

A46 Coventry Junctions (Walsgrave) Scheme number: TR010066

8.21 Environmental Statement Addendum Construction Noise Impacts at Coombe Pool SSSI

The Infrastructure Planning (Examination Procedure) Rules 2010
Rule 17(1)

Planning Act 2008

Volume 8

June 2025

Deadline 3

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure) Rules 2010**

**A46 Coventry Junctions (Walsgrave)
Development Consent Order 202[x]**

**ENVIRONMENTAL STATEMENT ADDENDUM
CONSTRUCTION NOISE IMPACTS AT COOMBE POOL SSSI**

Rule Number	Rule 17(1)
Planning Inspectorate Scheme Reference	TR010066
Application Document Reference	TR010066/APP/6.1
Author	A46 Coventry Junctions (Walsgrave) Project Team

Version	Date	Status of Version
Rev 0	June 2025	Deadline 3

Table of contents

1.	Introduction.....	1
1.1.	Purpose of this document	1
2.	Mitigation measures	4
2.1.	Construction programme review	4
2.2.	Construction activities closest to the SSSI.....	4
2.3.	Noise modelling.....	5
3.	Review of environmental statement.....	8
3.1.	Introduction.....	8
3.2.	Air quality	8
3.3.	Cultural heritage	9
3.4.	Landscape and visual	10
3.5.	Geology and soils.....	10
3.6.	Material assets and waste.....	11
3.7.	Noise and vibration	11
3.8.	Population and human health	12
3.9.	Road, drainage and water environment.....	12
3.10.	Climate.....	12
3.11.	Cumulative effects assessment	13
3.12.	Summary of findings	13
	Glossary and acronyms.....	15

Tables

Table 1: ES Chapters affected by the proposed changes	14
---	----

1. Introduction

1.1. Purpose of this document

- 1.1.1. This Environmental Statement Addendum (ESA) Construction noise impacts at Coombe Pool SSSI relates to an application submitted by National Highways (the Applicant) to the Secretary of State for Transport (through the Planning Inspectorate) for a development consent order (DCO) under the Planning Act 2008. The A46 Coventry Junctions (Walsgrave) Scheme (the Scheme) comprises of an upgrade to the junction of the A46 Coventry Eastern bypass and the B4082, east of Walsgrave by constructing a new grade separated junction located to the north of the existing Walsgrave roundabout with the B4082 extending to the new junction.
- 1.1.2. A DCO application for the Scheme was accepted for examination by the Planning Inspectorate on the 12 December 2024 (DCO Application). The Scheme is currently in examination which started on 7 May 2025 and is due to close on 7 November 2025.
- 1.1.3. The Environmental Statement (ES) Chapter 8 (Biodiversity) (**APP-030**) for the Scheme reported a moderate adverse (significant) effect on breeding waterbirds, and a large adverse (significant) effect on wintering waterbirds in the Coombe¹ Pool Site of Special Scientific Interest (SSSI), due to temporary increases in the baseline environmental noise levels during construction works.
- 1.1.4. The proposed works adjacent to the SSSI have been identified as having the greatest impact upon the SSSI related to construction works. The works alongside Coombe Pool are described in section 2.6 of ES Chapter 2 (The Scheme) (**APP-024**) and can be summarised as follows:
- Removal of existing vegetation in the verge and down the slope of the existing bund where earthworks will occur.
 - Earthworks to partially remove the top and slopes of the existing bund due to the realignment of the A46 for approximately 310m.
 - Rebuilding part of the existing bund to be at a lower overall height, a gradient of around 1V:3H, with a height of around 1m above the proposed carriageway.
- 1.1.5. Cross-sections showing the existing and proposed profiles of the bund are contained in ES Appendix 13.1 (Flood Risk Assessment) (**AS-012**) Annex D (A46 Southbound Embankment Flood Bund Drawing) and in Additional Cross

¹ Coombe is also spelt as Combe in some databases. For consistency, the spelling of Coombe will be used.

Sections through the Existing Walsgrave Junction (**REP1-032**) submitted at Deadline 1.

