}, as secured in the DCO through carbon commitment CBN04 in the Carbon and Energy Management Plan), asked them to commit to this limit or a lower limit and asked them to explain how they would go beyond this and construct the Project for the lowest practicable carbon emissions.
- E.3.3 The tender submissions that the Applicant received demonstrated that the market was prepared commit to a lower carbon limit and therefore the Applicant has updated CBN04 to reflect this. Tenderers have shown this could be achieved through measures such as:
- a. Using lower carbon steel compared with the steel that was assumed to be used in the Project's carbon model
 - b. Using lower carbon concrete compared with the concrete that was assumed to be used in the Project's carbon model
 - c. Reducing distances and changing mode for material transport
 - d. Using more hybrid plant, electric plant and biofuels and using telematics to optimise efficiency
- E.3.4 The Contractors still retain the right to specify different materials and construction methods. It is important to note that there are numerous possible pathways to deliver the Project and reduce emissions. The actual pathway will be determined by the Contractors and their designers when developing the detailed design, procurement strategy, and construction methodologies. Further details would be provided in the second iteration of the Carbon and Energy Management Plan, once these have been finalised.

E.3.5 Through the carbon management approach set out in the Carbon and Energy Management Plan, carbon reduction will be a continuing process throughout the detailed design and construction phases of the Project. The Applicant has committed to publish an annual carbon report through CBN16 which will provide an update on the Project’s progress against its carbon ambitions.

Determining significance of effects

E.3.6 The total net GHG emissions over the appraisal period of the Project (construction stage plus 60-year operational phase from opening) are calculated to be approximately 6.001 million tCO_{2e} (595,000 tCO_{2e} down from approximately 6.596 million tCO_{2e} reported in ES Chapter 15) with TAG GHG Workbook (DfT, 2022) / EFT v11 (Defra, 2021). The lower and higher bound projections presented in Figure 2 of the Transport Decarbonisation Plan (TDP) (DfT, 2021) would reduce the total Project GHG emissions to between approximately 1.728 million (down from 2.342 million) tCO_{2e} and 2.342 million (down from 2.938 million) tCO_{2e} (based on lower and higher bound projections presented in Figure 2 of the TDP and Plate 15.1 of ES Chapter 15 [APP-153]) with the lower estimate representing the lower bound estimate and reflecting a high level of policy success and implementation.

E.3.7 To align with the updated PAS 2080 guidance, the Applicant has reallocated the carbon sequestration gains (approximately -280,000 tCO_{2e} over the 60-year appraisal period) resulting from landscaping plans to the operational phase. This reallocation does not change the overall Project emissions.

E.3.8 Table E.2 is clarifies the changes to Table 15.17 of ES Chapter 15 [APP-153], due to the Project’s new construction limit of 1.44 million tCO_{2e} and reallocation of land use change emissions.

Table E.2 Modelled construction and operational phase emissions compared to relevant carbon budgets

Project phase	Modelled total GHG emissions over relevant carbon budgets (tCO _{2e}) (DS ⁽¹⁾ scenario)	Net Project GHG emissions over relevant carbon budgets (tCO _{2e}) (DS ⁽¹⁾ -DM ⁽¹⁾)	Net Project GHG emissions per relevant carbon budget (tCO _{2e}) ⁽²⁾		
			Fourth (2023 to 2027)	Fifth (2028 to 2032)	Sixth (2033 to 2037)
Construction	1,444,500	1,444,500	940,884	503,616	N/A
TAG GHG workbook / EFT v11⁽³⁾ with operation and maintenance					
Operation	67,925,141	709,604	N/A	270,569	439,036
Total	69,369,641	2,154,104	940,884	774,185	439,036
Percentage contribution to carbon budget			0.048%	0.045%	0.045%
Transport Decarbonisation Plan upper bound estimate with operation and maintenance					
Operation	52,234,965	542,915	N/A	240,818	302,097

Project phase	Modelled total GHG emissions over relevant carbon budgets (tCO ₂ e) (DS ⁽¹⁾ scenario)	Net Project GHG emissions over relevant carbon budgets (tCO ₂ e) (DS ⁽¹⁾ -DM ⁽¹⁾)	Net Project GHG emissions per relevant carbon budget (tCO ₂ e) ⁽²⁾		
			Fourth (2023 to 2027)	Fifth (2028 to 2032)	Sixth (2033 to 2037)
Total	53,679,465	1,987,415	940,884	774,434	302,097
Percentage contribution to carbon budget			0.048%	0.043%	0.031%
Transport Decarbonisation Plan lower bound estimate with operation and maintenance					
Operation	30,003,554	309,062	N/A	153,593	155,469
Total	31,448,054	1,753,563	940,884	657,209	155,469
Percentage contribution to carbon budget			0.048%	0.038%	0.016%
(1) DM = Do Minimum scenario; DS = Do Something scenario					
(2) The presented numbers are the result of model calculations. They should still be considered as estimates, however.					
(3) TAG GHG Workbook (DfT, 2022) and EFT v11 (Defra, 2021)					

- E.3.9 The assessment has established that the Project construction emissions would represent 0.048% of the 4th carbon budget and 0.045% of both the 5th and 6th carbon budget. This is reduced from 0.058%, 0.053% and 0.048% respectively as compared to Table 15.17 of the ES Chapter 15.
- E.3.10 The update to the maximum limit of construction phase carbon emissions underpins the Applicant's commitment to the ongoing process of achieving greater reductions in GHG emissions, reflecting the Project's 'pathfinder' status.
- E.3.11 It should be noted that further significant reductions are anticipated as the Contractors challenge their designers, supply chain and construction specialists to further reduce GHG emissions over the duration of the construction emissions. The level of 1.44 million tCO₂e therefore reflects the current position.
- E.3.12 In the context of the changes described in this appendix, the conclusions of the GHG emissions assessment presented in Section 15.6 of ES Chapter 15 [APP-153] remains robust and would not change. The conclusions of ES Chapter 15 are based on more conservative assumptions than the changes presented in this appendix and therefore remain valid as a worst case scenario.

