



# High Speed Rail (West Midlands - Crewe)

Supplementary Environmental Statement and  
Additional Provision Environmental Statement

## Volume 5: Technical appendices

Summary of changes to ecology baseline data that do  
not generate new or different significant effects  
(EC-002-000)



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## Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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A report prepared for High Speed Two (HS2) Limited:

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# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Summary table</b>	<b>2</b>
<b>3</b>	<b>References</b>	<b>36</b>



# 1 Introduction

- 1.1.1 This document is an appendix that forms part of Volume 5 of the Supplementary Environmental Statement (SES) and Additional Provision Environmental Statement (AP ES).
- 1.1.2 This appendix provides a summary of the new supplementary ecological baseline data that does not lead to new or different likely significant environmental effects from those reported in the High Speed Rail (West Midlands - Crewe) Environmental Statement (ES)<sup>1</sup> published in July 2017 (the main ES) as a result of the SES changes and amendments, assessed as part of the SES and AP ES. This document should be read in conjunction with Volume 2 (community area reports) and Volume 3 (route-wide effects assessment) of the SES and AP ES. Details of all supplementary ecological baseline data that is relevant to these areas is provided in the SES and AP ES Volume 5: Maps EC-04-052, EC-06-135, EC-11-10 and EC-12-102 and Background Information and Data (BID) document BID-EC-004-000<sup>2</sup> which accompanies the SES and AP ES.
- 1.1.3 This appendix covers the following community areas (CAs):
- CA1: Fradley to Colton;
  - CA2: Colwich to Yarlet;
  - CA3: Stone and Swynnerton;
  - CA4: Whitmore Heath to Madeley; and
  - CA5: South Cheshire.
- 1.1.4 Table 1 presents a summary of changes to the ecology baseline data that do not generate new or different significant effects in each of the community areas.
- 1.1.5 In this report the scheme is referred to as the AP revised scheme, which is the original scheme (i.e. the Bill scheme submitted to Parliament in July 2017, which was assessed in the main ES) as amended by additional surveys undertaken since the production of the main ES and SES design changes and AP amendments.

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<sup>1</sup> HS2 Ltd (2017), *High Speed Rail (West Midlands - Crewe) Environmental Statement*, <https://www.gov.uk/government/collections/hs2-phase-2a-environmental-statement>.

<sup>2</sup> HS2 Ltd (2018), *High Speed Two (HS2) Phase 2a (West Midlands - Crewe), Background Information and Data, Supplementary ecological baseline data*, [www.gov.uk/hs2](http://www.gov.uk/hs2).

## 2 Summary table

Table 1: Summary of changes to ecology baseline data that do not generate new or different significant effects