- 1.1.6. The existing bund is being reduced in height to allow for the A46 southbound carriageway to be moved eastwards, this enables the appropriate sight-lines to be achieved following the removal of the existing Walsgrave roundabout and the introduction of the bend.
- 1.1.7. Since the DCO application was made, the Applicant has continued to undertake further assessment to identify opportunities to reduce the significance of effects upon breeding waterbirds and wintering waterbirds at Coombe Pool SSSI. The Applicant continues to engage with Natural England on this matter.
- 1.1.8. As a result, a more specific temporal and spatially detailed construction programme has been developed for the programme months where the worst impacts across the SSSI were reported. This is described further in section 2. Such construction programme detail would not typically be available until the detailed design stage or start of construction but at this time further programme information has been developed by the Principal Contractor. .
- 1.1.9. Further detailed noise modelling was undertaken following the ES submission to assess the significance of effects via the use of a construction mitigation noise barrier and additional mitigation measures.
- 1.1.10. The purpose of this ESA is to assess and report whether the proposed mitigation measures (described in section 2) would give rise to new or materially different environmental effects than those already reported in the ES. This ESA has considered each environmental aspect, other than biodiversity, and either provided an updated assessment or a rationale for those assessments where the conclusion will be unaffected by this change. This is presented in section 3.
- 1.1.11. The updated biodiversity assessment is presented in ES Chapter 8 (Biodiversity) update (**APP-030**) resubmitted at Deadline 3. This assessment has identified that the installation of a temporary noise barrier results in a reduction in the significance of effect from that reported in ES Chapter 8 (Biodiversity) (**APP-030**) for breeding and wintering waterbirds during construction from noise. No new impacts have been identified.
- 1.1.12. For all other aspects, presented in this ESA, the conclusions of the ES remain unchanged and are discussed in Section 3.
- 1.1.13. The following documents have been resubmitted at deadline 3 and also been updated to reflect the reduction in the significance of effect reported upon Coombe Pool SSSI and the incorporation of required mitigation measures.

- ES Non-Technical Summary (**APP-108**) update
- ES Chapter 8 (Biodiversity) (**APP-030**) update
- ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Features) (**APP-091**) update
- ES Chapter 16 (Summary) (**APP-036**) update
- First Iteration Environmental Management Plan (EMP) (**REP1-010**) update
- Appendix A of the First Iteration EMP Register of Environmental Actions and Commitments (**APP-110**) update.

1.1.14. During Issue Specific Hearing 1 on the 8 May 2025 agenda item 6.1 relating to noise mitigation and the SSSI was raised and discussed. This ESA supports the Applicant's response.

2. Mitigation measures

2.1. Construction programme review

- 2.1.1. The construction noise data used to model construction noise for the assessment presented in the ES was preliminary. Similar to design, construction information typically goes through various stages of development and becomes more detailed and specific the nearer to construction it is, and as relevant specialist sub-contractors become involved. The preliminary construction programme phasing used for the assessment reported in the ES split the Scheme into a number of construction areas (Table 2-2 Construction phasing of ES Chapter 2 (The Scheme) (**APP-024**)). This resulted in long duration tasks (multiple weeks) which covered large areas of the Scheme. The assessment assumed that each task within each phase would occur throughout the duration of each phase when in reality this would not be the case. This approach is typically taken to provide a realistic worst-case scenario and also to provide flexibility for the Principal Contractor to undertake tasks at any time within each phase knowing that the effects had been fully assessed and mitigation identified.
- 2.1.2. A review of the construction programme has been undertaken. During this review the project was split into a larger number of construction areas (i.e. smaller in size than those considered in the ES). This resulted in the programme having a larger number of shorter tasks. This also means that not all of the tasks are occurring at the same time over the total area, as had been assumed in the ES.
- 2.1.3. The total duration of the construction works and the total size of working areas within each construction phase for each of the two construction programmes are the same. By breaking down the construction programme into smaller tasks and locations this allows the construction noise impacts to be modelled on a more temporal and spatially specific basis.