Appendix F Cultural Heritage – Assets experiencing less than substantial harm

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
LB153	Grade II Listed	1250606	HOLE FARMHOUSE	High	None	LE8.7 Nitrogen Deposition Planting Mitigation would take place in the fields surrounding the asset. This would not be a highly visually-intrusive activity compared to road construction, and the temporary impact caused by this is assessed to be negligible.	None	Negligible	Temporary Slight Adverse	The high-value Grade II listed “Hole Farmhouse” is located south of Great Warley and is largely surrounded by land within the Order Limits (although the asset itself is outside the Order Limits). The majority of the fields around the asset would change in use from arable land to LE8.7 Nitrogen Deposition Planting Mitigation (which would include a mixture of woodland and open glades). The asset would become largely divorced from its agricultural setting and lose its functional historical connection with the surrounding farmland. The effect is assessed as moderate rather than large due to the lack of physical harm to the fabric building and its curtilage.	None	Moderate	Moderate adverse	North
LB11	Grade II Listed	1079926	THE RECTORY	High	None	Sited in the vicinity of the Order Limits off Church Lane, construction activity would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. This would cause a minor adverse impact to this high value asset, as the key relationship with the church of St Mary Magdalene would not be affected. The effect is assessed as slight rather than moderate as the key elements of the asset’s setting that contribute to its value would not be harmed.	Good practice	Minor	Temporary Slight Adverse	The asset is located within the settlement of North Ockendon and its relationship with the village and the church would not be altered.	None	No change	Neutral	North
LB37	Grade II Listed	1111566	WHITECROFTS FARMHOUSE	High	None	The main alignment (A13 junction) and associated earthworks would be constructed immediately to the north and west of the asset, with associated visual and aural disturbance to its setting. The Stanford Road Compound would also be established c. 300m to	Good practice	Moderate	Temporary Moderate Adverse	The high-value Grade II listed “Whitcrofts Farmhouse” (LB37), now a care home, is located immediately south of the Order Limits, adjacent to the A1013. The main alignment (A13 junction) and associated earthworks would be present immediately to the north and west of the asset, altering the character of the formerly associated agricultural and in these directions and in very close proximity to the asset.	Woodland planting	Moderate	Moderate adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						the south-east of the asset.								
LB57	Grade II Listed	1111643	BAKER STREET WINDMILL	High	None	Baker Street Windmill (LB57) is located on the outskirts of the settlement of Baker Street, c. 60m to the east of the Order Limits. Utility diversion works for multi-utility networks would take place in the closest part of the Order Limits to the asset. Extensive construction activity for the A13/A1089/A122 Lower Thames Crossing junction, including the creation of earthwork embankments, would take place c. 75m to the south-west of the asset within a rural part of its setting that contributes to its value. The construction activity would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. This would result in a temporary impact of moderate adverse magnitude and a moderate adverse effect, which is assessed as significant. The effect is assessed as moderate rather than large due to the lack of physical harm to the asset and lack of harm to other elements of its setting that contribute to its value such as its relationship with Baker Street.	Good practice	Moderate	Temporary Moderate Adverse	A significant effect is predicted due to the operation of the Project on Baker Street Windmill (LB57), a Grade II listed building located c. 70m east of the northern part of the A13/A1089/ A122 Lower Thames Crossing junction. The existing rural land to the west of the asset would be replaced by the junction, including the roads themselves, earthwork embankments and ditches and landscape mitigation planting. This would greatly change the character and topography of a part of the setting of the asset that makes a contribution to its value. However, it should be noted that earthwork embankment adjacent to the main alignment would be at their lowest point in closest proximity to the asset, increasing in height towards the south as they continue away from the asset. This would retain a degree of openness in the vicinity of the asset, although this would be slightly lessened by planting on the embankment (LE2.11 Woodland with Non-Native Species). The noise levels in the vicinity of the asset would not greatly increase as a result of the operation of the Project. Night-time light levels are likely to increase, due to the presence of 10m, 12m and 15m-tall Post Top lighting columns along the junction alignment. An overhead gantry would be located c. 166m to the south-west of the asset, although this would be screened by intervening tree planting (LE2.11 Woodland with Non-Native Species). As a windmill, the asset was built in open countryside which would enable strong winds to power its sails. This connection with the open countryside has already been somewhat eroded by the existing A13 junction c. 240m to the south-west and it would be further eroded by the operation of the Project. Consequently, the operation of the Project would cause a permanent impact of moderate adverse magnitude to this high value asset and a moderate adverse effect, which is significant	Earthworks and planting	Moderate	Moderate adverse	North
LB109	Grade II Listed	1358548	BARN AND STABLE BLOCK TO THE NORTH OF	High	None	Sited immediately to the north-west of the Order Limits, activity associated	Good practice	Minor	Temporary Slight adverse	The asset is located adjacent to the existing route of the M25. The Project would increase the scale of the road	LE2.11 Woodland with Non-	Minor	Slight adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
			BROADFIELDS FARMHOUSE			with utility diversion works c. 60m south-east of the asset and construction of the main alignment c. 90m south-east of the asset (and associated vegetation removal) would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. The effect is assessed as slight rather than moderate due to the fact that the majority of the elements of the setting of the asset that contribute to its value would remain unharmed.				infrastructure adjacent to this heritage asset, although its rural setting would remain intelligible. This would be mitigated by landscape planting – LE2.11 Woodland with Non-Native Species to replace some of the removed vegetation and to screen the road from view. The effect is assessed as slight rather than moderate due to the fact that the majority of the elements of the setting of the asset that contribute to its value would remain unharmed.	Native Species			
LB128	Grade II Listed	1111553	OLD RECTORY	High	None	Construction activity would take place in the field adjacent to the asset to establish an NMU route and ecological mitigation areas (LE6.41 Marsh and Wet Grassland – Coastal Grazing Marsh, LE6.2 Banks and Ditches (Polygon) and LE6.12 Water Bodies and Associated Plants – Shallow Scrape). The field in which the ecological mitigation takes place would also be used for light vehicle access to the northern tunnel construction compound. These works would introduce a small degree of visual and aural disturbance to the rural setting of the asset. The minor impact would result in a slight, rather than moderate, effect due to the minor scale of work in close proximity.	Good practice	Minor	Temporary Slight Adverse	The distantly visible earthworks around the North Tunnel Portal would not harm the value of this asset.	None	No change	Neutral	North
LB134	Grade II Listed	1146774	GUN HILL FARMHOUSE	High	None	The online utilities access route along Gun Hill and the multi-utility network works c.100m to the east of the asset would introduce construction	Good practice	Minor	Temporary Slight adverse	Although elements of the operational scheme could be very distantly visible c. 2km to the south-east of the asset, these would not harm an element of its setting that contributes to its value.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						traffic and activity which would disturb the rural setting of the asset. This would result in a minor impact and slight rather than moderate adverse effect, due to the small scale of change to the setting of the asset.								
LB169	Grade I Listed	1337129	CHURCH OF ST KATHERINE	High	None	Construction activity would take place in the field opposite the church to establish an NMU route and ecological mitigation areas (LE6.41 Marsh and Wet Grassland – Coastal Grazing Marsh, LE6.2 Banks and Ditches (Polygon) and LE6.12 Water Bodies and Associated Plants – Shallow Scrape). The field in which the ecological mitigation takes place would also be used for light vehicle access to the northern tunnel construction compound. These works would introduce a small degree of visual and aural disturbance to the rural setting of the asset. The minor impact would result in a slight, rather than moderate, effect due to the minor scale of work in close proximity.	Good practice	Minor	Temporary Slight Adverse	The distantly visible earthworks around the North Tunnel Portal would not harm the value of this asset.	None	No change	Neutral	North
LB203	Grade II Listed	1111568	WALTONS HALL	High	None	Minor construction activity for OHL restringing and establishment of associated utilities offline access routes would take place adjacent to the asset. This would not alter its relationship with neighbouring buildings or the surrounding farmland that contribute to its value. The effect is assessed to be slight adverse rather than moderate as the construction activity would not greatly alter the	None	Temporary Negligible	Temporary Slight adverse	The setting of the asset does not extend to the operational Project.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						relationship between LB203, LB204, LB212 and LB217 or the surrounding farmland which contribute to their value.								
LB204	Grade II Listed	1111569	SUTTON'S FARMHOUSE	High	None	Minor construction activity for OHL restringing and establishment of associated utilities offline access routes would take place adjacent to the asset. This would not alter its relationship with neighbouring buildings or the surrounding farmland that contribute to its value. The effect is assessed to be slight adverse rather than moderate as the construction activity would not greatly alter the relationship between LB203, LB204, LB212 and LB217 or the surrounding farmland which contribute to their value.	None	Temporary Negligible	Temporary Slight adverse	The setting of the asset does not extend to the operational Project.	None	No change	Neutral	North
LB205	Grade I Listed	1111576	CHURCH OF ST MARY	High	None	Sited adjacent to the Order Limits along Brentwood Road, construction activity (utility diversions for multi-utility networks along Brentwood Road) would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. However, this would not affect its relationship with the settlement of Chadwell St Mary or any of the other principal elements of its setting that contribute to its value.	None	Negligible	Temporary Slight Adverse	The setting of the asset does not extend to the operational project.	None	No change	Neutral	North
LB211	Grade II Listed	1166282	CHADWELL HOUSE	High	None	Sited adjacent to the Order Limits along Brentwood Road, construction activity (utility diversions for multi-utility networks along	None	Negligible	Temporary Slight Adverse	The setting of the asset does not extend to the operational Project.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						Brentwood Road) would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery.								
LB212	Grade II Listed	1307175	TURNERS FARM	High	None	Minor construction activity for OHL restringing and establishment of associated utilities offline access routes would take place adjacent to the asset. This would not alter its relationship with neighbouring buildings or the surrounding farmland that contribute to its value. The effect is assessed to be slight adverse rather than moderate as the construction activity would not greatly alter the relationship between LB203, LB204, LB212 and LB217 or the surrounding farmland which contribute to their value.	None	Negligible	Temporary Slight Adverse	The setting of the asset does not extend to the operational Project.	None	No change	Neutral	North
LB213	Grade II Listed	1337061	SLEEPERS FARMHOUSE	High	None	Sited adjacent to the Order Limits along Brentwood Road, construction activity (utility diversions for multi-utility networks along Brentwood Road) would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery.	None	Negligible	Temporary Slight Adverse	The setting of the asset does not extend to the operational Project.	None	No change	Neutral	North
LB217	Grade II Listed	1337098	WEATHERBOARDED BARN AT WALTONS HALL	High	None	Minor construction activity for OHL restringing and establishment of associated utilities offline access routes would take place adjacent to the asset. This would not alter its relationship with neighbouring buildings or the surrounding farmland that contribute to its value. The effect is assessed to be slight adverse rather than	None	Negligible	Temporary Slight Adverse	The setting of the asset does not extend to the operational Project.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						moderate as the construction activity would not greatly alter the relationship between LB203, LB204, LB212 and LB217 or the surrounding farmland which contribute to their value.								
LB33	Grade II* Listed	1111541	CHURCH OF ST JAMES	High	None	Construction activity would cause small temporary changes to the setting of this asset by introducing additional noise, lighting and construction traffic along Coopers Shaw Road and Church Road (which would be used as main work construction secondary access routes) c. 180m to the east of the asset. Utility works would take place across the open land c.180m south of the asset, situated at the bottom of Hall Hill. The Northern Tunnel Entrance Compound would be located c. 680m south-east of the asset. These works would not alter its relationship with West Tilbury or impede long-distance views to and from the church across the former Tilbury Marshes. The visual disturbance to the semi-rural setting of the asset would result in a minor impact. The minor impact is assessed to result in a slight adverse effect rather than moderate effect due to the scale and nature of the impacts and the fact that the primary elements of the setting that contribute to the value of the asset will not be harmed.	Good practice	Minor	Temporary Slight adverse	The operational alignment (at Tilbury Viaduct) would be located c. 920m east of the asset. Parts of the operational alignment further to the south-east are likely to be distantly visible from the asset, but this will not harm its value.	None	No change	Neutral	North
LB115	Grade II Listed	1079879	FRANKS FARMHOUSE	High	None	The high value Grade II listed Franks Farmhouse (LB115) is sited	Good practice	Minor	Temporary Slight Adverse	The asset is located adjacent to the existing route of the M25. The Project would slightly increase the scale of the	To limit the land required adjacent to	Minor	Slight adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						approximately c. 55m west of the Order Limits. Construction activity for the A122 northbound link road and enlargement of the M25 would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. This would result in a temporary impact of minor adverse magnitude and a slight adverse effect, which is assessed as not significant. The effect is assessed as slight rather than moderate due to the scale of change in the context of the setting of the asset, located next to the existing M25.				motorway infrastructure adjacent to this heritage asset, resulting in a minor impact. The effect is assessed as slight rather than moderate due to the low scale of change relative to the existing M25-adjacent setting of the asset.	Franks Farmhouse (LB115) and the property of St Mary's Lane, a retaining wall rather than earthworks would be provided. Either soft landscaping would be provided to soften the visual impact of the structures or planted green walls would be provided (Design Principle S14.09).			
LB38	Grade II Listed	1111567	GREYGOOSE FARMHOUSE	High	None	The asset is sited c. 90m to the south of Order Limits, between the A13 and Chadwell St Mary. Construction activity would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery to the north, east and more distantly to the south-east. This would result in a minor impact and a temporary slight adverse effect. The effect is assessed as minor rather than moderate as the rural setting of the asset has already been somewhat eroded by the presence of the A13 and encroachment of the Chadwell St Mary suburbs.	Good practice	Minor	Temporary Slight Adverse	The asset would experience a change to its setting as a result due to the establishment of the A13/A1089/A122 junction in farmland c. 440m to the east of the asset.	None	Negligible	Slight adverse	North
LB40	Grade II Listed	1111574	HEATH COTTAGE	High	None	Sited adjacent to the Order Limits construction activity would cause temporary changes to the	Good practice	Minor	Temporary Slight Adverse	The Project would introduce further modern transport infrastructure into the semi-rural setting of this asset. The effect is assessed as slight rather than	Earthworks and reinstatement	Minor	Slight adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						setting of this asset by introducing additional noise, lighting and visible construction machinery, from the construction of the main alignment, utility works and Hornsby Lane Utility Hub which would be located c. 300 to the east of the asset. The farmland immediately adjacent to the rear and south-east of the asset would not be altered. The effect is assessed as slight rather than moderate as the primary elements of the asset's setting that contribute to its value (its grounds and association with Hornsby Lane) would not be harmed.				moderate as the primary elements of the asset's setting that contribute to its value (its grounds and association with Hornsby Lane) would not be harmed.	of agricultural land			
LB42	Grade II Listed	1111577	MILL HOUSE	High	None	The asset is sited immediately to the north of the Order Limits on Muckingford Road. Construction activity including hedgerow removal on the south side of the road, the establishment of an online utilities access route and utility diversion works for multi-utility networks would result in temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. The effect is assessed as slight rather than moderate as the historically-associated buildings and farmland to the west of the asset would not be harmed, and views southward across the Great Common Field would remain.	None	Minor	Temporary Slight Adverse	Establishment of an NMU route along the southern side of the Muckingford Road would not harm the value of the asset.	None	No change	Neutral	North
LB45	Grade II Listed	1111608	SLADES HOLD COTTAGES	High	None	The asset is located within Baker Street, on the southern side of High Road which would be	Good practice	Negligible	Temporary Slight Adverse	The operational Project would be located beyond the setting of the asset.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						used as to an online construction access route. Utility diversions for multi-utility networks would also take place along High Road. This would introduce additional noise and visible construction activity into the asset's setting.								
LB41	Grade II Listed	1111575	HEATH PLACE	High	None	The high-value Grade II listed "Heath Place" is located immediately to the south of the Order Limits. Other areas of the Order Limits are also located between 150m to 200m east, west and south of the asset. The Brentwood Road compound would be established c. 160m east of the asset, the Stanford Road Compound c. 290m to the west and Hornsby Lane Utility Hub c. 370m to the south. The main alignment would be constructed c. 200m south of the asset and multi-utility network works would take place immediately to the north of the asset. The visual and aural impact of construction, taking place within the rural setting of the asset that contributes to its value, is assessed to result in a temporary impact of moderate adverse magnitude and a moderate adverse effect, which is assessed as significant. The effect is assessed as moderate rather than large due to the temporary nature of the impact and lack of physical harm to the asset.	Good practice	Moderate	Temporary Moderate Adverse	The high-value Grade II listed "Heath Place" (LB41) is located immediately to the south of the Order Limits, on the northern slope of an east-west dry valley. Other areas of the Order Limits are also located between 150m to 200m east, west and south of the asset. The operational alignment and associated false cutting earthwork banks would be located c. 200m south of the asset, at the bottom of the valley in which it is located. This would represent a large erosion of the remaining agricultural landscape around the asset, which has already been encroached upon by the A13 c. 550m to the north, the A1089 c. 900m to the west and suburban development on the fringes of Chadwell St Mary c. 600m to the south-east. This would result in the asset becoming largely "islanded" within a small surviving area of agricultural land with the main alignment in relatively close proximity. Overall, the operation of the Project would result in a permanent impact of moderate adverse magnitude and a moderate adverse effect which is significant. The effect is considered to be slight rather than moderate due to the lack of physical harm to the asset and the fact that some of the rural land around the asset will be preserved, enabling its illustrative historical value as a former farmhouse to be preserved.	Reinstatement of agricultural land used for temporary works	Minor	Slight adverse	North
LB48	Grade II Listed	1111623	POLWICKS	High	None	Sited adjacent to the Order Limits, construction activity would cause temporary changes to the	Good practice	Moderate	Temporary Moderate Adverse	The main alignment would be located approximately 250m east of the asset and would introduce additional noise and modern infrastructure including the	None	Minor	Slight adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						setting of this asset by introducing additional noise, lighting and visible construction machinery into its setting. Church Road immediately south of the asset would be used as a Mains Work Construction Access Route (secondary access). The Northern Tunnel Entrance Compound would be located c. 155m south-east of the asset and Low Street Lane Utility Hub would be located c. 35m to the north. Construction of the main alignment (Tilbury Viaduct) would take place c. 250m east of the asset. The effect is considered to be moderate rather than large due to the temporary nature of the impact and the fact that the physical fabric of the building will not be harmed.				Tilbury Viaduct into its setting. The operational noise change would be between 5db and 10db, a moderate adverse change in noise terms. The eastern side elevation of the building that faces the viaduct is largely windowless and so no principal views would be compromised. Lighting columns would also be present on Church Road from c. 50m east of the asset, changing the character of the semi-rural night-time setting. The curtilage and grounds of the asset would not be physically affected, nor would its relationship with Church Road, the hamlet of Low Street and settlement of West Tilbury, or the surrounding agricultural landscape in general. As a result the impact is assessed as minor and is assessed to result in a slight rather than a moderate adverse effect.				
LB5	Grade II Listed	1079868	KILBRO	High	None	The asset is located on the eastern side of the B186 within North Ockendon Conservation Area (CA4) and immediately east of the Order Limits which include the B186. The B186 would be used as a short-term online main construction access route and utility diversions for multi-utility networks would also take place within the road. This would introduce additional noise and visible construction activity into the asset's setting.	Good practice	Negligible	Temporary Slight Adverse	The operational Project would not impact upon any elements of the asset's setting that contribute to its value.	None	No change	Neutral	North
LB50	Grade II Listed	1111625	WEST TILBURY HALL	High	None	A mains work construction secondary access routes would be situated along Coopers Shaw Road and Church Road c. 240m to the east	None	Minor	Temporary Slight Adverse	The operational alignment (at Tilbury Viaduct) would be located c. 990m east of the asset. Parts of the operational alignment further to the south-east could potentially to be distantly visible from the asset, but this will not harm its value.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames	
						of the asset. Utility works would take place across the open land c. 140m to the south-west of the asset, situated at the bottom of Hall Hill. The Northern Tunnel Entrance Compound would be located c. 750m south-east of the asset. These works would not alter its relationship with West Tilbury and the Church of St James nor or impede long-distance views across the former Tilbury Marshes. The visual disturbance to the semi-rural setting of the asset would result in a minor impact. This is assessed to be slight adverse rather than moderate as the construction activity would not greatly alter the relationship between LB50 and LB87 (Barn to north of West Tilbury Hall) and associated listed buildings in West Tilbury.									
LB49	Grade II Listed	1111624	WALNUT TREE COTTAGE	High	None	Sited adjacent to the Order Limits, construction activity would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery to the setting. Church Road immediately north of the asset would be used as a Mains Work Construction Access Route (secondary access). The Northern Tunnel Entrance Compound would be located c. 165m south-east of the asset and Low Street Lane Utility Hub would be located c. 120m to the north-east. Utility works for multi-utility networks would take place c. 120m to the south-west and c. 135m	Good practice	Moderate	Temporary moderate adverse	The main alignment (Tilbury Viaduct) would be located approximately 375m east of the asset and would introduce additional noise and modern infrastructure into its setting. The noise change would be between 3db and 5db (a minor adverse change in noise terms). Lighting columns would be present on Church Road from 150m east of the asset. The curtilage and grounds of the asset would not be affected, nor would its relationship with Church Road, the hamlet of Low Street and settlement of West Tilbury, or the surrounding agricultural landscape in general. As a result the minor impact would result in a slight rather than a moderate adverse effect.	None	Minor	Slight adverse	North	