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA1 Fradley to Colton	Woodland	BID-EC-002-000, paragraph 2.3.3	The main ES reported the loss of 23.1ha of woodland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since the production of the main ES.	The AP revised scheme will not result in the additional loss of woodland but there is potential for indirect impacts.	No change. No additional loss of woodland and the indirect impacts will not be significant.	No change.	No change.
CA1 Fradley to Colton	Scrub	BID-EC-002-000, paragraph 2.3.12	The main ES reported the loss of 1.8ha of scrub within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 2.4ha of scrub.	No change. The increased area of scrub loss does not result in a new or different significant effect.	No change.	No change.
CA1 Fradley to Colton	Improved grassland	BID-EC-002-000, paragraph 2.3.16	The main ES reported the loss of 145.7ha of improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 163.8ha of improved grassland.	No change. The increased area of improved grassland loss does not result in a new or different significant effect.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA1 Fradley to Colton	Species-poor semi-improved grassland	BID-EC-002-000, paragraph 2.3.16	The main ES reported the loss of 5.3ha of species-poor semi-improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 8.8ha of species-poor semi-improved grassland.	No change. The increased area of species-poor semi-improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA1 Fradley to Colton	Amenity grassland	BID-EC-002-000, paragraph 2.3.16	The main ES reported the loss of 18.8ha of amenity grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 21.9ha of amenity grassland.	No change. The increased area of amenity grassland loss does not result in a new or different significant effect.	No change.	No change.
CA1 Fradley to Colton	Water bodies	Volume 2, CA 1, paragraph 8.3.24	The main ES reported the loss of 58 water bodies within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 64 water bodies.	No change. The increased number of water body loss does not result in a new or different significant effect.	No change.	No change. As per the mitigation stated in the main ES, at least one pond will be created for every pond lost.
CA1 Fradley to Colton	Arable and cultivated land	BID-EC-002-000, paragraph 2.3.24	The main ES reported the loss of 401ha of arable/cultivated land within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 387.8ha of arable/cultivated land.	No change. The decreased area of arable and cultivated land loss does not result in a new or different significant effect.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA1 Fradley to Colton	Hedgerows within the Fradley to Colton area	Volume 2, CA1, paragraph 8.3.19	<p>There is approximately 64.8km of hedgerow within the land required for the original scheme in the Fradley to Colton area. Hedgerows within the land required for the original scheme comprise approximately:</p> <ul style="list-style-type: none"> <li>• 11.8km of native species-poor; and</li> <li>• 53.0km of native species-rich, of which 13.0km are also classified as 'Important' according to the 'Wildlife and Landscape' criteria described in The Hedgerows Regulations.</li> </ul> <p>Of the 64.8km of hedgerow, a total of 37.5km of hedgerows have not been subject to survey and are assumed to be species-rich.</p>	Hedgerow surveys in 2017.	Following the 2017 hedgerow surveys, 10 previously un-surveyed hedgerows (assumed to be species-rich in the main ES), with a combined length of approximately 2.8km were identified as 'Important'.	<p>No change.</p> <p>The additional loss of 'Important' hedgerows within the land required for the construction of the AP revised scheme will not represent new or different effects upon the hedgerow network.</p> <p>This is because the additional 2.8km of 'Important' hedgerows were already classed as species-rich hedgerows in the main ES so that their significance was already accounted for and proposed mitigation took account of this.</p>	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			This hedgerow network is of county value as reported in the main ES.					
