

Lower Thames Crossing 9.8 Environmental Statement Addendum

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Lower Thames Crossing

9.8 Environmental Statement Addendum

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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:
- 6.1 Environmental Statement [[APP-138](#) to [APP-155](#)]
 - 6.2 Environmental Statement - Figures [[APP-156](#) to [APP-331](#)]
 - 6.3 Environmental Statement - Appendices [[APP-332](#) to [APP-485](#)]
 - 6.4 Environmental Statement - Non-Technical Summary (NTS) [[APP-486](#)]
- 1.1.2 It is intended that this document remains a live document throughout Examination and would be used to track updates and amendments to the Environmental Statement documents, when required. Further amendments or points of clarification which arise through Issue Specific Hearings, Written Representations, Written Questions or other relevant elements of the Examination process, would be incorporated into this document accordingly. This document will be updated and re-submitted for each of the Examination Deadlines.

1.2 Document structure

- 1.2.1 Section 2 of this document details the updates to the various chapters of the Environmental Statement [[APP-138](#) to [APP-155](#)] since the DCO submission, and sets out amendments accordingly within Table 2.1 and Table 2.2.
- 1.2.2 Section 3 of this document details the updates to the various figures that accompany the Environmental Statement [[APP-156](#) to [APP-331](#)] since the DCO submission, and provides cross-references to the amended and re-issued figures within Table 3.1 and Table 3.2.
- 1.2.3 Section 4 of this document details the updates to the various appendices that accompany the Environmental Statement [[APP-332](#) to [APP-485](#)] since the DCO submission, and sets out amendments and provides cross-references to the amended and re-issued appendices within Table 4.1 and Table 4.2.
- 1.2.4 Section 5 of this document details the updates to and errata identified within the Environmental Statement Non-Technical Summary [[APP-486](#)] which have been identified since the DCO submission, consistent with the updates identified in Sections 2 to 4 of this Addendum.
- 1.2.5 The attached appendices present topic-specific information as identified within Sections 2 to 5 of this document.
- 1.2.6 A summary of the Application Documents within the Environmental Statement which have been updated and reported on in this ES Addendum is provided in Section 6.

Document contents

- 1.2.7 Within the tables identified above, each row describes an amendment or update to the Environmental Statement. Each update is identified by Document Reference, location within the document, reason for amendment and amendment required. In most cases the original chapter or appendix has not been re-issued as a new version and the relevant rows within the ES Addendum tables form the record of the update to that document.
- 1.2.8 Where the update cannot simply be presented as a row in a table, the relevant document has been updated and is submitted as an updated version alongside the ES Addendum at the same Deadline. This is the case for some chapter and appendix updates and for all updates to figures. Information on the updated version of each document is provided in the tables alongside the description of the change. The Examination Library reference numbers will be added for relevant rows at the next subsequent update of this ES Addendum.
- 1.2.9 Within the tables identified above, text shown in blue font with a strikethrough indicates text which is now removed from the relevant section of the Environmental Statement. Text shown in green font indicates text which is updated or new at the according submission Deadline, as defined by the Planning Inspectorate.

Exclusions

- 1.2.10 This ES Addendum tracks updates and amendments to all ES chapters, figures and appendices with the exception of changes to control documents, as these are considered live documents and may be subject to more extensive change than can reasonably be tracked in the ES Addendum.
- 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, First Iteration of Environmental Management Plan [[APP-336](#)]
 - b. 6.3 Environmental Statement - Appendix 2.2 - Code of Construction Practice, First Iteration of Environmental Management Plan - Annex A - Outline Site Waste Management Plan [[APP-337](#)]
 - c. 6.3 Environmental Statement - Appendix 2.2 - Code of Construction Practice, First iteration of Environmental Management Plan - Annex B - Outline Materials Handling Plan [[APP-338](#)]
 - 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 [[APP-339](#)]
- 1.2.12 Where updates are made to the control documents, these will be republished as revised versions at the relevant examination deadline. Where only minor corrections are required, these are identified in the Errata Report (Version 2, and subsequent versions). These corrections would then be incorporated into the next published revision of the control document.

2 Environmental Statement chapter updates

2.1 Section 51 submission December 2022

2.1.1 Table 2.1 outlines amendments which have been identified since submission of the DCO application in relation to the chapters of the Environmental Statement. These amendments were reported within the Errata Report (Version 1.0) [\[AS-004\]](#) published by the Examining Authority on 22 December 2022.

Table 2.1 Environmental Statement chapter updates December 2022

Document reference	Reason for amendment	Environmental Statement amendment December 2022
6.1 Environmental Statement - Chapter 2 - Project Description [APP-140]	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: b. A minimum of 30 individual specimen trees would be planted as replacement for 40 lost veteran trees (REAC Ref. LV032).
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] .

Document reference	Reason for amendment	Environmental Statement amendment December 2022
6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]	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 .

2.2 Deadline 1 updates

2.2.1 Table 2.2 outlines amendments which have been identified through pre-examination and examination in relation to the chapters of the Environmental Statement and are submitted to the Examining Authority at Deadline 1 (18 July 2023).

Table 2.2 Environmental Statement chapter updates – Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment July 2023										
6.1 Environmental Statement - Chapter 2 - Project Description [APP-140]	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.										
6.1 Environmental Statement - Chapter 6 - Cultural Heritage [AS-044]	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>Section 6.4, Section 6.6, Table 6.4 and Table 6.8 of ES Chapter 6 are amended to:</p> <p>Table 6.4 Summary of cultural heritage assets</p> <table border="1"> <thead> <tr> <th>Heritage assets</th> <th>Value</th> <th>South of the River Thames</th> <th>River Thames</th> <th>North of the River Thames</th> </tr> </thead> <tbody> <tr> <td>Built heritage</td> <td>High</td> <td>1 (RPG) 3 (CA) 105-106 (LB)</td> <td>n/a</td> <td>2 (RPG) 6 (CA) 177 (LB)</td> </tr> </tbody> </table> <p>Paragraph 6.4.110 is amended to delete bullet point c: c. 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:</p>	Heritage assets	Value	South of the River Thames	River Thames	North of the River Thames	Built heritage	High	1 (RPG) 3 (CA) 105-106 (LB)	n/a	2 (RPG) 6 (CA) 177 (LB)
Heritage assets	Value	South of the River Thames	River Thames	North of the River Thames								
Built heritage	High	1 (RPG) 3 (CA) 105-106 (LB)	n/a	2 (RPG) 6 (CA) 177 (LB)								

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<p>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:</p> <p>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, 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>

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<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> <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</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023														
		<p>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> <p>Table 6.8 Summary of cultural heritage assets</p> <table border="1"> <thead> <tr> <th>Impact Description</th> <th>Value</th> <th>Impact Magnitude</th> <th>Significance of effect</th> <th>Significance</th> </tr> </thead> <tbody> <tr> <td>Permanent Impact to the curtilage of high value Grade I listed Gadshill Place (LB241)</td> <td>High</td> <td>Minor</td> <td>Permanent slight adverse</td> <td>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 7 - Landscape and Visual [APP-145]</p>	<p>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.</p>	<p>Sections 7.6 and 7.9 of ES Chapter 7 are amended to report the additional visual receptors likely to experience significant effects.</p> <p><u>Section 7.6 Assessment of likely significant effects – Construction phase</u></p> <p>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-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 <p>Additions to Table 7.24 Schedule of visual effects on visual receptors north of the River Thames during construction:</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 														

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<ul style="list-style-type: none"> – 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: <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

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<p><u>Section 7.9 – Summary</u></p> <p>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: 10 11 other receptors or groups - Not significant • Construction effect, north of the River Thames: <ul style="list-style-type: none"> – Large adverse: 28 29 residential receptors or groups - Significant – Moderate adverse: 7 9 other receptors or groups - Significant • Operation effect, south of the River Thames: <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 – Slight adverse at opening year, slight adverse at design year: 4 5 other receptors or groups - Not significant
<p>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p>	<p>Paragraph 8.3.33 requires revision to resolve incomplete sentence.</p>	<p>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.</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023
<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>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>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</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>