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						south-east of the asset. Construction of the main alignment (Tilbury Viaduct) would take place c. 375m east of the asset. The effect is considered to be moderate rather than large due to the temporary nature of the impact and the fact that the physical fabric of the building will not be harmed.								
LB52	Grade II Listed	1111630	THATCHED BARN AT WHITFIELDS	High	None	The high value Grade II listed "Whitfields" (LB60) and Grade II listed "Thatched Barn at Whitfields" (LB52) are sited at Baker Street to the north of Stifford Clays Road. The Stifford Clays Road Compound East would be located c. 170m and c. 110m west of the assets respectively. Construction of the main alignment would take place c. 260m and 210m west of the assets, with construction of the Stifford Clays Road overbridge taking place in slightly closer proximity. Fen Lane to the east of the assets would be used as an online utilities access route and Stifford Clays Road to the south would be used a short-term online main works construction access route. The combination of these construction activities would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery.	Good practice	Moderate	Temporary Moderate Adverse	The high value Grade II listed "Whitfields" (LB60) and Grade II listed "Thatched Barn at Whitfields" (LB52) are sited at Baker Street to the north of Stifford Clays Road. The operational alignment would be located c. 260m and c. 210m west of the assets respectively. While this would be visible to the north-west of the assets, their relationship with the agricultural land to the north would remain, as would their key relationships with one another and the other buildings forming the courtyard farmstead, and with the settlement of Baker Street. The effect is assessed as slight rather than moderate due to the preservation of these key relationships.	None	Minor	Slight adverse	North
LB53	Grade II Listed	1111631	THE WILDERNESS	High	None	The Wilderness is sited adjacent to the Order Limits on the eastern side of Fen Lane within the settlement of Baker Street. Groundworks	Good practice	Minor	Temporary Slight Adverse	The asset is located within Baker Street and this aspect of its setting and its spatial relationship with other nearby historic buildings would not be harmed. While parts of the main alignment could be distantly visible across farmland to the	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						would take place along Fen Lane for multi-utility network diversions. The Stifford Clays Road Compound East would be located c. 215m north-west of the asset and the main alignment would be constructed c. 300m west of the asset. Construction of the main Project would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. The effect is assessed as slight rather than moderate due to the temporary nature of the impact and the fact that the bulk of construction activity will take place at a remove from the asset.				north-west, this is not assessed to impact upon the value of the asset.				
LB56	Grade II Listed	1111642	MILL HOUSE	High	None	The high value Grade II listed "Mill House" (LB56) is sited in Baker Street immediately to the south of Stifford Clays Road and the Order Limits. As such, construction activity would cause temporary changes, due to the A13/A1089/A122 Lower Thames Crossing junction construction and utility diversions for multi-utility networks, to the setting of this asset by introducing additional noise, lighting and visible construction machinery	Good practice	Minor	Temporary Slight adverse	The high-value Grade II listed "Mill House" (LB56) is located in Baker Street immediately to the south of Stifford Clays Road and the Order Limits. The operational alignment and associated earthworks would be located c. 170m to the south-west of the asset, although views in this direction are somewhat restricted by vegetation in the grounds of the asset and it does not have a strong connection with the agricultural land within the Order Limits. Therefore, there would be a limited aural intrusion, although the noise levels around the asset would not be affected.	None	Negligible	Slight adverse	North
LB6	Grade II Listed	1079869	RUSSELL COTTAGE	High	None	The asset is located on the eastern side of the B186 within North Ockendon Conservation Area (CA4) and immediately east of the Order Limits which include the B186. The B186 would be used as a short-term online main construction access route and utility diversions for multi-utility networks	Good practice	Negligible	Temporary Slight Adverse	The operational Project would not impact upon any elements of the asset's setting that contribute to its value.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						would also take place within the road. This would introduce additional noise and visible construction activity into the asset's setting.								
LB60	Grade II Listed	1146709	WHITFIELDS	High	None	The high value Grade II listed "Whitfields" (LB60) and Grade II listed "Thatched Barn at Whitfields" (LB52) are sited at Baker Street to the north of Stifford Clays Road. The Stifford Clays Road Compound East would be located c. 170m and c. 110m west of the assets respectively. Construction of the main alignment would take place c. 260m and 210m west of the assets, with construction of the Stifford Clays Road overbridge taking place in slightly closer proximity. Fen Lane to the east of the assets would be used as an online utilities access route and Stifford Clays Road to the south would be used a short-term online main works construction access route. The combination of these construction activities would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery.	Good practice	Moderate	Temporary Moderate Adverse	The high value Grade II listed "Whitfields" (LB60) and Grade II listed "Thatched Barn at Whitfields" (LB52) are sited at Baker Street to the north of Stifford Clays Road. The operational alignment would be located c. 260m and c. 210m west of the assets respectively. While this would be visible to the north-west of the assets, their relationship with the agricultural land to the north would remain, as would their key relationships with one another and the other buildings forming the courtyard farmstead, and with the settlement of Baker Street. The effect is assessed as slight rather than moderate due to the preservation of these key relationships.	None	Minor	Slight adverse	North
LB61	Grade II Listed	1146717	POPLARS FARMHOUSE	High	None	The asset is sited to the south of Green Lane. The Order Limits is located directly adjacent to the asset along Green Lane and also in open land c. 50m to the south. Utility diversion works for multi-utility networks would take place along Green Lane and further utility diversions for gas networks would take	Good practice	Minor	Temporary Slight Adverse	The Project would be located beyond the setting of the asset.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						place in the land to the south. This construction activity would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. This would affect its relationship with the arable fields that inform its setting. The effect is assessed as slight rather than moderate as the majority of the surrounding farmland and the asset's associations with the adjacent farm buildings would not be impacted upon.								
LB66	Grade II Listed	1147796	BUCKLAND	High	None	Sited adjacent to the Order Limits, construction activity would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery in northern tunnel entrance compound, Station Road compound and for construction of the main alignment including the Tilbury Viaduct and the large junction to the south. Utility works for multi-utility networks would also take place in close proximity. Overall this will result in a moderate impact. The effect is considered to be moderate rather than large due to the temporary nature of the impact and the lack of physical harm to the asset or its associated grounds.	Good practice	Moderate	Temporary Moderate adverse	The setting of the asset to the south-west and west would be greatly altered from an open landscape to road infrastructure including a viaduct and junction. This includes the principal view south-west across the Tilbury Marshes (although this has been previously eroded by vegetation within the grounds and industrial/waste activity on the former marshes). The noise levels would also be greater than 10db, a major adverse change in noise terms. This would result in a minor impact to the value of this asset which is assessed to result in a slight rather than moderate adverse impact, given the minor contribution that the agricultural land makes to its overall value.	None	Minor	Slight adverse	North
LB67	Grade II Listed	1147812	LITTLE WELLHOUSE	High	None	The asset is sited immediately adjacent to the Order Limits, between the A13 and Chadwell St Mary., Construction activity would cause	Good practice	Minor	Temporary Slight Adverse	The asset would experience a change to its setting as a result due to the establishment of the A13/A1089/A122 junction in farmland c. 440m to the east of the asset.	None	Negligible	Slight adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery to the east and west. This would result in a minor impact and a temporary slight adverse effect. The effect is assessed as minor rather than moderate as the rural setting of the asset has already been somewhat eroded by the presence of the A13 and encroachment of the Chadwell St Mary suburbs.								
LB69	Grade I Listed	1183610	CHURCH OF ST MARY MAGDALENE	High	None	The asset is located within North Ockendon Conservation Area (CA4) immediately east of the Order Limits and c. 350m east of the M25. Construction activity for the A122 Lower Thames Crossing/M25 junction, including the construction of the M25 Compound c. 270m to the south and utility working areas immediately to the west would cause temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery. The effect is assessed as moderate rather than slight due to the extensive nature of the construction activity.	Good practice	Minor	Temporary Moderate Adverse	The operational alignment and associated earthworks would be located c. 320m to the west of the asset. While road infrastructure in the form of the M25 is already located within the setting of the asset, this would be brought closer which would impact upon the rural landscape that makes a minor contribution to the aesthetic value of the asset. The Project would not harm the Conservation Area setting of the asset or alter its relationship with the other buildings in the village. For these reasons, the effect is assessed as slight rather than moderate.	None	Minor	Slight adverse	North
LB7	Grade II Listed	1079870	THE FORGE	High	None	The asset is located on the western side of the B186 within North Ockendon Conservation Area (CA4) and immediately east of the Order Limits which include the B186. The B186 would be used as a short-term online main construction access route and utility diversions for	Good practice	Negligible	Temporary Slight Adverse	The operational Project would not impact upon any elements of the asset's setting that contribute to its value.	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						multi-utility networks would also take place within the road. This would introduce additional noise and visible construction activity into the asset's setting.								
LB75	Grade II Listed	1224101	28 AND 30, BATA AVENUE	High	None	The construction activity would be located in the farmland to the west of the asset and would not affect the relationship between the asset and the associated settlement of East Tilbury, which is a crucial aspect of its setting.	Good practice	Negligible	Temporary Slight adverse	The Project would not affect the relationship between the asset and East Tilbury which is a crucial aspect of its setting.	None	No change	Neutral	North
LB8	Grade II Listed	1079871	CASTLE COTTAGES	High	None	The asset is located on the western side of the B186 within North Ockendon Conservation Area (CA4) and immediately east of the Order Limits which include the B186. The B186 would be used as a short-term online main construction access route and utility diversions for multi-utility networks would also take place within the road. This would introduce additional noise and visible construction activity into the asset's setting.	Good practice	Negligible	Temporary Slight Adverse	The operational Project would not impact upon any elements of the asset's setting that contribute to its value.	None	No change	Neutral	North
LB90	Grade II* Listed	1337058	MARSHALL'S COTTAGES	High	None	Construction activity would take place within the Great Common Field c. 400m north and north-west of the asset for multi-utility network works and subsequently for the establishment of an NMU route. This would introduce visible construction activity within part of the historic rural setting of the asset that contributes to its value.	Good practice	Minor	Temporary Slight Adverse	The operational alignment would be largely screened from the asset by intervening buildings and trees and is not located on land that makes a contribution to the value of the asset. However, an NMU route would be present along the northern edge of the Great Common Field which represents a very slight erosion of its historic character.	None	Negligible	Slight adverse	North
LB87	Grade II Listed	1308889	BARN TO NORTH OF WEST TILBURY HALL	High	None	A mains work construction secondary access routes would be situated along Coopers	None	Minor	Temporary Slight adverse	The operational alignment (at Tilbury Viaduct) would be located c. 990m east of the asset. Parts of the operational alignment further to the south-east could	None	No change	Neutral	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames	
						Shaw Road and Church Road c. 240m to the east of the asset. Utility works would take place across the open land c. 150m to the south-west of the asset, situated at the bottom of Hall Hill. The Northern Tunnel Entrance Compound would be located c. 760m south-east of the asset. These works would not alter its relationship with West Tilbury and the Church of St James nor or impede long-distance views across the former Tilbury Marshes. The visual disturbance to the semi-rural setting of the asset would result in a minor impact. The effect assessed to be slight adverse rather than moderate as the construction activity would not alter the relationship between LB87 and LB50 (West Tilbury Hall) and associated listed buildings in West Tilbury.					potentially to be distantly visible from the asset, but this will not harm its value.				
LB94	Grade II Listed	1337091	HIGH HOUSE	High	None	Sited c. 275m west of the Order Limits and a utilities online access route, construction activity would cause small temporary changes to the setting of this asset by introducing additional noise, lighting and visible construction machinery to the rural setting of the asset, although largely not in close proximity.	None	Negligible	Temporary Slight adverse	The high-value Grade II listed "High House" (LB94) would be located c. 750m south-west of the operational alignment. Given the distance and the relatively flat topography around the asset, the visual intrusion to its setting would not be great. However, the noise levels at the asset would increase by more than 10db, a major adverse impact in noise terms. However, in heritage terms the elements of the assets setting which make the greatest contributions to its value will not be harmed and it should be noted that a quarry is located immediately to the south-east of the asset. The operation of the Project would result in a permanent impact of minor adverse magnitude and a slight adverse effect which is not significant. The effect is assessed as slight rather than moderate due to the limited scale of the impact and the majority of the elements of the asset's	LE2.2 Scrub Woodland Planting	Minor	Slight adverse	North	