CA1 Fradley to Colton	Population of otter using the major and minor watercourses in the Fradley to Colton area	Volume 2, CA1 paragraph 8.3.28 (Table 13)	Field surveys undertaken for HS2 Phase One found evidence of otter in the Trent and Mersey Canal and Bourne Brook. Field surveys undertaken for the original scheme recorded evidence of otter at Pyford Brook, along the Bourne Brook and at Moreton Brook, all within the land required for the original scheme. Desk study records for otter were reported from the Trent and Mersey Canal at Handsacre within 1.2km of the land required for the original scheme. A number of desk study records also reported otter along the River Trent and Moreton Brook. Given the availability of suitable habitat, it is assumed that otters are using these watercourses and other	Additional otter surveys.	The findings of the otter surveys identified suitable habitat in a pond south-west of Alrewas Hayes.  The River Trent is also still considered to support suitable habitat in the absence of field signs and holts.  A stream south-east of B5014 Uttoxeter Road, a pond south-east of Newlands Lane, a pond north-west of the Newlands Lane, a pond north-west of B5013 Uttoxeter Road, and a ditch south-east of the B5013 Uttoxeter Road were scoped out of further surveys due to a lack of suitable habitat or connectivity to suitable habitat.	No change.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			watercourses and water bodies within the Fradley to Colton area for foraging, breeding and dispersal.					
CA1 Fradley to Colton	Badger social groups at undisclosed locations in the Fradley to Colton area	Volume 2, CA1 paragraph 8.3.28 (Table 13)	Five main badger setts have been recorded during field surveys within the land required for the original scheme. A further two main setts have been recorded within 30m of the land required for the original scheme, and a further two main setts have been recorded between 30 and 100m of the land required for the original scheme.	Additional badger field signs surveys.	<p>Four additional outlier badger setts have been identified, three of which are located within the land required for the AP revised scheme.</p> <p>The survey also recorded an additional partially active entrance to an outlier sett already identified in the main ES. This is outside of land required for the AP revised scheme.</p> <p>One additional main sett, one additional annexe sett, and one additional subsidiary sett have been recorded outside of the land required for the AP revised scheme.</p>	<p>No change.</p> <p>The three additional outlier badger setts recorded within the land required for the AP revised scheme will be lost during construction. The loss of outlier setts is not considered to be significant and does not change the assessment from the main ES.</p> <p>One additional main sett recorded outside of the land required for the AP revised scheme will not be damaged and is unlikely to be subject to disturbance or isolation effects.</p> <p>The additional annexe, subsidiary and outlier setts recorded outside of the land required for the AP revised</p>	No change.	No change. Although there will be no significant effects on badger populations in this area, mitigation measures to address the potential disturbance of badgers will be provided in accordance with the Ecological Principles of Mitigation within the SMR Addendum. This will include the provision of badger proof fencing and replacement setts where necessary.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						scheme will be retained in the majority of instances. Where construction works occur within 30m of these setts there is potential for setts to be disturbed or damaged. Such impacts will not represent new or different effects upon the badger social groups that utilise these setts to those reported in the main ES.		
CA1 Fradley to Colton	Wintering bird assemblage at Pipe Ridware floodplain	Volume 2, CA1 paragraph 8.3.28 (Table 13)	Wintering bird surveys conducted in 2015 and 2016 recorded a total of 47 bird species on the Pipe Ridware floodplain of which 22 were notable, both within and adjacent to the land required for the original scheme. The wintering bird assemblage recorded at Pipe Ridware Floodplain and Moreton Meadows is of	Wintering bird surveys in 2017.	The findings of the 2017 wintering bird surveys increased the total number of birds within the assemblage to 54 species of bird of which 26 are notable.  The recorded wintering bird assemblage is associated within and adjacent to land required for the construction of the AP revised scheme.	No change.  The additional wintering bird species and numbers do not change the level of significance of this adverse effect because they do not meet the Staffordshire criteria (Webb et al, 2014 <sup>3</sup> ) for county value and therefore remain as	No change.	No change.