Document reference	Reason for amendment	Environmental Statement amendment July 2023																	
		<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>6.1 Environmental Statement - Chapter 8 - Terrestrial Biodiversity [APP-146]</p>	<p>Table 8.19 requires amendment to correct the distance of Mucking Flats and Marshes SSSI from the Order Limits</p>	<p>The first row in Table 8.19 of ES Chapter 8 is amended to:</p> <p>Table 8.19 Statutory designated sites within the study area north of the River Thames</p> <table border="1"> <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>Mucking Flats and Marshes SSSI</td> <td>Mudflats, saltmarsh and grassland supporting important populations of wintering wildfowl and waders and invertebrates.</td> <td>National</td> <td>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 9 – Marine Biodiversity [APP-147]</p>	<p>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</p>	<p>Paragraph 9.5.6, bullet point a. of ES Chapter 9 is amended to:</p> <p>Construction phase embedded mitigation of relevance to marine biodiversity is as follows:</p> <p>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</p>																	

Document reference	Reason for amendment	Environmental Statement amendment July 2023
	<p>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.</p>	<p>(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.</p> <p>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]).</p>
<p>6.1 Environmental Statement - Chapter 10 - Geology and Soils Health [APP-148]</p>	<p>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.</p>	<p>Paragraph 10.5.8 bullet point u. of ES Chapter 10 is amended to:</p> <p>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).</p> <ul style="list-style-type: none"> i. 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). ii. 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. iii. Appropriate analysis and assessment would be undertaken by a suitably qualified person on suspected contaminated soils to establish the action required
<p>6.1 Environmental Statement - Chapter 13 - Population and Human Health [APP-151]</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</p>	<p>The following row in Table 13.56 of ES Chapter 13 is amended to:</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023																																					
	north of the River Thames.	<p>Table 13.56 Residential properties subject to demolition – north of River Thames</p> <table border="1"> <thead> <tr> <th>Receptor</th> <th>Sensitivity</th> <th>Magnitude of impact</th> <th>Significance of effect</th> </tr> </thead> <tbody> <tr> <td>1-2 Whitfield Cottages, Whitfield Cottage, Barn View and Stable View, Stifford Clays Road</td> <td>High</td> <td>Major adverse</td> <td>Very large adverse</td> </tr> <tr> <td>Yellow Stock Mews 1-5 Yellow Stock Mews, Ockendon Road</td> <td>High</td> <td>Major adverse</td> <td>Very large adverse</td> </tr> </tbody> </table> <p>The following row in Table 13.74 of ES Chapter 13 is amended to:</p> <p>Table 13.74 Land-use and accessibility sub-topics summary impact table</p> <table border="1"> <thead> <tr> <th>Impact description</th> <th>Sensitivity</th> <th>Impact magnitude</th> <th>Effect</th> <th>Significance</th> </tr> </thead> <tbody> <tr> <td colspan="5">Construction</td> </tr> <tr> <td colspan="5">North of the River Thames</td> </tr> <tr> <td>Private property and housing – 26 31 properties affected by demolition</td> <td>High</td> <td>Major adverse</td> <td>Very large / large adverse</td> <td>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).</p>						Receptor	Sensitivity	Magnitude of impact	Significance of effect	1-2 Whitfield Cottages, Whitfield Cottage, Barn View and Stable View, Stifford Clays Road	High	Major adverse	Very large adverse	Yellow Stock Mews 1-5 Yellow Stock Mews, Ockendon Road	High	Major adverse	Very large adverse	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
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Private property and housing – 26 31 properties affected by demolition	High	Major adverse	Very large / large adverse	Significant																																			
6.1 Environmental Statement - Chapter 13 - Population and Human Health	Table 13.66 requires amendment to include further information on the Two Forts Way temporary closures and	<p>Table 13.66 of ES Chapter 13 is amended to include further information on Two Forts Way temporary closures:</p> <p>Table 13.66 PRoW temporarily or permanently affected by the Project – north of the River Thames</p> <table border="1"> <thead> <tr> <th>Receptor</th> <th>Nature of effect</th> <th>Change in journey length</th> <th>Sensitivity of route</th> <th>Magnitude of impact</th> <th>Significance of effect</th> </tr> </thead> </table>						Receptor	Nature of effect	Change in journey length	Sensitivity of route	Magnitude of impact	Significance of effect																										
Receptor	Nature of effect	Change in journey length	Sensitivity of route	Magnitude of impact	Significance of effect																																		

Document reference	Reason for amendment	Environmental Statement amendment July 2023					
[APP-151]	alternative route available.	FP146	This route would be subject to a temporary closure for a period of less than one 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.	No change	Medium	No change	Neutral
		FP146	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 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.	No change	Medium	No change	Neutral
6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154]	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.	<p>Paragraph 16.5.40 of ES Chapter 16 is amended to:</p> <p>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.</p>					

Document reference	Reason for amendment	Environmental Statement amendment July 2023																			
<p>6.1 Environmental Statement - Chapter 16 - Cumulative Effects Assessment [APP-154]</p>	<p>Table 16.10 requires revision to align 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 population and human health receptors.</p>	<p>Table 16.10 of ES Chapter 16 is amended to include significant effects for the following three developments:</p> <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>Table 16.10 Inter-project cumulative effects on receptors</p> <table border="1"> <thead> <tr> <th>Development</th> <th>Description</th> <th>Construction</th> <th>Operation</th> <th>Residual Cumulative Effect</th> </tr> </thead> <tbody> <tr> <td> <p>Entire Land East Of A128 South Of A127 Tilbury Road West Horndon 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> </td> <td> <p><i>No revision to description documented in ES Chapter 16 Table 16.10.</i></p> </td> <td> <p>Population and Human Health: Effects during construction may depend 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> </td> <td> <p>Population and Human Health: Slight beneficial effects anticipated during scheme operation in terms of potential increased accessibility for employment and access to community facilities.</p> </td> <td> <p>Residential Amenity and Access – Slight Adverse and not significant effect (Construction)</p> <p>Employment and Access – Slight Beneficial and significant effect (Operation)</p> </td> </tr> <tr> <td></td> <td></td> <td> <p>Soils: Construction works should</p> </td> <td> <p>Soils: No cumulative effects likely during</p> </td> <td> <p>Soils - Very Large Adverse and</p> </td> </tr> </tbody> </table>					Development	Description	Construction	Operation	Residual Cumulative Effect	<p>Entire Land East Of A128 South Of A127 Tilbury Road West Horndon 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><i>No revision to description documented in ES Chapter 16 Table 16.10.</i></p>	<p>Population and Human Health: Effects during construction may depend 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>Population and Human Health: Slight beneficial effects anticipated during scheme operation in terms of potential increased accessibility for employment and access to community facilities.</p>	<p>Residential Amenity and Access – Slight Adverse and not significant effect (Construction)</p> <p>Employment and Access – Slight Beneficial and significant effect (Operation)</p>			<p>Soils: Construction works should</p>	<p>Soils: No cumulative effects likely during</p>	<p>Soils - Very Large Adverse and</p>
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<p>Entire Land East Of A128 South Of A127 Tilbury Road West Horndon 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><i>No revision to description documented in ES Chapter 16 Table 16.10.</i></p>	<p>Population and Human Health: Effects during construction may depend 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>Population and Human Health: Slight beneficial effects anticipated during scheme operation in terms of potential increased accessibility for employment and access to community facilities.</p>	<p>Residential Amenity and Access – Slight Adverse and not significant effect (Construction)</p> <p>Employment and Access – Slight Beneficial and significant effect (Operation)</p>																	
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Document reference	Reason for amendment	Environmental Statement amendment July 2023				
				<p>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>operational phase; impacts assessed at construction phase.</p>	<p>significant effect (Construction) Soils - Neutral and not significant effect (Operation)</p>
		<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,</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 July 2023				
			infrastructure, landscaping and earthworks			
		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) Medway Council area	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 space and children's play area, surface water flood mitigation and attenuation, vehicular access point from Town Road and associated ancillary works.	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.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	Soils - Very Large Adverse and significant effect (Construction) Soils - Neutral and not significant effect (Operation)
6.1 Environmental Statement - Chapter 16 - Cumulative	New environmental information - not errata. An update to the inter-project effects	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.				

Document reference	Reason for amendment	Environmental Statement amendment July 2023				
<p>Effects Assessment [APP-154]</p>	<p>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.</p>					
<p>6.1 Environmental Statement - Chapter 17 - Summary [APP-155]</p>	<p>The Chapter 17 summary requires updating to reflect the various ES updates set out within this ES Addendum.</p>	<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>Table 17.2 Summary of likely significant effects detailed in Chapter 6: Cultural Heritage</p> <table border="1"> <thead> <tr> <th>Receptors</th> </tr> <tr> <th>Chapter 6: Cultural Heritage</th> </tr> <tr> <th>North of the River Thames</th> </tr> </thead> <tbody> <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> </tbody> </table>	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>
Receptors						
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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 July 2023
		<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 Fig 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 <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

Document reference	Reason for amendment	Environmental Statement amendment July 2023						
		<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> <p>Table 17.8 Summary of likely significant effects detailed in Chapter 13: Population and Human Health</p> <table border="1"> <thead> <tr> <th colspan="2">Land use and accessibility effects – North of the River Thames</th> </tr> <tr> <th>Receptors</th> <th>Description of impact</th> </tr> </thead> <tbody> <tr> <td>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>
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3 Environmental Statement figure updates

3.1 Section 51 submission December 2022

3.1.1 Table 3.1 outlines amendments which have been identified since submission of the DCO application in relation to the various figures of the Environmental Statement. These amendments were reported within the Errata Report (Version 1.0) [\[AS-004\]](#) published by the Examining Authority on 22 December 2022.