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
										setting that contribute to its value would be preserved.				
LB101	Grade II Listed	1341498	CORNER COTTAGE	High	None	The setting of this asset is primarily formed by the surrounding modern residential development and the asset is sited c. 110m to the north of the existing route of the A2/M2. Construction activity is likely to cause temporary minor changes to its setting by introducing additional noise, lighting and potentially partial glimpses of construction machinery along the route of the A2 and for utility works and establishment of an NMU route c. 60m south of the asset, from the rear upper stories of some of the buildings. This would cause a temporary negligible adverse impact to this high value asset, resulting in a slight adverse significance of effect.	None	Negligible	Slight adverse	The setting of this asset is primarily formed by its location on Hever Court Road and nearby historic buildings, situated close to the existing route of the A2/M2. In terms of long-term operational noise, there would be a negligible/no change compared to existing noise levels. The asset is located in a medium brightness urban area and the Project would not have an impact on its value due to lighting. The operational phase would increase the size of the A2 but this would not be discernible from the asset and consequently they would experience an impact of no change and neutral effect.	None	No change	Neutral	South
LB105	Grade II Listed	1346416	PARISH BOUNDARY STONE	Medium	None	Located within the Order Limits, adjacent to the route of a ProW that would be upgraded to an NMU route by the Project. These works would not move or otherwise physically impact the asset and the asset would be protected by fencing. The asset has previously been moved from its original location for the construction of HS1, and consequently its precise location makes little contribution to its value.	Temporary fencing	Negligible	Slight adverse	The long-term operational noise change would not be discernibly different from existing noise levels. The operation of the Project would have no adverse effects on the value of the asset.	None	No change	Neutral	South
LB106	Grade II Listed	1350862	CHURCH OF ST MARGARET, IFIELD	High	None	Construction activity is likely to cause small temporary changes to the setting of this asset by introducing additional noise, lighting, and visible construction machinery along the new route of the	None	Negligible	Temporary slight adverse	Establishment of Ancient Woodland Mitigation Planting LE8.2 c. 160m north-east of the asset would not be out of character in this landscape, which 19 th century mapping shows once previously contained more woodland and orchard than today. The woodland would be established adjacent to existing trees	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						A2. This would cause a negligible adverse impact to this high value asset, resulting in a slight adverse significance of effect.				along Church Road and the majority of the open field around the asset will be retained. The long-term operational noise change would not be discernibly different from existing noise levels. The existing A2 in the vicinity of the asset is already lit (see Appendix 7.9 (Application Document 6.2) and Figure 7.18 (Application Document 6.3)) therefore the night-time setting is not likely to be discernibly changed. There would be no change and a neutral effect.				
LB122	Grade I Listed	1095053	COBHAM HALL (INCLUDING KITCHEN AND STABLE COURT)	High	None	This asset is located within the bounds of RPG1 c. 640m south of the Order Limits. The construction activity would temporarily introduce additional noise, lighting and visible construction machinery to the setting of this asset.	None	Negligible	Temporary Slight adverse	Although the asset's setting is formed by the RPG1, it also already includes the existing A2 dual carriageway, and the operation of the Project would not result in a discernible change within the setting, beyond the establishment of a cycleway c. 640m to the north at the northern edge of Cobham Park, and the redesign of the existing Halfpence Lane/Thong Lane roundabout in the north-western part of the park. This would not have an impact on the asset. The existing A2 to the north of the asset and the Brewers Road overbridge are already lit (see Figure 7.18, Application Document 6.3) and therefore the night-time setting is not likely to be discernibly changed.	None	No change	Neutral	South
LB126	Grade II Listed	1096336	CRUTCHES GATE COTTAGE AND FARMHOUSE	High	None	The asset is sited c. 180m to the north-east of the existing route of the A2/M2 and c. 65m north of a slip road. Construction activity is likely to cause temporary minor changes to its setting by introducing additional noise, lighting and potentially partial glimpses of construction machinery along the route of the A2 and for utility works and a long-term online main construction access route along the slip road. This would cause a temporary negligible adverse impact to this asset.	None	Negligible	Temporary Slight adverse	The long-term operational noise change would not be discernibly different from existing noise levels. The existing A2/M2 in the vicinity are already lit (see Figure 7.18, Application Document 6.3) and therefore the night-time setting is not likely to be discernibly changed. Although partly surrounded by residential development the asset derives some value from its setting, primarily from its location on Old Watling Street nearby former farm buildings of Crutches Farm and the surviving open landscape to the north and north-west. Although the land within the Order Limits form part of its setting (as the A2/M2 and roadside planting) it does not contribute to the value of the asset. The operational phase would increase the size of the A2/M2 but this would not adversely impact upon the value of the asset.	None	No change	Neutral	South
LB190	Grade II Listed	1095057	ROSE COTTAGE	High	None	Utilities diversion within the present-day road alignment of Halfpence Lane would create a temporary disruption in	None	Negligible	Slight adverse	The visual and associative setting does not extend to the land within the Order Limits. There will be no change to noise levels in the vicinity of the asset. While distant lighting will increase due to the	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						the setting of this asset. This would only have a negligible impact on this high value asset resulting in a slight adverse effect.				widening of the A2 corridor, this will be in an area which is already lit (see Appendix 7.9 (Application Document 6.2) and Figure 7.18 (Application Document 6.3)) and the change would not be of a scale which would harm the value of the asset.				
LB22	Grade II Listed	1083901	WHITE HORSE COTTAGE	High	None	The asset is located approximately 150m east of the Order Limits and 65m west of the Order Limits, which surround Thong Conservation Area. Construction activity for the main alignment to the west of the asset, including major earthworks and structures, would temporarily introduce additional noise, lighting and visible construction machinery to the setting of this asset, and this would have a moderate magnitude temporary impact.	Good practice	Moderate	Temporary moderate adverse	The operation of the Project would change the setting of the high-value Grade II listed White Horse Cottage (LB22), with the main alignment visible in the formerly open agricultural land to the west. While there would be no change to existing noise levels, the low brightness night-time setting of the asset (see baseline assessment for CA10) would see increased light as a result of the Project which would slightly harm its rural character.	None	Moderate	Moderate adverse	South
LB230	Grade II Listed	1435143	Cobham War Memorial	High	None	Utilities diversion within the present-day road alignment of Halfpence Lane would create a temporary disruption in the setting of this asset. This would only have a negligible impact on this high value asset resulting in a slight adverse effect.	None	Negligible	Temporary Slight adverse	No change	None	No change	Neutral	South
LB241	Grade I Listed	1049037	GADSHILL PLACE	High	None	The asset is sited adjacent to the A226 (Gravesend Road) which would be used as a long-term main online construction access route. The additional construction traffic would negatively impact upon the asset as a result of the additional noise and vehicle movements. This would have a minor impact on this high value asset resulting in a temporary slight adverse effect.	None	Minor	Temporary Slight adverse	No change	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
LB25	Grade II Listed	1089020	FILBOROUGH FARMHOUSE	High	None	This asset is sited c. 975m to the north of the South Portal and c. 90m east of A226 Gravesend Road compound. The high value Grade II listed Filborough Farmhouse (LB25), and the Grade II listed Granary at Little Filborough Farm (LB30) and the Barn to North West of Filborough Farmhouse (LB99) are predicted to experience a temporary change to their setting (Application Document 6.2, Figure 6.6, Viewpoint S-(CH)06). The works for the ground preparation tunnel would include tall construction machinery that would be visible from these assets and intrusive in the otherwise gently undulating surrounding landscape, an area with which they have a historical connection as adjacent farmland. Due to the presence of tall construction machinery the good practice mitigation measure to screen construction compounds would not be effective in this location. This would result in a moderate magnitude temporary impact and a moderate adverse effect, which is assessed as significant. This is assessed to be moderate adverse, rather than large, due to the temporary nature of the construction activities and because the relationship between the three buildings, which is a key component of their setting that contributes to their value would not be affected.	Good practice	Moderate	Temporary moderate adverse	This asset is located c. 975m to the north of the South Portal. While the new landform at Chalk Park would be visible, this would not harm the value of the asset. There would be no change to noise levels around the asset and the lighting change to the night-time environment is not likely to be discernible.	None	None	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
LB263	Grade II Listed	1096327	SIR JOHN FALSTAFF PUBLIC HOUSE	High	None	The asset is sited adjacent to the A226 (Gravesend Road) which would be used as a long-term main online construction access route. The additional construction traffic would negatively impact upon the asset as a result of the additional noise and vehicle movements. This would have a minor impact on this high value asset resulting in a temporary slight adverse effect.	None	Minor	Temporary slight adverse	No change	None	No change	Neutral	South
LB27	Grade II* Listed	1089044	CHURCH OF ST MARY	High	None	Current peaceful rural surroundings that contribute to their value would be affected by an increase in noise but there would be little change to their visual surroundings both because of the distance to the construction activity and because their settings are largely enclosed by vegetation. In addition, the A226 would remain operational and therefore the Church of St Mary (LB27) would not be functionally separated from the community it serves to the west of the Order Limits. This would result in a minor impact to these high value assets and a slight adverse effect. This is assessed as slight, rather than moderate, adverse as the change to setting would cause only a small temporary change to the appreciation of the value of the assets.	None	Minor	Temporary Slight adverse	This asset is located over 500m to the north-east of the South Portal. The main alignment is unlikely to be visible, although the new landform in Chalk Park will be visible. The Project would not result in a discernible increase in traffic noise. At night, the increased lighting would not be directly visible but may increase the background lighting perceptible in the area (against the backdrop of existing light spill from Gravesend). Overall, this would be a slight change to the value of the asset, which would have a minor impact resulting in a slight adverse effect.	None	Minor	Slight adverse	South
LB28	Grade II Listed	1089045	EAST COURT FARMHOUSE	High	None	A226 Gravesend Road compound would be located c. 280m to the north-west. Current peaceful rural surroundings that	None	Minor	Temporary slight adverse	This asset is located c. 875m to the north of the South Portal. While the new landform at Chalk Park would be visible, this would not harm the value of the asset. There would be no change to noise levels around the asset and the	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						contribute to their value would be affected by an increase in noise but there would be little change to their visual surroundings both because of the distance to the construction activity and because their settings are largely enclosed by vegetation and a slight topographical rise to the west. This would result in a minor magnitude temporary impact and a slight adverse effect, which is assessed as not significant. This is assessed as slight, rather than moderate, adverse as the change to setting would cause only a small temporary change to the appreciation of the value of the asset.				lighting change to the night-time environment is not likely to be discernible.				
LB29	Grade II Listed	1089051	THE GEORGE INN	High	None	The setting of this asset is primarily formed by the surrounding modern residential development and the asset is sited c. 110m to the north of the existing route of the A2/M2. Construction activity is likely to cause temporary minor changes to its setting by introducing additional noise, lighting and potentially partial glimpses of construction machinery along the route of the A2 and for utility works and establishment of an NMU route c. 60m south of the asset, from the rear upper stories of some of the buildings. This would cause a temporary negligible adverse impact to this high value asset, resulting in a slight adverse significance of effect.	None	Negligible	Temporary slight adverse	The setting of this asset is primarily formed by its location on Hever Court Road and nearby historic buildings, situated close to the existing route of the A2/M2. In terms of long-term operational noise, there would be a negligible/no change compared to existing noise levels. The asset is located in a medium brightness urban area and the Project would not have an impact on its value due to lighting. The operational phase would increase the size of the A2 but this would not be discernible from the asset and consequently they would experience an impact of no change and neutral effect.	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
LB3	Grade II Listed	1054798	CHAPEL FARMHOUSE	High	None	The setting of this asset is primarily formed by the surrounding modern residential development and the asset is sited c. 110m to the north of the existing route of the A2/M2. Construction activity is likely to cause temporary minor changes to its setting by introducing additional noise, lighting and potentially partial glimpses of construction machinery along the route of the A2 and for utility works and establishment of an NMU route c. 60m south of the asset, from the rear upper stories of some of the buildings. This would cause a temporary negligible adverse impact to this high value asset, resulting in a slight adverse significance of effect.	None	Negligible	Temporary Slight adverse	The setting of this asset is primarily formed by its location on Hever Court Road and nearby historic buildings, situated close to the existing route of the A2/M2. In terms of long-term operational noise, there would be a negligible/no change compared to existing noise levels. The asset is located in a medium brightness urban area and the Project would not have an impact on its value due to lighting. The operational phase would increase the size of the A2 but this would not be discernible from the asset and consequently they would experience an impact of no change and neutral effect.	None	No change	Neutral	South
LB30	Grade II Listed	1089062	GRANARY AT LITTLE FILBOROUGH FARM	High	None	This asset is sited c.1km to the north of the South Portal, and c. 80m east of A226 Gravesend Road compound. The high value Grade II* listed Filborough Farmhouse (LB25), and the Grade II listed Granary at Little Filborough Farm (LB30) and the Barn to North West of Filborough Farmhouse (LB99) are predicted to experience a temporary change to their setting (Application Document 6.2, Figure 6.6, Viewpoint S-(CH)06). The works for the ground preparation tunnel would include tall construction machinery that would be visible from these assets and intrusive in the otherwise gently undulating surrounding landscape, an area with	Good practice	Moderate	Temporary moderate adverse	This asset is located c. 1km to the north of the South Portal. While the new landform at Chalk Park would be visible, this would not harm the value of the asset. There would be no change to noise levels around the asset and the lighting change to the night-time environment is not likely to be discernible.	None	None	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						which they have a historical connection as adjacent farmland. Due to the presence of tall construction machinery the good practice mitigation measure to screen construction compounds would not be effective in this location. This would result in a moderate magnitude temporary impact and a moderate adverse effect, which is assessed as significant. This is assessed to be moderate adverse, rather than large, due to the temporary nature of the construction activities and because the relationship between the three buildings, which is a key component of their setting that contributes to their value would not be affected.								
LB31	Grade II Listed	1096324	THE MOUNT	High	None	This asset is located within the bounds of RPG1 c. 115m south of the Order Limits and is separated from it by woodland. The construction activity would temporarily introduce additional noise, lighting and visible construction machinery to the setting of this asset, but this would only have a negligible impact on this high value asset resulting in a slight adverse effect.	None	Negligible	Temporary Slight adverse	The long-term operational noise change would not be discernibly different from existing noise levels. The existing A2 in the vicinity and the Brewers Road overbridge are already lit (see Figure 7.18, Application Document 6.3) although the Thong Lane Green Bridge would create a new light source. However, given the existing setting of the asset c. 300m south of the A2, the minor change to night-time setting is not assessed to cause harm to the value of the asset. Although the asset's setting is formed by RPG1, it also already includes the existing A2 dual carriageway, and the operation of the Project would not result in a discernible change within the setting, beyond the establishment of a cycleway on the PRow c. 125m north of the asset at the northern edge of Cobham Park and the redesign of the existing Halfpence Lane/Thong Lane roundabout in the north-western part of the park. This would not have an impact on LB31, and so the Project would therefore have a neutral effect.	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
LB4	Grade II Listed	1054827	ORCHARD HOUSE	High	None	The setting of this asset is primarily formed by the surrounding modern residential development and the asset is sited c. 110m to the north of the existing route of the A2/M2. Construction activity is likely to cause temporary minor changes to its setting by introducing additional noise, lighting and potentially partial glimpses of construction machinery along the route of the A2 and for utility works and establishment of an NMU route c. 60m south of the asset, from the rear upper stories of some of the buildings. This would cause a temporary negligible adverse impact to this high value asset, resulting in a slight adverse significance of effect.	None	Negligible	Temporary slight adverse	The setting of this asset is primarily formed by its location on Hever Court Road and nearby historic buildings, situated close to the existing route of the A2/M2. In terms of long-term operational noise, there would be a negligible/no change compared to existing noise levels. The asset is located in a medium brightness urban area and the Project would not have an impact on its value due to lighting. The operational phase would increase the size of the A2 but this would not be discernible from the asset and consequently they would experience an impact of no change and neutral effect.	None	No change	Neutral	South
LB78	Grade II Listed	1252853	BAYNARDS COTTAGE	High	None	LB78 is predicted to experience a temporary change to its setting. During construction, Utility Logistics Hub ULH13 would be established around 100m to the west and Ancient Woodland Mitigation Planting LE8.2 would subsequently take place to the west, south and east of the asset. This would result in a moderate magnitude temporary impact and a moderate adverse effect, which is assessed as significant.	Good practice.	Moderate	Temporary moderate adverse	The operation of the Project would not result in a change in noise levels in the vicinity of the asset. There may be a slight increase in lighting of the night-time environment due to the presence of lights along the main alignment leading to the South Portal. However, the lights would be located in a cutting c. 1km north-west of the asset and the light would be in the context of existing light spill from Gravesend. Ancient Woodland Mitigation Planting (LE8.2) would be established in the field immediately to the east and south of the asset, which is currently in use as arable farmland. This would effectively extend Shorne Woods northward adjacent to the asset. There would be an area of open grassland established as a buffer between the woodland planting and the property boundary of the asset. The connection of the asset with the arable landscape would remain to the north, visible from the principal elevation. However, the open arable land to the south would be replaced by woodland. This erosion of	Establishment of grassland buffer between the asset and the woodland planting.	Minor	Slight adverse	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
										the open agricultural landscape would result in a minor magnitude impact.				
LB79	Grade II Listed	1262054	THE ENGINE HOUSE, COBHAM HALL	High	None	This asset is located within the bounds of RPG1 c. 130m south of the Order Limits and is separated from it by intervening vegetation. The construction activity would temporarily introduce additional noise, lighting and visible construction machinery to the setting of this asset.	None	Negligible	Temporary Slight adverse	Although the asset's setting is formed by RPG1, it also already includes the existing A2 dual carriageway, and the operation of the Project would not result in a discernible change within the setting, beyond the establishment of a cycleway c. 130m north at the northern edge of Cobham Park and the redesign of the existing Halfpence Lane/ Thong Lane roundabout in the north-western part of the park. The long-term operational noise change would not be discernibly different from existing noise levels. The existing A2 in the vicinity and the Brewers Road overbridge are already lit (see Figure 7.18, Application Document 6.3) and therefore the night-time setting is not likely to be discernibly changed. The Project would not have an impact on this asset.	None	No change	Neutral	South
LB99	Grade II Listed	1341481	BARN TO NORTH WEST OF FILBOROUGH FARMHOUSE	High	None	This asset is sited c. 975m to the north of the South Portal and c. 60m east of A226 Gravesend Road compound. The high value Grade II* listed Filborough Farmhouse (LB25), and the Grade II listed Granary at Little Filborough Farm (LB30) and the Barn to North West of Filborough Farmhouse (LB99) are predicted to experience a temporary change to their setting (Application Document 6.2, Figure 6.6, Viewpoint S-(CH)06). The works for the ground preparation tunnel would include tall construction machinery that would be visible from these assets and intrusive in the otherwise gently undulating surrounding landscape, an area with which they have a historical connection as adjacent farmland. Due to the presence of tall construction machinery, the good practice	Good practice	Moderate	Temporary moderate adverse	This asset is located c. 975m to the north of the South Portal. While the new landform at Chalk Park would be visible, this would not harm the value of the asset. There would be no change to noise levels around the asset and the lighting change to the night-time environment is not likely to be discernible.	None	None	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						mitigation measure to screen construction compounds would not be effective in this location. This would result in a moderate magnitude temporary impact and a moderate adverse effect, which is assessed as significant. This is assessed to be moderate adverse, rather than large, due to the temporary nature of the construction activities and because the relationship between the three buildings, which is a key component of their setting that contributes to their value would not be affected.								
LB334	Grade II Listed	1070552	Hale Close	High	None	Hale Close is located within a discrete plot of land, slightly set back from the southern edge of Pilgrims Way. Its setting is influenced by its defined plot of land (relics of which survive from the illustrated 1869 OS map) and the rural character to the south of the building. The setting contributes in part to the significance of the building. Impacts to the asset will principally come from construction traffic along Pilgrims Way increasing noise. Mitigation would be in the form of good practice for construction.	Good practice	Minor	Temporary slight adverse	The asset is located 500m southeast of the Order Limits at the western Blue Bell Hill Site. Intervening properties on the northern side of Pilgrims Way and woodland prevent any visibility between the Order Limits and the asset; consequently the Order Limits do not contribute to the significance of the asset.	None	No change	Neutral	South
LB335	Grade II Listed	1070553	Little Culand, Farmhouse	High	None	Little Culand Farmhouse is located on the southern edge of Pilgrims Way, 190m south of the Order Limits. The setting of the farmhouse is principally informed by its location within the farmyard of Little Culand Farmstead (4744) and the buildings forming the farmstead. However, the original	Good practice	Minor	Temporary slight adverse	The asset does not hold any visibility to the Order Limits. This is due to the topography of Pilgrim's Way with the farmhouse located on a downslope; as well as surrounding vegetation creating an enclosed plot of land for the farmhouse.	None	No change	Neutral	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						layout and character of the farmstead has changed since the 1960s, with the original farm buildings (such as the timber barn of asset 4640) being replaced by large sheet metal sheds. Consequently, the setting plays a limited part to the significance of the asset. Impact to setting during construction would occur from an increase in noise along Pilgrim Way from construction traffic.								
CA4	Conservation Area		North Ockendon	High	Multi-utility network works would take place along the B186 within the Conservation which would introduce noise and construction traffic which would have a small but temporary impact on its aesthetic value.	The high-value designated North Ockendon Conservation Area (CA4), is partially located within the Order Limits, approximately 250m east of the M25. During the construction phase, the M25 compound would be established immediately to the south and south-west of the asset. A short-term online main construction route would be established through the Conservation Area, along Ockendon Road and the B186. Multi-utility network works would also take place areas along the B186. Construction of the main alignment and associated earthworks would take place c. 270m west of the asset. These activities would be mitigated through the good practice mitigation of appropriate screening of construction compounds and measures to reduce dust, noise and light (S326) and reinstatement of the agricultural land used for the construction compounds. Overall, with the implementation of mitigation this would	Screening of construction compounds, Good Practice, Reinstatement of Agricultural Land	Moderate	Temporary Moderate Adverse	North Ockendon (CA4) Conservation Area, which is of high value, is located approximately 250m east of the M25. The rural landscape surrounding the asset (albeit compromised to the west by the M25) makes a minor contribution to its overall value through its aesthetic and illustrative historical value as a rural settlement (Application Document 6.2, Figure 6.6, Viewpoint N-38). Operation of the Project would result in the presence of a new road c. 250m south-west of the asset, passing under the M25, and curving eastward through the currently rural landscape approximately 600m south of the asset. This would be mitigated by false cutting earthwork embankments along the main alignment to the south-east and south of Ockendon. The false cutting earthworks and overbridges would be visible in southward views out of the Conservation Area, from the PRow in the western hamlet and the B186 in the eastern hamlet. However, key Internal views identified in the Conservation Area Character Appraisal (London Borough of Havering, 2008c) would not be altered. Overall, the Project would result in a permanent impact of moderate adverse magnitude and a moderate adverse effect, which is significant	False cutting earthworks	Moderate	Moderate adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						result in a temporary impact of moderate adverse magnitude.								
CA6	Conservation Area		East Tilbury	High	None	The high value designated East Tilbury Conservation Area (CA6), is located approximately 30m east of the Order Limits and main works area and approximately 510m east of the proposed location of the main alignment and associated earthwork embankemnts. The Tilbury Viaduct would be constructed approximately 550m to the south-west of the asset, and the Northern Tunnel Entrance Compound would be established approximately 135m to the south of the asset. The Muckingford Road Utility Hub would be established c. 400m west of the Conservation Area. Multi-utility network works would take place within the agricultural land between East Tilbury and the main alignment. These construction activities would cause visual and auditory disturbance to the rural setting to the south-west of the Conservation Area, which makes a minimal contribution to its value. However, the works would be large in scale and intrusive in nature. These temporary construction activities would be mitigated through screening of construction compounds with fencing and good practice measures to reduce the impact of dust, noise and lighting. Following the implementation of mitigation, construction of	Screening of construction compounds, Good Practice	Moderate	Temporary moderate adverse, permanent slight adverse	East Tilbury (CA6) Conservation Area, which is of high value, is located approximately 510m east of the main alignment and associated earthwork embankments. The Tilbury Viaduct would be located approximately 550m to the south-west of the asset. As a settlement built as a 'garden village', the surviving rural landscape to the west, south and south-east of the Conservation Area makes a minor contribution to its value, through its aesthetic and illustrative historical value. However, it should be noted that a 299-unit housing development has recently been constructed on the western side of the asset, further reducing its connections with the agricultural landscape (planning reference 09/50045/TTGOUT). A 50-home development has also been constructed at Bata Mews immediately south of the Conservation Area (13/01163/FUL). The majority of the Conservation Area's value is derived from the evidential, historical and aesthetic value of its built form, features and open spaces, and from its associative historical value with Thomas Bata and its sister settlement in Zlín, in the Czech Republic, where the Bata company originated. The Project would result in the visible presence of tall infrastructure (Tilbury Viaduct) and earthworks through the agricultural landscape to the south-west of the Conservation Area, further eroding the rural setting in combination with the recently constructed developments mentioned above. While this would reduce the agricultural landscape in this direction, it would not be completely severed and several rural fields would remain adjacent to the south-western side of the asset. Noise levels would increase in the south-western part of the Conservation Area, although it should be noted that this area is historically industrial in character. Overall, the operation of the Project would result in a permanent impact of minor adverse magnitude and a slight adverse effect, which is not significant	False cutting earthworks on the northern side of the Tilbury Viaduct	Moderate	Moderate adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						the Project is assessed to result in a temporary impact of moderate adverse magnitude and a moderate adverse effect, which is assessed as significant.								
CA7	Conservation Area		West Tilbury	High	Construction of the Project would result in a permanent physical impact to the high-value West Tilbury Conservation Area (CA7). Construction of a utility access route and following that in the same location, an NMU route, would result in the removal of the 'gappy' hedgerow and bank that forms the northern boundary of the Great Common Field and of the Conservation Area itself. This would result in a minor impact and a slight, rather than moderate, effect due to the small scale of change to the overall value of the Conservation Area and due to mitigation.	A number of temporary construction activities would affect the asset, comprising the following: a. Creation of a utility access route and associated utility working area across the northern edge of the Great Common field within the asset b. A utility access route across open land immediately south of the Conservation Area c. Establishment of the Northern Tunnel Entrance Compound immediately to the south-east of the asset d. Construction of the main alignment approximately 185m to the east of the asset e. Utility access route across the fields immediately to the south of the asset between Gun Hill and Coopers Shaw Road f. Mains works construction access route (secondary access) along Coopers Shaw Road and Church Road immediately east of the asset.	Screening of construction compounds, Good Practice, archaeological excavation and recording (REAC Ref. CH001; AMS-OWSI No. 4)	Minor (permanent), Moderate (temporary)	Permanent Slight Adverse and Temporary Moderate Adverse	The asset's south-eastern extent would be approximately 195m to the west of the operational main alignment and Tilbury Viaduct. The Muckingford Road bridge over the A122 and earthworks would be located approximately 560m to the east of the northern part of the asset (Application Document 6.2, Figure 6.6, Viewpoints N-08, N-09 and N-11). These would greatly change the character of the agricultural land to the east of the asset, with the introduction of raised road infrastructure which would alter the views and the skyline and reduce the rural landscape between West and East Tilbury. Key views southward over the former marshes to the historically associated common land would remain, as would views to the west and north. Key views towards West Tilbury and the tower of the Church of St James from the landscape to the south-west would also be preserved. The introduction of the landscape earthworks to the south of the North Portal would not prevent views across the river to Kent. Several areas within CA7 would see a noticeable increase in noise levels due to the operational Project, largely in open land away from existing roads. The eastern part of the Great Common Field, around the Grade II* listed "Marshall's Cottages" (LB90) would see an increase of 5db to 10db (a moderate adverse change in noise terms). The southern part of the Conservation Area, to the south of the Grade II* listed "Church of St James" (LB33) would see a similar increase. Much of the eastern part of the Conservation Area at Low Street would also see a 5db to 10db increase (in the rural land away from the existing Church Road). These noise changes would noticeably reduce the rural character of the Conservation Area.	None	Moderate	Moderate adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
CA9	Conservation Area		Shorne Village	High	None	The high value designated Shorne Conservation Area (CA9) is located approximately 500m south-east of the Order Limits and is predicted to experience a temporary change to its setting. During the construction phase, the Southern Tunnel Entrance compound, utility diversion works, and the construction of the main alignment would occupy much of the middle ground of one key external view identified in the Conservation Area Appraisal (Gravesham Borough Council, 2017d). Given the high elevation of the vantage point (Application Document 6.2, Figure 6.6, Viewpoint, S-32) it would not be possible to mitigate this impact. This would result in a temporary impact of minor adverse magnitude and a slight adverse effect, which is assessed as not significant	None	Minor adverse	Temporary Slight adverse	CA9 Conservation Area derives its value primarily from the historical, evidential and aesthetic value of its built form and historic open spaces, although it also derives some value from its setting, including a number of key internal and external views. One such key external view (identified in the Conservation Area Appraisal (Gravesham Borough Council, 2017d)) overlooks the area within the Order Limits (Application Document 6.2, Figure 6.6, Viewpoint S-32), and is from a PRoW immediately west of the Conservation Area boundary, although similar views (somewhat filtered by seasonal vegetation) are likely to be possible with the adjacent parts of the Conservation Area. This wide-ranging panoramic view encompasses a foreground of the arable chalk landscape (small arable fields, followed by the open prairie fields and golf course within the Order Limits), a middle ground of reclaimed marshland and the River Thames, to distant views of Essex beyond. The view contains a wide-ranging mix of agricultural, industrial, infrastructure and residential elements. The foreground is predominantly agricultural, apart from prominent electricity pylons and the Thames View Crematorium (immediately to the north of the Order Limits). In itself, this view makes a minor contribution to the overall value of the Conservation Area, through its aesthetic value. Woodland will be established in the NDEP areas c. 210m to the south-east and 220m to the south of Shorne Conservation Area. As the setting of the Conservation Area in these directions is enclosed and already contains a large amount of woodland, this is not assessed to result in harm to the value of the asset. During the operational phase the main alignment and South Portal area would be visible within the middle ground of this view. Large areas of the land inside the Order Limits within the view would be returned to landowners, and other areas would see a change in use from arable to areas of new contoured earthworks with woodland edge planting (Figure 2.4: Environmental Masterplan (Application Document 6.2) LE2.2), woodland with	None	Minor	Slight adverse	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
										non-native species (EMP element LE2.11) and species-rich grassland (Figure 2.4: Environmental Masterplan (Application Document 6.2) LE1.3). Given the high elevation of the vantage point, it will not be possible to mitigate these changes to the key view. However, while the Project would introduce new elements within the middle ground, it should be noted that this would be in the context of a wide-ranging panoramic view which already contains a mix of rural, industrial, infrastructure and residential elements. The changes to this key view would result in a minor magnitude permanent impact.				
CA10	Conservation Area		Thong Conservation Area	Medium	CA10 would experience a limited physical impact, comprising the widening of Thong Lane at the northern edge of the area and slight encroachment within the gardens of Heroes buildings on the western side of the road. This would result in a permanent minor magnitude impact to the asset.	Thong Conservation Area (CA10) is predicted to experience a temporary change to its setting from construction of the main alignment and associated earthworks and landscaping, the A2 compound and the southern tunnel entrance compound. This would temporarily introduce additional noise, lighting and visible construction activity and machinery to the asset's settings (Application Document 6.2, Figure 6.6, Viewpoint S-25). This would be mitigated by screening of construction compounds with hoarding (S325.08), and good practice construction procedures to reduce the impact of noise, dust and lighting. This would result in a temporary impact of moderate adverse magnitude and a moderate adverse effect on the medium value Thong Conservation Area (CA10) which is assessed as significant	Screening of construction compounds	Temporary Moderate, Permanent minor	Temporary moderate adverse, permanent slight adverse	The northernmost part of the medium-value designated Thong (CA10) Conservation Area extends within the Order Limits. Utility diversions to the west of Thong would require the movement of an existing electricity pylon closer to the edge of Thong Conservation Area, placing it approximately 75m west of the Conservation Area, as opposed to the current distance of approximately 200m. This would add to the change to the setting of the Conservation Area, introducing additional infrastructure in close proximity that would increase the enclosure of the current open setting, and consequently affect its value. In addition, the existing key northern approach to the Conservation Area (identified in the Conservation Area Appraisal (Gravesham Borough Council, 2017e)) on the historic route of Thong Lane would be altered with new woodland planting screening along a new curving road alignment. This would alter the historic approach to the Conservation Area and screen the existing key views towards the asset on the approach from the north. No mitigation has been identified that could reduce these impacts to the Conservation Area. The alteration of the northern approach into the Conservation Area and the large changes to elements of its setting that contribute to its value would affect the value of the Conservation Area. During the operational phase, the main alignment would be located approximately 50m to the west of Thong (CA10) Conservation Area, passing to the west of the asset to meet the rising earthworks of the M2/A2/Lower Thames	Earthworks and woodland planting to screen part of A122 route	Moderate adverse	Moderate adverse	South