<sup>3</sup> Webb, J., Lawley, S., Cadman, D., Slawson, C., Smith, J. and Weightman, J. (2014), *Guidelines for the selection of sites of county biological importance in Staffordshire*. Staffordshire Wildlife Trust, Stafford

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			local/parish importance.			of local/parish importance.		
CA1 Fradley to Colton	Wintering bird assemblage at Moreton Meadows	Volume 2, CA1 paragraph 8.3.28 (Table 13)	Wintering bird surveys undertaken in 2015 and 2016 recorded a total of 33 bird species at Moreton Meadows, of which 12 were notable. The wintering bird assemblage recorded at Moreton Meadows is of local/parish importance.	Wintering bird surveys in 2017.	The recorded wintering bird assemblage increased to 37 species of which 15 were notable  The recorded wintering bird assemblage is associated within and adjacent to land required for the construction of the AP revised scheme.	No change.  The additional wintering bird species and numbers do not change the level of significance of this adverse effect because they do not meet the Staffordshire criteria (Webb et al, 2014 <sup>3</sup> ) for county value and therefore remain as of local/parish importance.	No change.	No change.
CA1 Fradley to Colton	Great crested newt metapopulation west of Fradley Lock (AMP 31)	Volume 2, CA1 paragraph 8.3.28 (Table 13)	The main ES reported an assumed great crested newt metapopulation in eight ponds to the west of Fradley Lock (AMP 31). Desk study review identified a small great crested newt population within one pond. On a precautionary basis the presence of great crested newt was assumed in seven further ponds. The metapopulation is	Further field surveys undertaken since production of the main ES have confirmed the absence of great crested newt within one pond where presence was previously assumed to form part of this metapopulation	A re-assessment of the composition of all metapopulations across the Fradley to Colton area has been undertaken from updated field survey data and consideration of habitat connectivity. In addition to the confirmed great crested newt population within this AMP 31 from the main ES (one pond) there are six further ponds with assumed populations that are	No change.  The AP revised scheme would not result in the loss of any additional ponds that support known or assumed great crested newt populations that form part of this metapopulation. There is no new or different significant effect upon this metapopulation.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			valued at up to county level within the main ES.		considered to form part of this metapopulation. The revised metapopulation therefore includes seven ponds with confirmed or assumed populations of great crested newt, with the largest population being of assumed medium class size. This metapopulation occurs partially within the land required for the AP revised scheme.			
CA1 Fradley to Colton	Great crested newt metapopulation in a network of three ponds near Kings Bromley, south of the River Trent (AMP 1.1)	Volume 2, CA1 paragraph 8.3.28 (Table 13)	The main ES reported an assumed great crested newt metapopulation in three ponds near Kings Bromley (AMP 1.1). Field surveys recorded great crested newt presence within one pond, with the largest population being of assumed medium size class. On a precautionary basis the presence of great crested newt was assumed in two further ponds. The metapopulation is valued at up to county	Further field surveys undertaken since production of the main ES have confirmed the absence of great crested newt within one pond where presence was previously assumed to form part of this metapopulation. This pond no longer forms part of the metapopulation  In addition to the confirmed great crested newt population within this	The revised metapopulation therefore includes three ponds with confirmed or assumed populations of great crested newt, with the largest population being of assumed medium class size. This metapopulation occurs partially within the land required for the AP revised scheme.	No change.  The AP revised scheme would not result in the loss of any additional ponds that support known or assumed great crested newt populations that form part of this metapopulation. There is no new or different significant effect upon this metapopulation.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			level within the main ES.	metapopulation from the main ES, there are two further ponds with assumed populations that are considered to form part of AMP 1.1.				
CA1 Fradley to Colton	Great crested newt metapopulation located to the north of the Trent and Mersey Canal and south of the A513 near Kings Bromley Marina (AMP 1.5)	Volume 2, CA1 paragraph 8.3.28 (Table 13)	Not reported in the main ES.	Field surveys undertaken since the main ES and subsequent re-assessment of the composition of metapopulations have identified an additional great crested newt metapopulation in six ponds located north of the Trent and Mersey Canal and south of the A513 near Kings Bromley Marina (AMP 1.5).	Field surveys recorded great crested newt presence within two ponds, with the largest population being of medium size class. The metapopulation occurs approximately 220m from the land required for the AP revised scheme and it is of value at county level.	No change.  The AP revised scheme would not result in the loss of any ponds that support known or assumed great crested newt populations that form part of this metapopulation. There is no new or different significant effect upon this metapopulation.	No change.	No change.
CA2 Colwich to Yarlet	Scrub	BID-EC-002-000, paragraph 2.3.38	The main ES reported the loss of 0.5ha of scrub within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 0.5ha of scrub.	No change.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA2 Colwich to Yarlet	Improved grassland	BID-EC-002-000, paragraph 2.3.47	The main ES reported the loss of 162.3ha of improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 164.5ha of improved grassland.	No change. The increased area of improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA2 Colwich to Yarlet	Species-poor semi-improved grassland	BID-EC-002-000, paragraph 2.3.47	The main ES reported the loss of 31ha of species-poor semi-improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 31.5ha of species-poor semi-improved grassland.	No change. The increased area of species-poor semi-improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA2 Colwich to Yarlet	Amenity grassland	BID-EC-002-000, paragraph 2.3.47	The main ES reported the loss of 14.8ha of amenity grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 15.9ha of amenity grassland.	No change. The increased area of amenity grassland loss does not result in a new or different significant effect.	No change.	No change.
CA2 Colwich to Yarlet	Water bodies	Volume 2, CA 2, paragraph 8.3.24	The main ES reported the loss of 27 water bodies within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 45 water bodies.	No change. The loss of an additional 18 water bodies does not result in a new or different significant effect.	No change.	No change. As per the mitigation stated in the main ES, at least one pond will be created for every pond lost