2.2. Construction activities closest to the SSSI

- 2.2.1. The ES Chapter 2 (The Scheme) (**APP-024**) paragraph 2.6.48 stated that “*The bund may be lined, if required, with an impermeable barrier to avoid seepage through the bund during a flood event. This will be considered further at the detailed design stage.*” The assessment previously undertaken assumed this would be required leading to the vegetation loss assessed in the ES.
- 2.2.2. Assuming, as a worst-case that the impermeable barrier, in the form of a clay layer on the Coombe Pool side slope of the existing bund, is required these works would be the closest to the SSSI that requires heavy machinery. For these works it is proposed that a long-reach excavator would be based on the grass

verge (adjacent to the A46 southbound carriageway) or the existing southbound carriageway and reach over the bund (which at that time may have reduced in height as part of the works) to remove the topsoil and then to place a layer of clay over the slope of the bund. The clay layer would be required for an approximate length of 150m and most likely only to the north of the Smite Brook culvert.

2.3. Noise modelling

- 2.3.1. The review of the construction programme has considered those specific construction activities that resulted in the worst month in total for absolute noise change which are expected to occur in September 2026 (night-time). The construction activities proposed during September 2026 (night-time) and resulting noise levels occur from the out-of-hours creation of the construction access areas of the A46 layby (northbound and southbound) and the B4082.
- 2.3.2. As September is not within the wintering bird season (October to March) or the bird breeding season (March to August) the worst month within the wintering and bird breeding season was then reviewed which is December 2026 (day time). This more detailed construction programme information for December 2026 has been used to re-model the noise impacts upon the SSSI and identify the mitigation required. The wintering and breeding bird seasons have been considered as these are relevant to the species for which the SSSI is designated for.
- 2.3.3. The noise modelling for December 2026 (daytime) represents the construction activities and noise levels resulting primarily from the Phase 1 works, including the north-west, north-east, south-east, south-west slip roads and attenuation pond works areas. The modelling also included site clearance works on the southbound carriageway south of the Walsgrave roundabout (i.e. adjacent to the SSSI). Due to the complexity of the detailed construction programme information in this month, the noise modelling exercise identified that the worst-case overall site noise emissions from all works areas within the Order Limits occurs on the 17 December 2026, and the worst-case site noise emissions from works closest to the SSSI occurs on 15th December 2026.
- 2.3.4. The limitations and assumptions made in the additional construction noise model are the same as those set out in section 11.6 of ES Chapter 11 (Noise and Vibration) (**APP-033**).
- 2.3.5. As per the assessments presented in the ES, the noise modelling results were used to determine the absolute change in ambient baseline noise levels over the SSSI during construction works. This was achieved through the logarithmic summation of the baseline environmental noise contours (derived from the Do

Minimum Opening Year (DMOY) mapping) and the construction noise contours, followed by the subtracting of the ambient baseline noise contours to produce the absolute noise change in 16-hour (daytime) or 8-hour (night-time) ambient noise level.

- 2.3.6. The review of the construction programme also involved the rationalisation of construction equipment. As a result the equipment allowances for some tasks led to a reduction in plant quantity or size. Noise emissions during construction works are the cumulative result of both equipment size, on-time and quantity. Therefore, reductions in plant size or quantity for each task would result in reduced noise emissions.
- 2.3.7. Following the review of the construction programme and additional noise modelling it was reconfirmed that additional mitigation measures are required to reduce the significance of effects from noise during construction upon Coombe Pool (wintering and breeding waterbirds). Ultimately it was found that mitigation using noise barriers and monitoring will be the most efficient and practicable approach to reduce noise at the SSSI.
- 2.3.8. Modelling of absolute noise change during construction in December 2026 with the use of a construction noise barrier was undertaken. The results of this modelling are presented in the Update to ES Appendix 8.16 (Assessment of Noise Impacts on Ecological Receptors) (**APP-091**). The modelling of a noise barrier for mitigation was undertaken based on a 2.0m tall temporary noise barrier as presented on update to ES Figure 8.3 (Proposed construction mitigation noise barrier – December 2026 daytime) (**APP-052**) resubmitted at Deadline 3.
- 2.3.9. In addition to reducing noise levels during the month of December 2026, the mitigation noise barrier would be used throughout the duration of construction and therefore reduce absolute noise change levels and areas of Coombe Pool impacted throughout construction.