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
										<p>Crossing junction approximately 125m south-west of the asset. The landscape earthworks to screen the M2/A2/Lower Thames Crossing junction would raise the ground level significantly to the south-west, and the M2/A2/Lower Thames Crossing junction would include flyover bridges. The character of the open agricultural land to the north-west, west and south-west of the asset would be changed to infrastructure and landscaping, and key external views towards the asset across the agricultural land to the west would be adversely altered.</p> <p>The landscape to the west of the asset does not form as prominent a background in views out of the Conservation Area as does Randall Wood to the east. However, glimpsed views westward from along Thong Lane within the Conservation Area would be slightly altered. The view out of Thong (CA10) Conservation Area from the PRoW heading west from Thong Lane would be far more noticeably altered when viewed from the western edge of the Conservation Area. The key view looking south to the asset when approached from the north along Thong Lane would also be altered, with the realignment of the historic route of Thong Lane, and woodland planting which would screen views to the Conservation Area.</p> <p>While views looking east from Thong (CA10) Conservation Area to Randall Wood would not be altered, the external views westward towards the asset from the edge of the wood itself would be altered, with the Project visible in the background. Therefore, all of the key long-distance views of the Conservation Area identified within the Conservation Area Appraisal (Gravesham Borough Council, 2017e) would be adversely altered. Apart from the views from the north, key internal views within the Conservation Area would not be altered. However, a key characteristic of the Conservation Area, appearing 'islanded' within a rural landscape, would be compromised by the shrinking of the 'island' within which it sits.</p>				