Table 3.1 Environmental Statement figure updates December 2022

Document reference	Reason for amendment	Environmental Statement amendment December 2022
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. 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. Resubmitted in December 2022 as: Additional Submission - 6.2 Environmental Statement - Figure 2.2 - Project Proposals (Version 2) - Accepted at the discretion of the Examining Authority [AS-046]
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]

Document reference	Reason for amendment	Environmental Statement amendment December 2022
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]

3.2 Deadline 1 updates

- 3.2.1 Table 3.2 outlines amendments which have been identified through pre-examination and examination in relation to the various figures that accompany the Environmental Statement and are submitted to the Examining Authority at Deadline 1 (18 July 2023).
- 3.2.2 In addition to the amendments described in Table 3.2, general presentational updates have been made to the legend for each of these figures and their associated sheets. These minor typing updates such as adjustments to capitalisations and singular/plural amendments are not documented separately for each figure in Table 3.2 below.

Table 3.2 Environmental Statement figure updates – Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment July 2023
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.	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.
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) [APP-179]	Specifically, this relates to pages 17, 40 and 63 of Figure 5.5 (1 of 2) and pages 86, 109 and 132 of Figure 5.5 (2 of 2)	Resubmitted in July 2023 as: 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) (Tracked) (Version 2) 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) (Clean) (Version 2)

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) (Tracked) (Version 2)
<p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) [APP-192]</p> <p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) [APP-193]</p>	<p>Figure 6.6 requires amendment to resolve the omission of a number of summer and winter heritage viewpoints.</p>	<p>Figure 6.6 is amended to include omitted summer and winter views.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) (Tracked) (Version 2)</p> <p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.4 – Landscape Designations [APP-200]</p>	<p>Figure 7.4 requires amendment to remove the football pitches removed from the extent of Southern Valley Golf Club.</p>	<p>Figure 7.4 is amended to show the updated Southern Valley Golf Club extent and labelling.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 7.4 – Landscape Designations (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 7.4 – Landscape Designations (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations [APP-234]</p>	<p>Figure 7.16 requires amendment to show additional identified visual receptors and associated assessment scores.</p>	<p>Figure 7.16 is amended to include omitted visual receptors and visual impact assessment scores.</p> <p>Resubmitted in July 2023 as:</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<p>6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) [APP-245]</p>	<p>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:</p> <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 • The alignment of the proposed recreational routes 	<p>Figure 7.19 is amended to address discrepancies in the photomontages for Representative Viewpoints S-33 and S-38b.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (2 of 4) (Clean) (Version 2)</p> <p>6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (2 of 4) (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on</p>	<p>Figure 7.20.1 requires amendment to correct the</p>	<p>Figure 7.20.1 is amended to correct the predicted traffic flows shown along some roads.</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023
<p>the Kent Downs AONB during construction (6 sheets) [APP-248 to APP-253]</p>	<p>predicted traffic flows shown along some roads.</p>	<p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 Sheets) (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 Sheets) (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on the Kent Downs AONB during operational year 2030 and 2045 [APP-254]</p>	<p>Figure 7.20.2 requires amendment to correct the predicted traffic flows shown along some roads.</p>	<p>Figure 7.20.2 is amended to correct the predicted traffic flows shown along some roads.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 Sheets) [APP-259 and APP-260]</p>	<p>Figure 7.23 requires amendment to show potential veteran trees previously not shown.</p>	<p>Figure 7.23 is amended to include omitted potential veteran trees.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 Sheets) (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 Sheets) (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan [APP-261]</p>	<p>Figure 7.24 requires amendment to show potential veteran trees previously not shown.</p>	<p>Figure 7.24 is amended to include omitted potential veteran trees.</p> <p>Resubmitted in July 2023 as:</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<p>6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment [APP-308]</p>	<p>Figure 11.1 requires amendment to incorporate omitted active landfill sites.</p>	<p>Figure 11.1 is amended to include omitted active landfill sites.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Tracked) (Version 2)</p>
<p>6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition [APP-319]</p>	<p>Figure 13.3 requires amendment to remove the ‘Private building access significantly impacted/ building affected’ layer which is a redundant dataset.</p>	<p>Figure 13.3 is amended to show only properties requiring demolition.</p> <p>Resubmitted in July 2023 as:</p> <p>6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition (Clean) (Version 2)</p> <p>6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition (Tracked) (Version 2)</p>

4 Environmental Statement appendix updates

4.1 Section 51 submission December 2022

- 4.1.1 Table 4.1 outlines amendments which have been identified since submission of the DCO application in relation to the various appendices of the Environmental Statement. These amendments were reported within the Errata Report (Version 1.0) [[AS-004](#)] published by the Examining Authority on 22 December 2022.

Table 4.1 Environmental Statement appendix updates December 2022

Document reference	Reason for amendment	Environmental Statement amendment December 2022
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]
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'.
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:

Document reference	Reason for amendment	Environmental Statement amendment December 2022
		6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (1 of 2) (Version 2) [AS-051]
6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [APP-367]	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 to Kit’s Coty, Burham and Blue Bell Hill, have the potential to affect Heritage Assets 4745, 4483, 4513, 4525, and 4760.
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]
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	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]

Document reference	Reason for amendment	Environmental Statement amendment December 2022
	in Table 3.1 of Appendix 7.8 requires correcting.	6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies – (Tracked) (Version 2) – Accepted at the discretion of the Examining Authority [AS-055]
6.3 Environmental Statement – Appendix 12.5 – Baseline Noise Survey Information [APP-445]	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> Queens Garden <i>Queens Gardens, Dartford, DA2 6HZ.</i>
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 1 of 2) [APP-458]	Paragraph 3.9.6 required revision to correct area number.	Paragraph 3.9.6 of 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 <i>small</i> areas in North Ockendon Pit SINC.

4.2 Deadline 1 updates

4.2.1 Table 4.2 outlines amendments which have been identified through pre-examination and examination in relation to the appendices of the Environmental Statement and are submitted to the Examining Authority at Deadline 1 (18 July 2023).

Table 4.2 Environmental Statement appendix updates – Deadline 1

Document reference	Reason for amendment	Environmental Statement amendment July 2023
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) 6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 6.10 – Assessment Tables (Version 2) [AS-052] and [AS-053]	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 .
6.3 Environmental Statement – Appendix 6.13 – Holocene Geoarchaeological Desk-based Assessment of the Route of the Lower Thames Crossing [APP-371]	Appendix 6.13 requires amendment to correct the photograph referencing.	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;
6.3 Environmental Statement – Appendix 7.7	Table 3.1 and Table 3.2 of Appendix 7.7 requires	Table 3.1 and Table 3.2 of ES Appendix 7.7 are amended as follows:

Document reference	Reason for amendment	Environmental Statement amendment July 2023
<p>– Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity [APP-382]</p>	<p>amendment to incorporate the identification of additional visual receptors since submission of the DCO application.</p>	<p><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. – 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

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<ul style="list-style-type: none"> – 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 parts of the activity centre, there are distant views south towards the River Thames estuary valley and rising ground beyond. – 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

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<ul style="list-style-type: none"> – 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. – Summer baseline view commentary: Further screening as a result of roadside vegetation in the midground to the east.
<p>6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects [APP-385]</p>	<p>Appendix 7.10 requires amendment to incorporate the identification of additional visual receptors since submission of the DCO application.</p>	<p>Table 2.2, Table 2.4, Table 3.2 and Table 3.4 of ES Appendix 7.10 are amended as follows:</p> <p><u>Section 2 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-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 <p>Additions to Table 2.4 Schedule of visual effects for visual receptors north of the River Thames during construction:</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: Major – Significance of effect: Large adverse effect

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<ul style="list-style-type: none"> • 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 – 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