Proposed mitigation measures

- 2.3.10. During the construction works a noise barrier shall be installed and maintained in accordance with Commitment NV2 of the REAC, Appendix A of the First Iteration EMP (**APP-110**). The noise barrier will be in place, where practicable, when an absolute noise change of 3dB or greater at the SSSI was identified. The location and extent of the modelled noise barrier is presented in updated ES Figure 8.3 (Proposed construction mitigation noise barrier – December 2026 daytime) (**APP-052**) resubmitted at Deadline 3.

- 2.3.11. To create the noise barrier Heras fence panels shall be secured to the existing post and rail fence that forms the boundary fence between National Highways owned land and the SSSI. Acoustic blankets will be fixed securely to the Heras fence panels with cable ties and 'Velcro' overlaps, which ensures that there are no gaps between the acoustic blankets, hence forming a noise barrier. This noise barrier, which will be approximately 2m high, shall be installed prior to any excavation of the bund in this location and will remain in place until the works are complete.
- 2.3.12. To avoid potential additional permanent impacts upon the SSSI a noise barrier of 2m has been considered the most practicable as at this height the fence would not require foundations for installation. By avoiding the need for foundations, excavations within the root protection zones of the trees within the SSSI will not be required.
- 2.3.13. Further mitigation to be employed alongside the noise mitigation barrier during the construction phase includes monitoring by an Ornithological Specialist. This mitigation is only applicable to the biodiversity assessment and is described further in the Update to ES Appendix 8.16 (Assessment of noise impacts upon ecological receptors) (**APP-091**) submitted at Deadline 3. The biodiversity assessment is presented in the updated ES Chapter 8 (Biodiversity) (**APP-030**), resubmitted at Deadline 3.

3. Review of environmental statement

3.1. Introduction

- 3.1.1. The following sections summarise the outcomes for each environmental aspect when considering the potential significant effects, which may arise based upon the mitigation required for the noise impacts to the SSSI. This review has considered the existing environmental assessment detailed within the ES. The biodiversity aspect has been considered elsewhere as described in section 1.
- 3.1.2. The methodology used is the same as that described in the ES. The assumptions and limitations are the same as those reported in the ES.

3.2. Air quality

- 3.2.1. ES Chapter 5 (Air Quality) (**APP-027**) determined that an assessment of construction traffic on air quality during the construction period was not required. The proposed mitigation measures will not change the criteria upon which this assessment was undertaken thus the conclusions remains the same.
- 3.2.2. The construction dust assessment reported in ES Chapter 5 (Air Quality) (**APP-027**) concluded there will be no likely significant air quality effects associated with the Scheme, provided that appropriate best practice mitigation measures are employed. To clarify, the assessment reported in ES Chapter 5 captured the Coombe Pool SSSI as a sensitive receptor, with the sensitivity of the receiving environment within 200 m of the Order Limits being classified as 'high' with reference to DMRB LA 105.
- 3.2.3. The mitigation measures commensurate to the construction dust risk potential and environment sensitivity are included in the Scheme's First Iteration EMP (**REP1-010**) (Commitment AQ1 of the REAC, Appendix A of the First Iteration EMP (**APP-110**)).
- 3.2.4. The revised construction programme reported in Section 2 of this ESA confirms that the total duration of the construction programme would remain the same (i.e. less than two years), and the total size of working areas would be the same. Furthermore, the Principal Contractor has confirmed that there is no change to the expected average daily construction traffic movements already reported in Table 5-9, page 16 of ES Chapter 5 (Air Quality) (**APP-027**).
- 3.2.5. On the above basis, within the context of DMRB LA 105, no further assessment of construction phase impacts on local air quality is required. The conclusions of the construction phase air quality assessment remain unchanged.