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
										<p>The long-term operational noise change from the existing baseline would not be discernible from most parts of the Conservation Area (Figure 12.8, Application Document 6.2). In the western part of the Conservation Area, west of Thong Lane and in most cases to the rear of the properties along the lane, the operational noise would be 5 to 9.9dBA higher than the present which Chapter 12 assesses as a moderate adverse change. The introduction of additional traffic noise which was not previously present in the rural setting would cause a degree of harm to its aesthetic value.</p> <p>Regarding Lighting, according to Chapter 6 Appendix 7.9 (Application Document 6.2) states “there would be a perceived change in the night-time environment due to new sources of lighting (LED luminaires) and vehicle lights at the M2/A2/Lower Thames Crossing junction, in particular on the elevated Project road southbound to A2 westbound viaduct structure. Additional light sources would also be present along Thong Lane and on the Thong Lane green bridge south. The street lighting along the A2 corridor would change to LED luminaires. Installed on lower columns, emitting reduced light spill and skyglow compared with the existing luminaires, the prominence of the new lighting would be limited and perceived in the context of existing lighting. However, due to the widened corridor, the extent of lighting would be increased, with additional lanes of traffic and vehicle lights evident. The perception of lighting would be greatest further north in the LLCA away from existing lighting along the A2 corridor”, i.e. in the vicinity of Thong Conservation Area.</p> <p>The impacts to the Conservation Area would be mitigated by the Thong Lane green bridge to reduce visibility of the main alignment, a wooded circle around Thong helping to retain part of the rural setting (Design Principle S2.01), native woodland planting on the slopes of the M2/A2/Lower Thames Crossing junction earthworks to the south-west to screen the infrastructure of the junction (Figure 2.4: Environmental Masterplan (Application Document 6.2) LE2.1, 2.2,</p>				