Document reference	Reason for amendment	Environmental Statement amendment July 2023
		<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 – Figure 2.4 Environmental Masterplan reference: Highway Section 11
<p>6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise</p>	<p>Assessment in Appendix 7.11 requires amendment to reflect corrections to some predicted</p>	<p>Assessment in ES Appendix 7.11 is amended to reflect revised supporting figures (as detailed in Table 3.2 of this ES Addendum).</p>

Document reference	Reason for amendment	Environmental Statement amendment July 2023
Effects on the Kent Downs AONB [APP-386]	traffic flows shown on traffic maps in supporting figures (Figure 7.20.1 & 7.20.2).	Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB (Clean) (Version 2) 6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB (Tracked) (Version 2)
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) 6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors [APP-437]	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) 6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors (Tracked) (Version 2)
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)

Document reference	Reason for amendment	Environmental Statement amendment July 2023																			
		6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment (Tracked) (Version 2)																			
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 2 of 2) [APP-459]	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 exclusion of water flow into the shafts]. </td> </tr> <tr> <td> Work number MU73 </td> <td> Length of deep section: [number to be confirmed] approximately 370m. </td> <td> SPZ3 ³ Essex Gravels groundwater body </td> <td> Not significant [Following the precautionary principle. A Project </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 exclusion of water flow into the shafts].	Work number MU73	Length of deep section: [number to be confirmed] approximately 370m.	SPZ3 ³ Essex Gravels groundwater body	Not significant [Following the precautionary principle. A Project
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 exclusion of water flow into the shafts].																		
Work number MU73	Length of deep section: [number to be confirmed] approximately 370m.	SPZ3 ³ Essex Gravels groundwater body	Not significant [Following the precautionary principle. A Project																		

Document reference	Reason for amendment	Environmental Statement amendment July 2023			
			<p>Alignment is beneath the London, Tilbury and Southend railway line, beneath the proposed A122 cutting and beneath the existing M25 cutting.</p> <p>Proposed utility construction method: Large HDD trenchless method</p>	<p>Fields south of Cranham Marsh SINC (300m north west), Hall Farm moat, paddock and St Mary Magdalene Churchyard SINC (275m south east)</p>	<p>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].</p>
<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]</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>			
<p>6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 6 [APP-465]</p>	<p>Part 6 Annex A – Calculations requires updating to include omitted calculation sheets.</p>	<p>Part 6 Annex A of ES Appendix 14.6 is amended to incorporate omitted calculation sheets.</p> <p>Resubmitted in July 2023 as: 6.3 Environmental Statement – Appendix 14.6 Flood Risk Assessment - Part 6 (Clean) (Version 2)</p>			

Document reference	Reason for amendment	Environmental Statement amendment July 2023
<p>6.3 Environmental Statement – Appendix 16.2 – Short List of Developments [APP-484]</p>	<p>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.</p> <p>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). 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>6.3 Environmental Statement – Appendix 14.6 Flood Risk Assessment - Part 6 (Tracked) (Version 2)</p> <p>Entries against Application Reference 22/00402/FUL Brentwood Enterprise Park on Page 72 of ES Appendix 16.2 are amended to:</p> <p>The 'N' in column 5 is amended to 'Y'.</p> <p><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.</p> <p><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.</p> <p><u>Noise and Vibration text in column 9:</u> 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>

5 Environmental Statement Non-Technical Summary updates

5.1 Section 51 submission December 2022

- 5.1.1 No updates to the Environmental Statement Non-Technical Summary were made as part of the Section 51 submission in December 2022. For consistency of numbering of tables with Sections 2, 3 and 4 of this ES Addendum, Table 5.1 has been prepared with no entries shown.

Table 5.1 Environmental Statement Non-Technical Summary updates December 2022

Reason for amendment	Non-Technical Summary amendment July 2023
No updates	No Updates

5.2 Deadline 1 updates

- 5.2.1 Table 5.2 outlines where amendments which have been identified through pre-examination and examination in relation to the Environmental Statement chapters and their accompanying figures and appendices, resulted in a need to amend the content of the Environmental Statement – Non-Technical Summary (NTS) [[APP-486](#)] for Deadline 1.

Table 5.2 Environmental Statement Non-Technical Summary updates – Deadline 1

Reason for amendment	Non-Technical Summary amendment July 2023
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.
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 39 35 properties, permanent acquisition of land from five properties and temporary possession of land from a further property.

6 Summary

6.1 Summary of documents updated

6.1.1 Table 6.1 provides a collated summary of the updates to application documents that are reported in this ES Addendum. Table 6.1 identifies the application documents that have been updated, and when, with a cross reference to where the relevant detail of the update can be found and references to new published versions, where relevant. Documents are listed in order of the Application Document numbering as identified in the Lower Thames Crossing Examination Library, which is a live document maintained by the Planning Inspectorate.

Table 6.1 Summary of documents updated

Application Document name and reference	Date of update	Update description	Updated version of document and reference
ES chapters			
6.1 Environmental Statement – Chapter 2 – Project Description [APP-140]	Section 51 submission December 2022	As identified in Table 2.1	Document not re-issued. Updates identified in ES Addendum only
	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 6 – Cultural Heritage [APP-144]	Section 51 submission December 2022	As identified in Table 2.1	6.1 Environmental Statement – Chapter 6 – Cultural Heritage – (Clean) (Version 2) [AS-044]
	Deadline 1 July 2023	As identified in Table 2.2	6.1 Environmental Statement – Chapter 6 – Cultural Heritage – (Tracked) (Version 2) [AS-045] AS-044 and AS-045 as above. Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 7 – Landscape and Visual	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only

Application Document name and reference	Date of update	Update description	Updated version of document and reference
[APP-145]			
6.1 Environmental Statement – Chapter 8 – Terrestrial Biodiversity [APP-146]	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 9 – Marine Biodiversity [APP-147]	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 10 – Geology and Soils Health [APP-148]	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 13 – Population and Human Health [APP-151]	Section 51 submission December 2022	As identified in Table 2.1	Document not re-issued. Updates identified in ES Addendum only
	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 16 – Cumulative Effects Assessment [APP-154]	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
6.1 Environmental Statement – Chapter 17 – Summary [APP-155]	Deadline 1 July 2023	As identified in Table 2.2	Document not re-issued. Updates identified in ES Addendum only
ES figures			
6.2 Environmental Statement – Figure 2.2 – Project Proposals [APP-157]	Section 51 submission December 2022	As identified in Table 3.1	6.2 Environmental Statement – Figure 2.2 – Project Proposals (Version 2) [AS-046]

Application Document name and reference	Date of update	Update description	Updated version of document and reference
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) [APP-178]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (1 of 2) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) [APP-179]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 5.5 – Construction Traffic Receptors and Results (2 of 2) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) [APP-192]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (1 of 2) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) [APP-193]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 6.6 Representative Heritage Viewpoints (2 of 2) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.4 – Landscape Designations [APP-200]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.4 – Landscape Designations (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.4 – Landscape Designations (Tracked) (Version 2)

Application Document name and reference	Date of update	Update description	Updated version of document and reference
6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations [APP-234]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.16 – Visual Effects Drawing with Representative Viewpoint and Photomontage Locations (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.19 – Photomontages – Winter Year 1 and Summer Year 15 (2 of 4) [APP-245]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (2 of 4) (Clean) (Version 2) 6.2 Environmental Statement - Figure 7.19 - Photomontages - Winter Year 1 and Summer Year 15 (2 of 4) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on the Kent Downs AONB during construction (1 of 6) [APP-248]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (1 of 6) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (1 of 6) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on the Kent Downs AONB during construction (2 of 6) [APP-249]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (2 of 6) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (2 of 6) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on the Kent Downs AONB during construction (3 of 6) [APP-250]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (3 of 6) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (3 of 6) (Tracked) (Version 2)

Application Document name and reference	Date of update	Update description	Updated version of document and reference
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on the Kent Downs AONB during construction (4 of 6) [APP-251]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (4 of 6) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (4 of 6) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on the Kent Downs AONB during construction (5 of 6) [APP-252]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (5 of 6) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (5 of 6) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on the Kent Downs AONB during construction (6 of 6) [APP-253]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 of 6) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.1 – Traffic effects on Kent Downs AONB during construction (6 of 6) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on the Kent Downs AONB during operational year 2030 and 2045 [APP-254]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.20.2 – Traffic effects on Kent Downs AONB during operational year 2030 and 2045 (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) [APP-259]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (1 of 2) (Tracked) (Version 2)