3.3. Cultural heritage

- 3.3.1. The Cultural Heritage Assessment – ES Chapter 6 (Cultural Heritage) (**APP-028**) reported two slight adverse (not significant) effects as a result of the Scheme which comprised a physical impact to a wall determined to be listed through curtilage at the Grade II listed Hungerley Hall Farm and an effect resulting from a change in setting.
- 3.3.2. Mitigation applied both through the design of the Scheme in the form of landscape planting and through the application of a programme of historic building recording have reduced, insofar as is possible, the scale of the effects from the Scheme to the significance of the asset.
- 3.3.3. The Cultural Heritage Assessment also took into consideration the potential for an effect on the significance of the Grade II* Registered Park and Garden at Coombe Abbey which contains the Combe Pool SSSI. It was concluded that there would be a temporary impact to the significance of the park and garden during construction through an increase in traffic noise but that it would be temporary in length and limited in scale. A negligible adverse (not significant) effect was reported.
- 3.3.4. General visual intrusion from construction is temporary. As reported in the Cultural Heritage Assessment impacts are short term and reversible, which means they will cause no permanent change or loss. Therefore, while temporary impacts are predicted for the Scheme, none of these can be considered to result in residual effects upon the Grade II* Registered Park and Garden at Coombe Abbey. The noise barrier proposed would remain consistent with those typically associated with construction activities and thus would not change the outcome of the Cultural Heritage Assessment.
- 3.3.5. The Cultural Heritage assessment reported a low potential for as yet unknown archaeological remains to be present within the construction footprint. Any archaeological remains which are encountered will be mitigated through application of the Unexpected Archaeological Finds Protocol (UAFP), which forms Appendix B.6 of the First Iteration Environmental Management Plan (**REP1-010**).
- 3.3.6. For the purposes of the Cultural Heritage Assessment, changes in the construction programme will not alter any of the reported effects. There will be no new areas of excavation which could affect unknown archaeological remains while the effects on the significance of Hungerley Hall would remain the same.
- 3.3.7. The reported negligible adverse (not significant) effect on the Grade II* Registered Park and Garden at Coombe Abbey will also remain the same as the

change from the construction programme will not remove the presence of noise during the construction phase.

3.4. Landscape and visual

- 3.4.1. ES Chapter 7 (Landscape and Visual Effects) (**APP-029**) assessed the effects of construction activities. With mitigation the effect upon Project Landscape Character Area (PLCA) 2 - Coombe Abbey Park and Old Lodge Farm was reported to be slight adverse (not significant) as the effect is limited by the temporary presence of the construction activities. The existing bund and A46 would shield views of the noise barrier from other PLCAs considered in the assessment.
- 3.4.2. The assessment of the effect of construction activities upon visual receptors was undertaken through the assessment of representative viewpoints. The effects of construction activities on visual amenity at Viewpoint 10: Recreational receptors at Coombe Country Park was determined to be Neutral (not significant) owing to the temporary presence of construction activities causing an adverse visual effect.
- 3.4.3. The noise barrier proposed would remain consistent with those typically associated with construction activities and thus would not change the outcome of the assessment in ES Chapter 7 (Landscape and Visual Effects) (**APP-029**).
- 3.4.4. Introduction of the proposed construction phase noise barrier would not alter the assessment presented in ES Chapter 7 (Landscape and Visual Effects) (**APP-029**) and its supporting appendices, as the impacts would remain consistent with those typically associated with construction activities. Therefore, there is no potential for materially new or materially different landscape and visual effects.

3.5. Geology and soils

- 3.5.1. The further detailed construction programme would not affect the assessment contained within the ES Chapter 9 (Geology and Soils) (**APP-031**). Criteria and methodology used in the assessment are both current and conservative with no foreseen updates identified within the updated programme. Furthermore, the amendments to the construction programme would not affect the considered volumes of materials or the disturbance required to deliver the Scheme.
- 3.5.2. The further detailed construction programme would not affect the agricultural assessment contained within the ES Chapter 9 (Geology and Soils) (**APP-031**). The temporary land-take would remain unchanged from what is reported in ES Chapter 9 (**APP-031**).

- 3.5.3. The noise barrier proposed as mitigation would not affect the assessment contained within the ES Chapter 9 (Geology and Soils) (**APP-031**) as it does not require any excavations, does not affect the considered volumes of materials or the disturbance required to deliver the Scheme. The noise barrier would not affect the agricultural assessment contained within the ES Chapter 9 (Geology and Soils) (**APP-031**) as the temporary land-take would remain unchanged from what is reported in ES Chapter 9 (Geology and Soils) (**APP-031**).