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
										2.3, 2.4) and establishment of new woodland planting at the M2/A2/Lower Thames Crossing junction to help reduce the effects of new lighting on the night-time environment. Overall, these impacts to its views and setting would adversely affect the Conservation Area, although it would still be understandable as a linear village with no further change (after construction) to the relationships between the buildings and it would maintain its relationship with Thong Lane and the land to the west. Therefore, this would result in a moderate magnitude permanent impact to this medium-value asset and a moderate adverse effect, which is assessed as significant.				
CA11	Conservation Area		Cobham Village	High	The Order Limits extends partially within the asset along Halfpence Lane. The asset is predicted to experience a temporary change to its rural character from proposed utilities works along Halfpence Lane.	The high value designated Cobham Conservation Area (CA11) is located partially within the Order Limits and is predicted to experience a temporary change to its rural character from proposed utilities works along Halfpence Lane within and adjacent to the Cobham Conservation Area (CA11). This would result in a temporary impact of minor adverse magnitude and a slight adverse effect, which is assessed as not significant	None	Minor adverse	Temporary Slight adverse	Cobham (CA11) Conservation Area is located partially within the Order Limits, at an area proposed for utilities works along Halfpence Lane, which will have been completed prior to the Operational Phase. The main alignment and associated landscaping would be located approximately 925m north of the asset. Halfpence Lane, included within the Order Limits, makes a minor contribution to the setting and character and appearance of the asset, as it forms a historic routeway and an approach to the village from the A2. The main alignment area within the Order Limits does not contribute to the value of the asset and is largely screened by intervening woodland and undulating topography. From the very north-eastern corner of the Conservation Area within Cobham Hall (RPG1), distant glimpses of the main area within the Order Limits are possible in the vicinity of Brewers Road but in themselves do not contribute to the value of the asset. The long-term operational noise change would not be discernibly different from existing noise levels. During operation, the remainder of the area within the Order Limits would be largely screened from the asset by vegetation. However, there is potential for distant glimpsed views of the tallest elements of the M2/A2/Lower Thames Crossing junction (approximately 1.1km to the north-west) from the upper stories of buildings within the Conservation Area during the winter	None	No change	Neutral	South

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										months (Application Document 6.2, Figure 6.6, Viewpoint S-(CH)07). Such distant glimpsed views would not affect the value of the Conservation Area. While night-time lighting will increase due to the widening of the A2 corridor, this will be in an area which is already lit (see Appendix 7.9 (Application Document 6.2) and Figure 7.18 (Application Document 6.3)), therefore the change is unlikely to be of a scale which would harm the value of the asset.				
CA14	Conservation Area		Riverside, Gravesend	High	None	The high-value Gravesend Riverside Conservation Area (CA14) would experience an impact from the use of Canal Road within the asset as a short-term online main works construction access route linking the Milton Compound with the Southern Tunnel Entrance Compound. The increase in traffic (within this already urban area) would result in a temporary impact of minor adverse magnitude and a slight adverse effect, which is not significant	None	Minor adverse	Temporary Slight adverse	No change	None	No change	Neutral	South
RPG1	Grade II* Registered Park and Garden	1000182	Cobham Hall	High	During the construction phase, a cycleway would be constructed along the northern edge of RPG1 parallel to HS1 and the park boundary (partially along an existing PRow) (Application Document 6.2, Figure 6.6, Viewpoint S-(CH)02),	Long-term online main construction routes would be present along the A2 and M3. Construction activity would take place along the A2 and the Brewers Road overbridge would be replaced. The visual impact of construction activity along the A2 would be mitigated by the use of hoarding of a sensitive appearance, such as a plain and dark green style (REAC Ref CH001; AMS-OWSI No. 1, Application Document 6.3).	The impact of construction activity adjacent to Brewers Road would be mitigated by the use of hoarding of a sensitive appearance, such as plain and dark green (REAC Ref CH001; AMS-OWSI No. 1). Archaeological excavation and recording would also take place	Minor	Permanent Slight adverse	RPG1 would be impacted by the presence of the widened A2 and realigned Thong Lane and Brewers Road bridges over the A2, which border the northern edge of the park. The reduction in vegetation along the northern edge of the park with the loss of trees from the centre of the A2 corridor, and the increase in the size of the existing infrastructure corridor in this location would increase the visibility of modern infrastructure within and immediately adjacent to the Registered Park and Garden. According to the LVIA Chapter 7 Appendix 7.9, Table 3.3 (Application Document 6.3) there would be “a perceived change in the night-time environment” within the Local Landscape Character Area that includes Cobham Park “due to the change in street lighting (LED luminaires). Installed on lower	Mitigation measures would include planting (LE2.1 Native Woodland) around the new LTC/A2 junction to reduce the visual impacts to Cobham Park and the construction of a green bridge for the Brewers Lane overbridge. The majority of the woodland along the	Minor	Slight adverse	South

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					<p>which would result in the removal of small areas of trees and vegetation immediately to the south of HS1 and to the east and west of Brewers Road within RPG1. Multiple utility works would take place along Brewers Road and Halfpence Lane within RPG1 but would not cause removal of trees within the park. Other multi-purpose utility works would take place within the park south of the A2, east and west of Park Pale, and a Park Pale-A2 link would be constructed, resulting in the removal of trees in these areas. The removal of trees would take place in a strip of land located between the A2 and HS1, already physically severed from the rest of the park.</p>		<p>during groundworks within RPG1 to mitigate the physical impact to below-ground archaeological remains associated with RPG1, such as the park pale. Vegetation replanting west of Park Pale to restore the screening of the A2 (Linear Belt Shrubs and Trees LE2.4).</p>			<p>columns, emitting reduced light spill and skyglow compared with the existing luminaires, the prominence of new lighting would be limited and perceived in the context of existing lighting. Additional light sources would be present at the Thong Lane green bridge south in the Higham Arable Farmland (sub area Thong) LLCA. However, this would be seen in the context of existing lighting along the A2." By 2045, "the establishment of tree and shrub belt planting along the southern edge of the modified A2 corridor would to some extent help reduce the effects of new lighting on the night-time environment." Given that the existing A2 corridor is already lit, it is not assessed that the lighting associated with the Project would result in adverse impacts in heritage terms.</p> <p>The permanent alterations to the asset would be minimal and would occur within peripheral areas, such as the strip between the A2 and HS1 which has already been physically severed from the rest of the park. The vast majority of the park would not experience a physical impact and the peaceful, rural character would be largely preserved. While the presence of infrastructure to the north of the park would be increased, this is on the line of existing infrastructure. Furthermore, the creation of the green bridges would create a green link between the park and Shorne Woods with which the asset is historically associated</p>	<p>northern edge of the park south of HS1 would be retained, which would maintain some visual screening.</p>			