Application Document name and reference	Date of update	Update description	Updated version of document and reference
6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) [APP-260]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.23 – Existing Tree Constraints Plan (2 of 2) (Tracked) (Version 2)
6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan [APP-261]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan (Clean) (Version 2) 6.2 Environmental Statement – Figure 7.24 – Tree Removal and Retention Plan (Tracked) (Version 2)
6.2 Environmental Statement - Figure 10.2 - Soil Scape Mapping [APP-300]	Section 51 submission December 2022	As identified in Table 3.1	Additional Submission - 6.2 Environmental Statement - Figure 10.2 - Soil Scape Mapping (Version 2) - Accepted at the discretion of the Examining Authority [AS-047]
6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment [APP-308]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Clean) (Version 2) 6.2 Environmental Statement – Figure 11.1 – Active Landfill and Waste Transfer and Treatment (Tracked) (Version 2)
6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition [APP-319]	Deadline 1 July 2023	As identified in Table 3.2	6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition (Clean) (Version 2) 6.2 Environmental Statement – Figure 13.3 – Population and Human Health Assessment - Properties and Businesses at Risk of Demolition (Tracked) (Version 2)
6.2 Environmental Statement - Figure 14.4 - Bedrock Aquifer Designations [APP-325]	Section 51 submission December 2022	As identified in Table 3.1	Additional Submission - 6.2 Environmental Statement - Figure 14.4 - Bedrock Aquifer Designations (Version 2)

Application Document name and reference	Date of update	Update description	Updated version of document and reference
			- Accepted at the discretion of the Examining Authority [AS-048]
ES appendices			
6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information [APP-335]	Section 51 submission December 2022	As identified in Table 4.1	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]
6.3 Environmental Statement – Appendix 2.1 – Construction Supporting Information [APP-335]	Section 51 submission December 2022	As identified in Table 4.1	AS-049 and AS-050 as above. Document not re-issued with update included. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results [APP-347]	Deadline 1 July 2023	As identified in Table 4.2	6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results (Clean) (Version 2) 6.3 Environmental Statement – Appendix 5.3 – Air Quality Construction Phase Results (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (1 of 2) [APP-360]	Section 51 submission December 2022	As identified in Table 4.1	6.3 Environmental Statement – Appendix 6.7 – Geophysical Survey Reports (1 of 2) (Version 2) [AS-051]

Application Document name and reference	Date of update	Update description	Updated version of document and reference
6.3 Environmental Statement – Appendix 6.9 – Draft Archaeological Mitigation Strategy and Outline Written Scheme of Investigation [APP-367]	Section 51 submission December 2022	As identified in Table 4.1	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement Appendix 6.10 – Assessment Tables [APP-368]	Section 51 submission December 2022	As identified in Table 4.1	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]
	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 6.13 – Holocene Geoarchaeological Desk-based Assessment of the Route of the Lower Thames Crossing [APP-371]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 7.7 – Representative Viewpoint and Visual Receptor Baseline Descriptions and Visual Sensitivity [APP-382]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies [APP-383]	Section 51 submission December 2022	As identified in Table 4.1	6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies – (Clean) (Version 2) – Accepted at the discretion of the Examining Authority [AS-054]

Application Document name and reference	Date of update	Update description	Updated version of document and reference
			6.3 Environmental Statement – Appendix 7.8 – Technical Methodologies – (Tracked) (Version 2) – Accepted at the discretion of the Examining Authority [AS-055]
6.3 Environmental Statement – Appendix 7.10 – Schedule of Visual Effects [APP-385]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB [APP-386]	Deadline 1 July 2023	As identified in Table 4.2	6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB (Clean) (Version 2) 6.3 Environmental Statement – Appendix 7.11 – Traffic and Noise Effects on the Kent Downs AONB (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy [APP-434]	Deadline 1 July 2023	As identified in Table 4.2	6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy (Clean) (Version 2) 6.3 Environmental Statement – Appendix 10.11 – Remediation Options Appraisal and Outline Remediation Strategy (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors [APP-437]	Deadline 1 July 2023	As identified in Table 4.2	6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors (Clean) (Version 2) 6.3 Environmental Statement – Appendix 11.3 List of Third party Offsite Waste Infrastructure Receptors (Tracked) (Version 2)

Application Document name and reference	Date of update	Update description	Updated version of document and reference
6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment [APP-444]	Deadline 1 July 2023	As identified in Table 4.2	6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment (Clean) (Version 2) 6.3 Environmental Statement – Appendix 12.4 – Construction Noise and Vibration Assessment (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 12.5 – Baseline Noise Survey Information [APP-445]	Section 51 submission December 2022	As identified in Table 4.1	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 1 of 2) [APP-458]	Section 51 submission December 2022	As identified in Table 4.1	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.5 – Hydrogeological Risk Assessment (Part 2 of 2) – Annex Q Utilities assessment (groundwater) [APP-459]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 1 [APP-460]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 2 [APP-461]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 3 [APP-462]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment - Part 6 [APP-465]	Deadline 1 July 2023	As identified in Table 4.2	6.3 Environmental Statement – Appendix 14.6 Flood Risk Assessment - Part 6 (Clean) (Version 2)

Application Document name and reference	Date of update	Update description	Updated version of document and reference
			6.3 Environmental Statement – Appendix 14.6 Flood Risk Assessment - Part 6 (Tracked) (Version 2)
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 8 [APP-467]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 14.6 – Flood Risk Assessment – Part 10 [APP-477]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
6.3 Environmental Statement – Appendix 16.2 – Short List of Developments [APP-484]	Deadline 1 July 2023	As identified in Table 4.2	Document not re-issued. Updates identified in ES Addendum only
Environmental Statement Non-Technical Summary			
6.4 Environmental Statement - Non-Technical Summary (NTS) [APP-486]	Deadline 1 July 2023	As identified in Table 5.2	Document not re-issued. Updates identified in ES Addendum only

References

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.

Appendices

Appendix A Recreational Pressure on Designated Sites

A.1 Introduction

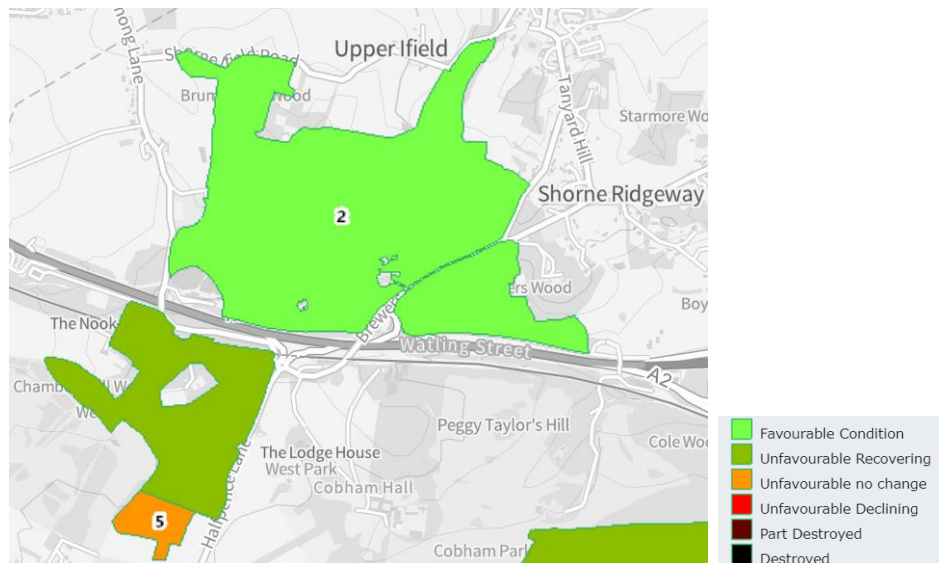
- A.1.1 This Appendix has been prepared in response to comments made by Natural England (NE) in relation to nationally designated nature conservation sites. Specifically, NE's Relevant Representation states that *'Natural England does not endorse the direct loss of habitat from the Shorne and Ashenbank 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'*.

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. 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).