3.6. Material assets and waste

- 3.6.1. The further detailed construction programme would not affect the assessment contained within the ES Chapter 10 (Material Assets and Waste) (**APP-032**). Criteria used in the assessment are both current and conservative with no foreseen updates to the criteria identified within the further detailed programme, with the mitigations detailed within the First Iteration EMP (**APP-032**) remaining unaltered. Furthermore, the amendments to the construction programme would not affect the considered volumes of materials or the disturbance required to deliver the Scheme.
- 3.6.2. The noise barrier proposed as mitigation would not affect the assessment contained within the ES Chapter 10 (Material Assets and Waste) (**APP-032**). The use of this temporary fence would not affect the considered volumes of materials, or the disturbance required to deliver the Scheme.

3.7. Noise and vibration

- 3.7.1. The detailed construction programme information for this ESA has been reviewed in the context of the construction noise assessments presented in the ES Chapter 11 (Noise and Vibration) (**APP-033**). The assessment presented in ES Chapter 11 (**APP-033**) reflects a worst-case assessment of noise impacts on noise sensitive human receptors for each phase of the development.
- 3.7.2. When considering that the detailed programme information has not materially changed the overall works programme or phasing, works areas, works tasks, works equipment, or mitigation strategies with relation to that presented in the ES, it is considered that there is no impact on the conclusions of the assessments presented.
- 3.7.3. The noise barrier proposed to be located at the boundary of the SSSI is primarily to mitigate noise levels within the SSSI at ecological receptor locations. its presence does not change the impact upon human receptors. The assessment of noise impacts on ecological receptors has been considered more fully within Chapter 8: Biodiversity and its associate appendices.

3.8. Population and human health

- 3.8.1. In accordance with DMRB LA 112 Population and human health, it is not anticipated that the further detailed construction programme or the proposed noise barrier during construction would affect the assessment of likely significant effects on access to private property and housing, community land or assets, development land or businesses, or walkers, cyclists and horse-riders (WCH) detailed in the ES Chapter 12 (Population and Human Health) (**APP-034**). Access should be maintained throughout the construction period as set out in section 12.10 of ES Chapter 12 (Population and Human Health) (**APP-034**). The noise barrier will be on land in possession of the Applicant during the proposed construction works.
- 3.8.2. The assessment on human health remains the same as reported in ES Chapter 12 (Population and Human Health) (**APP-034**). The effects on the health determinants would remain Neutral as the construction period would still be considered temporary.

3.9. Road, drainage and water environment

- 3.9.1. The further detailed construction programme and provision of a noise barrier during construction would not affect the surface water or groundwater assessments within ES Chapter 13 (Road Drainage and the Water Environment) (**APP-034**). Although the noise barrier would in some locations be located within the flood zone of Coombe Pool/Smite Brook this would be the same as for all the construction works within the floodplain (i.e. the replacement of the post and rail boundary fence, the potential requirement for clay on the bund and the installation of temporary construction site fencing for securing the construction site). Mitigation measures are already detailed in the ES Chapter 13 (Road Drainage and the Water Environment) (**APP-034**) along with requirements for Ordinary watercourse consent for temporary works. The detailed construction programme and provision of the noise barrier would not change the conclusions of the assessment, or the resulting mitigation proposed within ES Chapter 13 (Road Drainage and the Water Environment) (**APP-034**), and First Iteration the EMP (**REP1-010**).

3.10. Climate

- 3.10.1. It is not anticipated that the further detailed construction programme or provision of the noise barrier for mitigation of noise impacts would change the outcome of the assessment, both for the impact of the Scheme on climate change and the impact of climate change on the Scheme detailed in ES Chapter 14 (Climate) (**APP-036**).

- 3.10.2. The Green House Gases (GHG) assessment to quantify emissions from the construction phase of the project was based on data from a bill of quantities on the proposed design at the preliminary design stage. Estimates of carbon emissions (tCO₂e) were made to assess the emissions from the production of materials, their transport to site, and plant and construction emissions. This quantified the total emissions from the construction phase and the assessment would not change based on the further detailed construction programme amendment and the provision of a noise barrier.