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SM5	Scheduled Monument	1002199	Earthworks near church, West Tilbury	High	None	A mains work construction secondary access routes would be situated along Coopers Shaw Road and Church Road c. 170m to the east of the asset. Utility works would take place across the open land immediately to the south-west of the asset, situated at the bottom of Hall Hill. The Northern Tunnel Entrance Compound would be located c. 650m south-east of the asset. These works would not alter its relationship with West Tilbury and the Church of St James nor or impede long-distance views across the former Tilbury Marshes. The visual disturbance to the semi-rural setting of the asset would result in a minor impact. The minor impact is assessed to result in a slight adverse effect rather than moderate effect due to the scale and nature of the impacts and the fact that the primary elements of the setting that contribute to the value of the asset will not be harmed.	Good Practice	Minor	Slight adverse	The operational alignment (at Tilbury Viaduct) would be located c. 920m east of the asset. Parts of the operational alignment further to the south-east are likely to be distantly visible from the asset, but this will not harm its value.	None	No change	Neutral	North
SM6	Scheduled Monument	1009286	Causewayed enclosure and Anglo-Saxon cemetery 500m ENE of Heath Place	High	None	The high value designated causewayed enclosure and Anglo-Saxon cemetery 500m east-north-east of Heath Place (SM6) is located outside the Order Limits, but immediately to the north of the proposed Brentwood Road Compound and Brentwood Road Utility Hub, and c. 100m west of an online mains works construction access route. Utility diversion works for multi-utility	Good Practice, screening of construction compound	Temporary moderate	Temporary moderate adverse	The high-value designated causewayed enclosure and Anglo-Saxon cemetery 500m east-north-east of Heath Place (SM6) would be located upslope from the false cutting earthworks (c. 275m to the south) and the operational alignment (c. 325m to the south). The Project design has avoided the use of tall noise barriers at this location to reduce the visual impact to the asset. However, there would be clear views from the location of the asset towards the Project, although this would be located within a false cutting that would somewhat restrict views to the road and associated traffic. Traffic along the operational Project would be clearly audible from the asset,	The Project would be located within a false cutting to reduce visibility.	Moderate	Moderate Adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						networks would also take place c. 65m east of the asset. The main alignment and false cutting earthworks would be constructed from c. 275m to the south of the asset. These activities would introduce noise and visual intrusion into the setting of the asset, introducing intrusive features in views from the asset to the south, which contribute to its value. The good practice mitigation of appropriate screening of construction compounds, and dust and noise reduction measures, would reduce the impact but would not fully mitigate it due to the close proximity between the Brentwood Road Compound and SM6. This is assessed to result in a moderate adverse impact and a moderate (rather than large) effect due to the scale and temporary nature of the changes to its setting.				with a noise increase of 3db – 5db. The operational alignment would also be located along the base of the dry valley with which the asset is associated. As a result of the Project, some Prehistoric to Roman archaeological sites associated with the asset within the Order Limits would have been removed and replaced by the operational alignment. This change to the setting of the asset would have a permanent impact of moderate adverse magnitude and a moderate adverse effect, which is assessed as significant. The effect is assessed as moderate rather than large due to the scale of change to the overall setting and lack of physical impacts to the asset.				
SM7	Scheduled Monument	1009287	Springfield style enclosure and Iron Age enclosures south of Hill House, Baker Street.	High	None	The high value Springfield' style enclosure and Iron Age enclosures south of Hill House, Baker Street (SM7) is located adjacent to the Order Limits. The working area for buried utility diversions would be located directly adjacent to the eastern end of the scheduled area. Consequently the asset would be preserved in situ. The associated non-designated high value Bronze Age and Iron Age cropmark complex (2078) that surrounds the scheduled area would be physically impacted by the utility diversion (as	None	Permanent minor adverse	Permanent slight adverse	The utilities would be buried and would not create any visual intrusion during operation. The operational A122 would not be clearly visible and the noise would increase by only c. 1 decibel.	Landscape earthworks and planting would reduce visibility.	No change	Neutral	North

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						assessed above). The loss of part of these associated archaeological remains would negatively affect the setting of the scheduled monument as they form part of the same wider area of activity and make a key contribution to its value. The loss of the majority of the Orsett cropmark complex (SM1) to the west would also affect the setting of this asset by removing additional archaeological remains which are broadly contemporary with elements of SM7. Other Late Prehistoric archaeological remains would survive unharmed within the setting of this asset, such as 261 and 268. Overall, the removal of some associated archaeological remains of 2078 and SM1 would have a permanent impact of minor adverse magnitude on this high-value asset, resulting in a slight adverse effect after mitigation, which is not significant. A slight rather than a moderate adverse effect is considered appropriate due to the limited area of associated remains which would be disturbed and the fact that the core concentrations of settlement activity would not be harmed.								
SM9	Scheduled Monument	1012185	Second World War anti-aircraft battery at Bowaters Farm	High	None	The asset would be located approximately 165m east of the Northern Tunnel Entrance compound, utilities diversion works, and immediately to the west of an area of the Order Limits in which works would be carried out to	Screening of construction compounds, Good Practice	Minor	Temporary Slight Adverse	The asset would be located approximately 450m east of the operational alignment and would have no clear views towards it (Application Document 6.2, Figure 6.6, Viewpoint N-(CH)08 and N-06). Views in this direction are not a key aspect of its setting. Traffic on operational main alignment would be audible (a moderate adverse change in noise terms of 5db to	None	Minor adverse	Slight adverse	North

Project ID	Designation	Source reference	Name	Value	Construction physical impact	Construction setting impact	Construction mitigation	Overall construction impact	Construction effect	Operation impact description	Operation mitigation	Operation impact	Operation effect	North or South of River Thames
						establish ecological mitigation areas. These activities would introduce noise and visual impacts to the setting of the asset. Although the overgrown nature of the asset means that direct views would be limited (Application Document 6.2, Figure 6.6, Viewpoint N-(CH)08 and N-06), construction activity is likely to be clearly audible. This would alter the setting of the asset but would not change its most important characteristics				10db) and this would constitute an adverse change in its setting. The ecological mitigation area to the east would comprise open mosaic habitat and would not impede views in this direction or alter the relationship between the anti-aircraft battery and contemporary defences at Coalhouse Fort (SM14). The effect is considered to be slight rather than moderate due to the nature and scale of change to the setting of the asset.				
SM10	Scheduled Monument	1012964	Romano-British villa and 19 th century reservoir in Cobham Park	High	None	Introduction of additional traffic, light and noise associated with construction.	None	Negligible	Temporary Slight adverse	The long-term operational noise change would not be discernibly different from existing noise levels. Operation of the Project would not result in a discernible change within the setting, beyond the establishment of an NMU route c. 80m to the north of the asset, at the northern edge of Cobham Park and the redesign of the existing Halfpence Lane/Thong Lane roundabout in the north-western part of the park. The existing A2 in the vicinity and the Brewers Road overbridge are already lit (see Figure 7.18, Application Document 6.3) and therefore the night-time setting is not likely to be discernibly changed.	None	No change	Neutral	South
SM12	Scheduled Monument	1019106	Roman barrow 260m north-east of South Ockendon Hall	High	None	None, major construction activity would be located c. 470m to the north of the asset and would cause no change to elements of its setting that contribute to its value.	None	No change	Neutral	The operational Project would cause an increase in noise at this location (5db to 10db a moderate adverse change in noise terms), causing a small change to the setting of the asset which would have a negligible impact on its overall value. The main alignment would not spatially separate the asset from the sites of the potentially associated former barrows located along the slight ridgeline to the south of the asset.	None	Negligible	Slight adverse	North
SM13	Scheduled Monument	1021092	Tilbury Fort	Very High	None	There would be an aural and visual impact from construction traffic on Fort road within the Order Limits and mains works area c. 230m to north of the asset, and a similar impact from the road immediately north of Fort Road which would be	Good Practice	Negligible	Temporary Slight adverse	The asset is located c. 19km west of the proposed North Tunnel Portal, although this would be obscured by pylons and structures at the Tilbury Sewage Treatment Works (Application Document 6.2, Figure 6.6, Viewpoint N-01 and N-(CH)01-06) and screened by landscape earthworks. The remaining open landscape view from the fort to West Tilbury would not be obstructed by	None	No change	Neutral	North

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						used as a long-term online mains works construction access route.				the Project, the closest element of which would be located approximately 865m east of West Tilbury. The landscape earthworks proposed to the south of the North Portal would increase the height of the land in this area. This land has already been raised by landfill, obscuring views between Tilbury Fort (SM13) and Coalhouse Fort (SM14) to the east. The landscape earthworks would increase this height by approximately 8.5m from the current height at their maximum (and by approximately 4.5m from the permitted height of the current landfill operation) but would create no further change to the setting of Tilbury Fort. The operation of the Project would result in no change.				
SM14	Scheduled Monument	1013943	Coalhouse Fort battery and artillery defences	Very High	None	The land within the Order Limits immediately to the west of the asset would be used as a light vehicle access route, which will not involve excavation of a fixed trackway (although vehicle matting may be placed). Groundworks will take place in the fields immediately west and north of the asset to establish ecological mitigation areas. Construction of the tunnel portal would take place c. 1.3km west of the asset and associated earthworks and new landforms of Tilbury Fields would be constructed (within the southern tunnel entrance compound) c. 1.1km west of the asset. Overall, the noise, lighting and visual intrusion caused by construction activities would result in a minor magnitude of impact. The effect is assessed as moderate rather than large due to the character of the impacts, the distance of much of the construction activity and their temporary nature.	Good Practice	Negligible	Temporary slight adverse	There would be no change to noise levels around the asset. The main alignment and tunnel portal c. 1.3km to the west of the asset would be screened from view by earthworks. The Tilbury Fields landscape earthworks would be slightly visible from the upper parts of the fortifications, as glimpsed views through trees beyond the raised ground of East Tilbury landfill against a backdrop of Tilbury substation and Tilbury Port (Application Document 6.2, Figure 6.6, Viewpoint N-(CH)09). Ecological mitigation areas would be present immediately west of the asset: LE6.41 Marsh and Wet Grassland-- Coastal Grazing Marsh; LE6.12 Water Bodies and Associated Plants-- Shallow Scrape; and LE6.2 Banks and Ditches and also to the north of the asset: LE8.6 Translocated Acid Grassland. The ecological mitigation landscaping would maintain the current open areas which contribute to the value of the asset. The main alignment and earthworks would not harm the relationship between the asset and associated defence features or major topographical features such as the surrounded reclaimed marshes, the River Thames and the southern bank.	None	No change	Neutral	North

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SM17	Scheduled Monument	1013658	New Tavern Fort, Gravesend, including Milton Chantry	High	None	Order Limits is located c. 1.05km east and 1.34km north-east of the asset. A short-term online main construction route will pass through the Conservation Area along Canal Road/Ordnance Road. 'Short-term – Online – Main' routes are generally used for initial access, primarily for site setup works. Once the appropriate offline accesses are created, the short-term routes would not be used for HGV construction traffic other than for very specific works (see Outline Construction Traffic Management Plan, Application Document 7.14). There will be an aural and visual impact from the construction traffic this route.	None	Negligible	Temporary Slight adverse	None	None	None	No change	Neutral	South
SM21	Scheduled Monument	1004226	Roman enclosure SE of Vagniacae	High	None	Impact caused to semi-rural setting by construction traffic on adjacent existing A2 dual carriageway, which will be utilised as a long-term online main construction access route.	None	Negligible	Temporary Slight adverse	None. Application Site is located c. 200m to the north across the existing A2 and A2260. Operational elements in this part of the Application Site will comprise new below-ground multi-utility services. The noise levels in the vicinity of the asset will not be increased by the Project.	None	No change	Neutral	South	
SM22	Scheduled Monument	1005140	Springhead Roman site	High	None	Impact caused to semi-rural setting by construction traffic on adjacent existing A2 dual carriageway, which will be utilised as a long-term online main construction access route.	None	Negligible	Temporary Slight adverse	None. Application Site is located c. 160m to east across the existing A2 and A2260. Operational elements in this part of the Application Site will comprise new below-ground multi-utility services. The noise levels in the vicinity of the asset will not be increased by the Project.	None required	No change	Neutral	South	

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