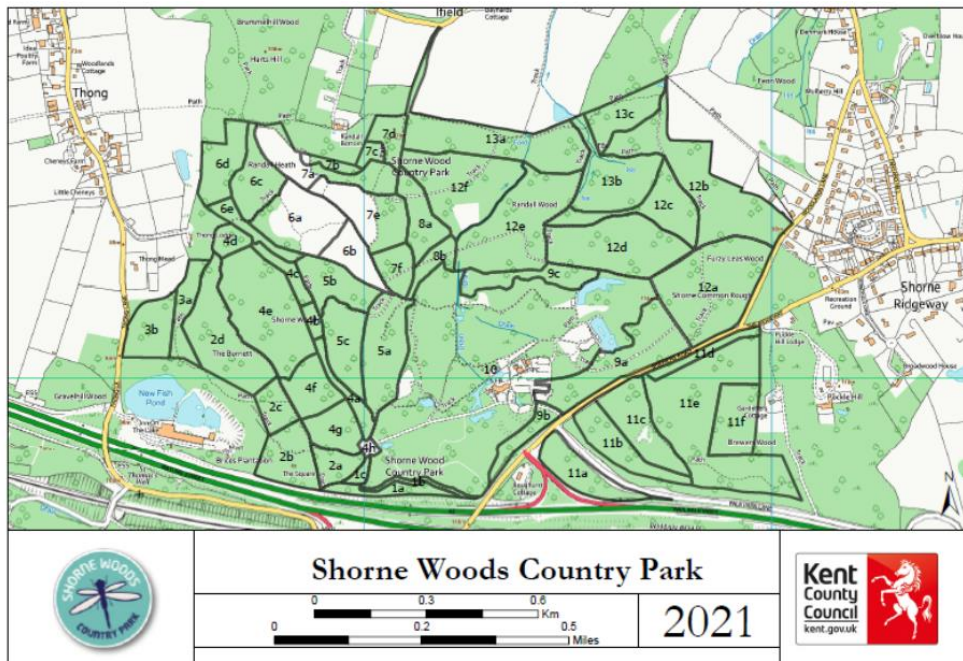
Plate A.1 Site boundary and condition status for Shorne and Ashenbank Woods SSSI



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 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 Trampler 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)¹. Car ownership tends to be lower for people in lower social groupings.

¹ (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).

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.

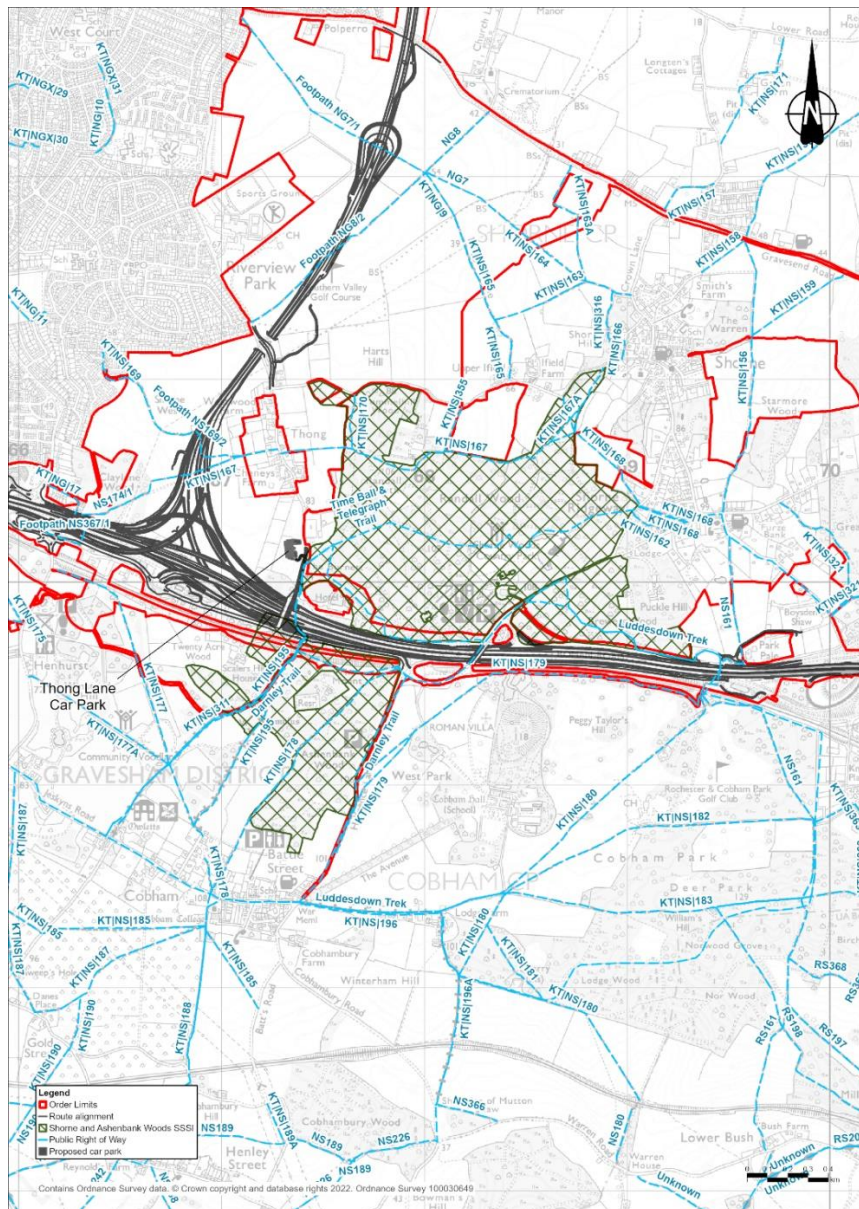
The wider area

- 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.
- 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 region².
- 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.

² 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 PRowS 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 PRowS (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:

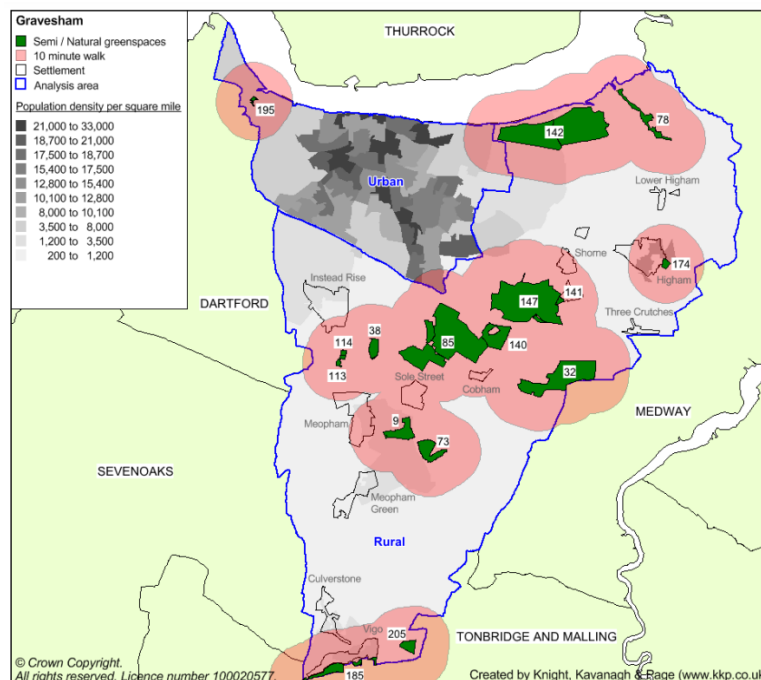
- a. Along Thong Lane – three pedestrians and nine cyclists were recorded here on a Sunday in August in 2019
- b. Footpath NS174 – the footpath is located to the north of the A2, connecting the National Cycle Network Route 177 to links with Footpath NS167 and passing in a north-east to south-west direction 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