3.11. Cumulative effects assessment

- 3.11.1. It has been determined that the cumulative effects assessment would not need to be updated as a result of the proposed mitigation measures.
- 3.11.2. The conclusions outlined in the ES Chapter 15 (Cumulative Effects) (**APP-107**) for single project effects would not change as the mitigation measures would not alter the conclusions of the other ES chapters, other than those outlined in paragraph 1.1.7 in this document (i.e. biodiversity).
- 3.11.3. The conclusions outlined for different project effects at the time of submission of the ES would not change from ES Chapter 15 (Cumulative Effects) (**APP-107**). There were no developments that were determined to require further assessment in the shortlist for the original ES Chapter 15 (Cumulative Effects) (**APP-107**) assessment. On the basis that this ES Addendum uses the environmental baseline that was determined at the time the original cumulative effects assessment was undertaken, it is not considered that the conclusions of the cumulative effects assessment would change as a result of the mitigation measures.

3.12. Summary of findings

- 3.12.1. Table 1 summarises and identifies those environmental aspects for which the assessment outcomes reported in the Environmental Statement have changed as a result of the proposed mitigation measures to mitigate noise impacts upon the SSSI. (✓) means a change in the assessment outcome has been reported and (✗) means no change in the assessment outcome has been reported.
- 3.12.2. The findings and conclusions of each ES Chapter have been examined. This ES addendum concludes that the mitigation measures do not give rise to new or materially different environmental effects already reported in the Environmental Statement except for biodiversity. The change in effects for biodiversity are reported in the update to ES Chapter 8 (Biodiversity) (**APP-030**), resubmitted at Deadline 3.

Table 1: ES Chapters affected by the proposed changes

ES Chapter	Change identified in assessment outcomes
Chapter 5 - Air quality (APP-027)	x
Chapter 6 - Cultural Heritage (APP-028)	x
Chapter 7 - Landscape and Visual effects (APP-029)	x
Chapter 8 - Biodiversity (APP-030)	✓
Chapter 9 - Geology and Soils (APP-031)	x
Chapter 10 - Material assets and Waste (APP-032)	x
Chapter 11 - Noise and Vibration (APP-033)	x
Chapter 12 - Population and Human Health (APP-034)	x
Chapter 13 - Road, Drainage and the Water Environment (APP-035)	x
Chapter 14 - Climate (APP-036)	x
Chapter 15 - Cumulative effects assessment (APP-037)	x

Glossary and acronyms

Term	Definition
Absolute noise change	Change in noise level between the baseline noise level without the Scheme in the opening year of the Scheme (i.e. 2028 for this Scheme) and the cumulative noise level which is the background noise level without the Scheme in the opening year plus the construction noise level.
Ambient noise	Ambient noise is the total sound in a given situation at a given time usually composed of sound from many sources, near and far.
Decibel	<p>The unit of measurement used for sound pressure levels and noise levels quoted in decibels (dB).</p> <p>NOTE 1: The decibel scale is logarithmic rather than linear; the threshold of hearing is zero decibels while, at the other extreme, the threshold of pain is about 130 decibels.</p> <p>NOTE 2: These limits are seldom experienced and typical levels lie within the range of 30dB(A) (a quiet night time level in a bedroom) to 90dB(A) (at the kerbside of a busy road).</p>
DMRB	Design Manual for Roads and Bridges
Do-minimum (DM)	Scenario without the Scheme.
Do-something (DS)	Scenario with the Scheme.
DMOY	Do-minimum opening year scenario (DMOY) i.e. the conditions at the time the Scheme would open but if the Scheme didn't exist – i.e. the future baseline without the Scheme. The opening year is 2028 for this Scheme.
DSOY	The Scenario with the Scheme in the year the Scheme opens (i.e. for this Scheme the opening year is 2028).
ES	Environmental Statement
ESA	Environmental Statement Addendum
Noise	Unwanted sound.
Noise modelling	<p>Software to predict noise levels.</p> <p>NOTE: This can be undertaken either by specialist software to provide a 3D representation of the project and nearby noise sensitive receptors or a simple spreadsheet.</p>
Noise monitoring	Measurement of noise levels.
Opening year	The first year of operation.
OS	Ornithological Specialist
SSSI	Site of Special Scientific Interest