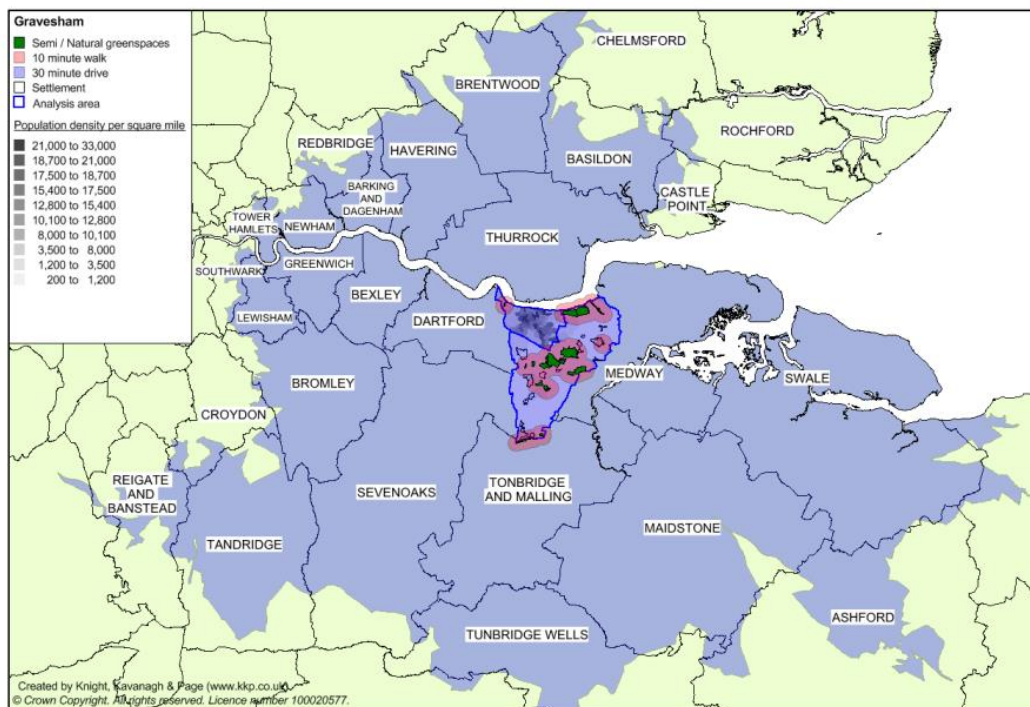
A.2.23 In relation to the likely catchment area for users of Shorne and Ashenbank Woods, this was set out in the Open Space Assessment prepared for Gravesham Borough Council by Knight, Kavanagh and Page in 2016. Guidance on appropriate walking distance and times is published by Fields In Trust (FIT) 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).

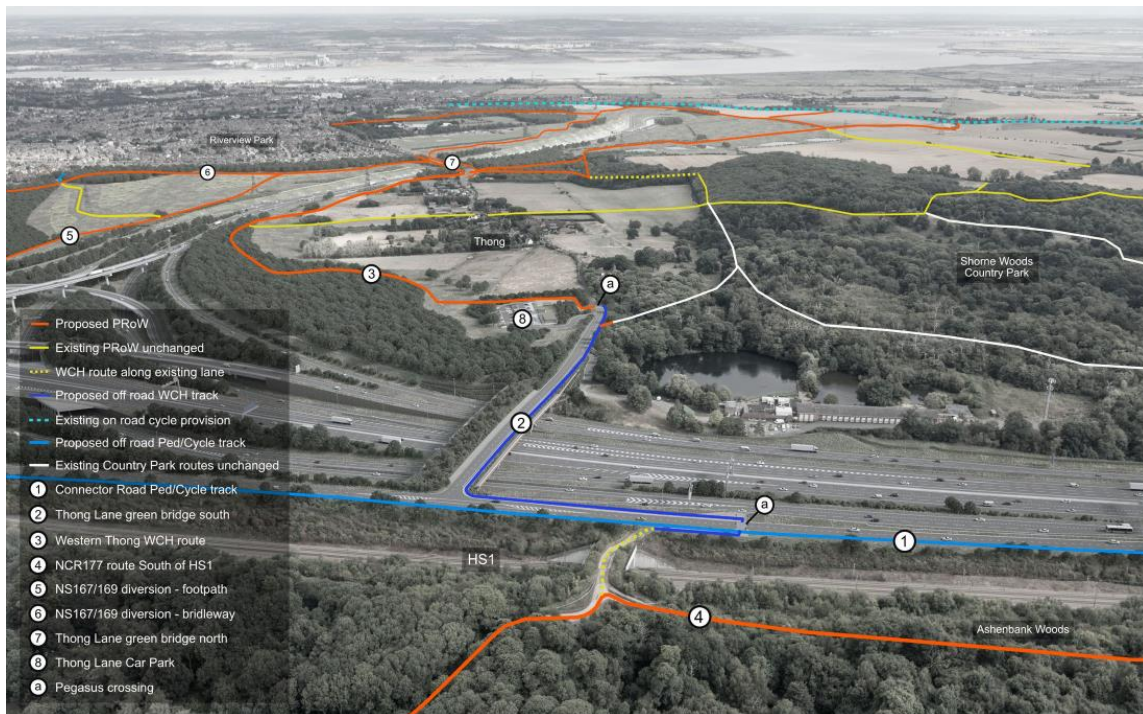
A.3 Summary of proposals

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

- A.3.2 The car park would re-utilise one of the construction compounds used for the Project and the intention would be for the car park to repurpose hardstanding and utility connections from the construction phase. The Project Design Report Part D: General Design South of the River [**Application Document [APP-509](#)**] describes in more detail the proposal for a new car park to the west of Thong Lane, the purpose of which would be to provide recreational access to the PRoW network and open spaces within the wider area. This commitment is set out in Design Principle S2.11 [**Application Document [APP-516](#)**] and adherence to this is secured through Requirement 3 of the draft Development Consent Order.
- A.3.3 The design evolution for the car park is described in Project Design Report Part G: Design Evolution [**Application Document [APP-514](#)**]. The car park was originally proposed to be located to the east of Thong Lane green bridge north. Following comments received from stakeholders and local residents in response to the Design Refinement Consultation 2020, the proposed car park was moved further south of the village of Thong in order to reduce impacts associated with visitor traffic to the car park through the village of Thong itself. The revised location for the car park, to the south of the village of Thong and to the north of the A2, was presented at the Community Impacts Consultation 2021. The location is illustrated in Plate A.6 (the car park is numbered eight on the figure).

Plate A.6 Location of proposed Thong Lane car park (shown at number 8)



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

A.3.4 Features of the car park include:

- a. Space for approximately 100 vehicles
- b. Provision for suitably surfaced parking for 10-12 horseboxes, located away from the main car park circulation
- c. A building with provision for a kiosk, toilets, changing and storage facility
- d. An area for cycle hire and cycle wash facility.

A.3.5 WCH routes are proposed to connect to and from the car park as far as technically possible (within site constraints). A new bridleway would lead into the proposed car park from the west and a new direct entrance (bridleway) to Shorne Woods Country Park would be provided via a Pegasus crossing on Thong Lane. These links are shown in Plate A.7.

A.3.6 The new car park would be owned and managed by KCC and run on the same basis as the existing Country Park car park (i.e. pay and display). KCC have noted that the current car parks within SWCP are at capacity and that an additional car park located at Thong Lane would be particularly beneficial for basing cyclists and equestrian visitors. The outline design of the new car park has been developed in close consultation with KCC; the detailed design of the car park would be developed post-Development Consent Order (DCO) grant in accordance with Schedule 2 Requirement 3 (Detailed Design) and Requirement

5 (Landscaping and Ecology) [**Additional Submission AS-038**]. Further information relating to design of the car park is set out in Design Principle S2.11 [**Application Document APP-516**].

Walking, cycling and horse riding proposals

A.3.7 New public rights of way proposed in the vicinity of the Shorne and Ashenbank Woods SSSI are shown on Plate A.7. 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.7 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 [**Application Document APP-512**]

A.3.8 Plate A.7 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 [**Application Document**

[APP-516](#)). The nature of new sections is described in the Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [**Application Document [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 [**Additional Submission [AS-038](#)**] 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.3.9 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.3.10 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.3.11 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 [**Application Document APP-516**]).
- A.3.12 General design principles for WCH routes are detailed in Table 4.1 of the Design Principles [**Application Document APP-516**], 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.3.13 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 [**Application Document APP-516**].
- A.3.14 Paragraph 3.4.14 of the Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [**Application Document**] 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 desi

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 creation of a new car park at Thong Lane for recreational users, and 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

A.4.2 Direct and indirect pathways for recreational impacts arising from the creation of a new car park at Thong Lane are as follows:

- a. Direct pathways relate to a change in visitor numbers, associated effects relating to physical damage (e.g. soil compaction or erosion) and visual impact.
- b. Indirect pathways relate to wider aspects that may arise as a result of increased recreational users, for example littering, disturbance of wildlife, impacts arising from the presence of dog faeces, effects on livestock (Ashenbank Woods), changes in air pollution as a result of the introduction of additional vehicles, visitor perceptions of the area.

Direct impacts

A.4.3 The new car park would have space for approximately 100 vehicles. A number of assumptions have been made around usage in order to calculate the likely change in visitor numbers arising from the new car park, as follows:

- a. The car park is assumed to be open 363 days of the year (this is in line with the main car park within SWCP).
- b. Two occupancy scenarios have been tested – these include a lower occupancy rate of 50% (i.e. for each day the car park is open, half the spaces are utilised once) and an upper occupancy rate of 80% (i.e. for each day the car park is open, 80% of the spaces are utilised once)³. It is noted that there will be periods during the year where occupancy rates are likely to be higher / lower (for example during the summer months there may be multiple use of individual spaces and in the winter months the occupancy

³ Occupancy rates for car parking spaces typically vary between 50% and 80% (The size and shape of the UK parking profession, British Parking Association, 2013). It is noted that these figures relate to urban car parks and that rural car parks may experience greater extremes at certain points in the year.

rate may be far below 50%); an annual occupancy rate has been applied to allow for changes in use profile.

- c. Each vehicle is assumed to contain an average of two people. This is aligned with data from previous visitor surveys at SWCP.

A.4.4 Based on the above assumptions, the car park at Thong Lane is likely to generate usage as follows:

- a. Scenario 1 (50% occupancy rate) generates 18,150 vehicles per annum (100 spaces multiplied by 363 days, multiplied by 0.5 occupancy rate). Based on two people per car, this equates to around **36,300** visitors per annum
- b. Scenario 2 (80% occupancy rate) generates 29,040 vehicles per annum (100 spaces multiplied by 363 days, multiplied by 0.8). Again, based on two people per car, this equates to around **58,080** visitors per annum.

A.4.5 In the context of overall visitor numbers to SWCP (using the highest most recent annual count of 353,066 visitors in 2013/14), this equates to a 10.3% overall increase in visitor numbers (Scenario 1) and a 16.45% increase in visitor numbers (Scenario 2).

A.4.6 Whilst a proportion of these visitors will be additional to the area, the majority are likely to be 'displaced' visitors from other locations, i.e. existing visitors to the area who have simply chosen the Thong Lane car park over destinations such as the main SWCP car park or Jeskyns Community Woodland car park for reasons of **convenience** (it may be closer to their home), **purpose** (the opportunity for connecting to wider bridleway or cycling routes) or **capacity** (for example the main SWCP car park is too busy and the Thong Lane car park presents a reasonable alternative).

A.4.7 Visitors arriving at the car park would have a choice as to route and destination, meaning that numbers would be dispersed across the area rather than concentrated in any one location. Visitors would most likely choose between the following direction and destinations:

- a. Access SWCP to the east using the new Pegasus crossing over Thong Lane. This presents access to permissive paths within the western portions of the Country Park.
- b. Access north towards Thong either along Thong Lane or as part of the Thong western loop, a new PRoW created as a result of the Project which provides traffic-free access ultimately to the eastern fringe of Gravesend (Riverview).

- c. Access south across the Thong Lane green bridge and A2 towards Ashenbank Woods and Jeskyns Community Woodland.

- A.4.8 It is also noted that the estimated increase in visitor numbers only relates to those who would be accessing the area via the new car park and does not include people who may walk or cycle to Shorne and Ashenbank Woods from nearby residential areas.
- A.4.9 A final factor to take into consideration is the provision of a new recreational landscape (Chalk Park) to the south of the River Thames which may attract visitors and divert them from regular use of existing areas such as SWCP, Ashenbank Woods and Jeskyns Community Woodland. The Chalk Park public open space provision is described in Design Principle S3.04 [**Application Document APP-516**]. Chalk Park is located to the north-east of Gravesend, currently an area of limited public open space provision; residents of the eastern fringes of Gravesend would be able to walk / cycle to Chalk Park rather than necessarily travelling by car to access Shorne Woods Country Park.
- A.4.10 The visitor context within the wider area has been referred to earlier. Jeskyns Community Woodland to the south of the A2 is a well-visited destination, with 878,626 visitors recorded in 2021 (Visit Britain, 2022). This, combined with approximately 400,000 visitors to SWCP per annum, shows that the area is already a highly visited leisure destination. An increase of 36-58,000 visitors via the proposed Thong Lane car park is therefore not considered to have a significant additional effect in the wider context of the local visitor environment, particularly as the visitors using the car park are likely to be dispersed across a wide area.
- A.4.11 In relation to physical damage potentially caused by the increase in visitors:
- a. The SSSI to the north of the A2, which is likely to be the principal destination for users of the car park (from a distance and convenience perspective) is in good condition and no recreational impact issues have been identified within the Shorne Woods Management Plan for compartments along the western edge of the Country Park
 - b. Cycling routes within Shorne Woods Country Park are appropriate for this use and clearly waymarked
 - c. New cycling routes proposed to the west of the new car park (Thong western loop) would be designed in accordance with the design principles secured in the DCO and therefore be of appropriate surfacing for their use
 - d. The car park is being constructed on the site of a former construction compound. Following demobilisation of the construction compound, the car park and associated walking, cycling and horse riding routes would be completed. Both the car park and part the alignment of the western loop

overlap with the need for the construction compound and therefore could not be complete until the compound is removed or part demobilised. Both the car park and the WCH routes would therefore be completed in the same period of time, thereby avoiding people potentially using routes that are not appropriately designed.

- e. The proposed diversion of the national cycle route NCR177 through Ashenbank Woods and Jeskyns Community Woodland will no longer be required at the time the proposed car park is constructed (as the car park is due to be created on the site of the former construction compound and therefore at the completion of the construction phase in this area); the temporary surfacing through Ashenbank Wood will be removed once the permanent cycle route has been completed, and the quality of the existing track through the Woods restored. It is noted that the proposed route through Ashenbank Woods is part of the Darnley Trail and currently includes permissive use for walkers, cyclists and horse riders. The designation of this track will remain unchanged during both construction and operation phases. It is possible that leisure use of this trail may increase as a result of users becoming accustomed to, or aware of, the trail from the construction phase. However, the connections towards Jeskyns may be more attractive to users from the car park (i.e. heading towards a known destination with potential for linking in to a longer leisure route and additional facilities).

- A.4.12 In terms of addressing visual impact, Design Principle S2.11 [**Application Document [APP-516](#)**] contains provision for a wooded buffer along Thong Lane, planting to the north of the car park which would be designed to screen views from the village of Thong and boundary planting designed to integrate the car park into the surrounding landscape. Schedule 2 Requirement 3 (Detailed Design) and Requirement 5 (Landscaping and Ecology) of the draft DCO [**Additional Submission [AS-038](#)**] make further provision for the detailed design of the car park.

Indirect impacts

- A.4.13 Indirect pathways relate to wider aspects that may arise as a result of increased recreational users. No significant indirect pathways have been identified:
- a. Indirect effects potentially caused by a rise in visitor numbers may relate to littering and visitor behaviour associated with dog walking (not picking up dog faeces). These are considered to be able to be dealt with through visitor information and awareness raising campaigns which form part of the management of the existing Country Park to the north of the A2 and of the Woodland Trust's approach to managing Ashenbank Woods to the south of the A2.

- b. The impacts of existing visitors (primarily dogwalkers) on livestock within Ashenbank Woods has already been identified as part of the Woodland Trust Management Plan for the site. Of the potential user groups for the new car park, dogwalkers are likely to stay for the shortest duration and typically walk short, circular routes; as such this group is unlikely to venture into Ashenbank Woods in sufficient numbers to create an additional effect, as a result of the distance from the new car park.
- c. No air pollution effects are likely to be experienced as a result of the introduction of additional vehicles to the car park, as a result of the existing context of the local area (the busy A2 immediately to the south of the car park) and the number of vehicles likely to utilise the car park.

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

- A.4.14 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. As with the new car park, 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.4.15 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.4.16 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 [**Additional Submission AS-038**] which relates to the temporary use of land for carrying out the authorised development).

- A.4.17 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.4.18 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 either as a result of the creation of the new car park at Thong Lane or as a result of new WCH routes to the south of the A2. The principal reasoning behind these conclusions are as follows:
- a. The number of net additional visitors to the area as a result of the new car park are considered to be very small. Visitors are primarily likely to be displaced from other nearby locations (such as the main Shorne Woods Country Park car park or Jeskyns Community Woodland car park) rather than new visitors to the area entirely.
 - b. Route choice from the car park ensures that the small number of visitors are further dispersed throughout the area rather than concentrated in one direction. Access into the western portion of SWCP is likely to be the principal direction for visitors; the SSSI in this location is in good condition with no current issues associated with recreational usage or pressure identified in the SWCP Management Plan.
 - c. 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).
 - d. 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 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	Potential for additional significant moderate adverse inter-project effects on local landscape character and visual amenity effects on receptors during construction.

Topic	Development and effect	Update to significance reported in ES Chapter 16 Table 16.12
	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.	
Landscape and visual	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.	Potential for additional significant large adverse inter-project effects on local landscape character and visual amenity effects on receptors during construction.
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 	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.

Topic	Development and effect	Update to significance reported in ES Chapter 16 Table 16.12
	<ul style="list-style-type: none"> • East Havering Datacentre and Ecology Park 	
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>

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