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA2 Colwich to Yarlet	Arable and cultivated land	BID-EC-002-000, paragraph 2.3.55	The main ES reported the loss of 184.2ha of arable/cultivated land within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 190.2ha of arable/cultivated land.	No change.  The increased area of arable and cultivated land loss does not result in a new or different significant effect.	No change.	No change.
CA2 Colwich to Yarlet	Hedgerows within the Colwich to Yarlet area	Volume 2, CA 2, paragraph 8.3.19	There is approximately 33.9km of hedgerow within the land required for the original scheme in the Colwich to Yarlet area. Hedgerows within the land required for the original scheme comprise: <ul style="list-style-type: none"> <li>• 10.3km of native species-poor hedgerow;</li> <li>• 23.6km of native species-rich hedgerow; of which 1.4km are also classified as 'Important' according to the 'Wildlife and Landscape' criteria described in The</li> </ul>	Hedgerow survey to help determine the presence of 'Important' hedgerows.	An additional 1.1km of 'Important' hedgerows was recorded within the land required for the construction of the AP revised scheme. This 1.1km is part of the 23.6km of native species-rich hedgerow identified in the main ES.	No change.  The additional loss of 'Important' hedgerow within the land required for the construction of the AP revised scheme will not represent new or different effects upon the hedgerow network. This is because the additional 1.1km of 'Important' hedgerows were already classed as species-rich hedgerows in the main ES so that their significance was already accounted for and proposed mitigation took account of this.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			Hedgerows Regulations 1997 <sup>4</sup> .					
CA2 Colwich to Yarlet	Bat assemblage at Ingestre Park Golf Club	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	Field surveys recorded moderate levels of activity and a diverse assemblage of bat species including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, <i>Myotis</i> species, brown long-eared bat and noctule.  A maternity roost for a <i>Myotis</i> species and a mating site for common pipistrelle were also recorded in trees that are located within the land required for the construction of the original scheme.	Internal inspection of the Club House involving a search for roosting bats and signs of their presence.	An unidentified pipistrelle species summer day roost was recorded in the loft of the Club House, approximately 30m from the land required for the construction of the AP revised scheme.	No change.  This pipistrelle summer day roost is sufficiently distant and will not be impacted during construction of the AP revised scheme.	No change.	No change.
CA2 Colwich to Yarlet	Bat assemblage at Yarlet School	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	Field surveys recorded three transitional/day roosts for common pipistrelle in two buildings and a tree at Yarlet, within the land	Internal inspection of buildings at Yarlet School involving a search for roosting bats	An unidentified <i>Myotis</i> species summer day roost was recorded in the loft of a residential cottage at Yarlet School, approximately 100m	No change.  This <i>Myotis</i> summer day roost is sufficiently distant and will not be impacted during	No change.	No change.

<sup>4</sup> The Hedgerows Regulations 1997 (No. 1160), Her Majesty's Stationery Office, London.

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			required for the construction of the original scheme. Feeding remains found in one building also suggest brown long-eared bat presence.	and signs of their presence.	from the land required for the construction of the AP revised scheme.	construction of the AP revised scheme.		
CA2 Colwich to Yarlet	Bat assemblage at Yarlet School	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	Field surveys recorded three transitional/day roosts for common pipistrelle in two buildings and a tree at Yarlet, within the land required for the construction of the original scheme. Feeding remains found in one building also suggest brown long-eared bat presence.	Internal inspection of buildings at Yarlet School involving a search for roosting bats and signs of their presence.	A brown long-eared bat summer day roost was recorded in the loft of the mansion house at Yarlet School, approximately 6m from a haul road within the land required for the construction of the AP revised scheme.	No change. This brown long-eared bat summer day roost is sufficiently distant and will not be impacted during construction of the AP revised scheme.	No change.	No change.
CA2 Colwich to Yarlet	A small population of otter near the River Trent and Trent and Mersey Canal	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	Otter occurs at low density throughout the Colwich to Yarlet area. Field survey signs of otter were recorded alongside the River Trent at Hoo Mill, during field surveys within the land required for the construction of the original scheme.	Additional survey for otter	Otter footprints were noted on a field survey along the River Trent, within the land required for the construction of the AP revised scheme.	No change. The presence of additional field signs are likely to be associated with existing confirmed and assumed otter populations described in the main ES. This additional survey information does not change the population described within the main ES	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						and therefore there are no new or different effects associated with this change.		
CA2 Colwich to Yarlet	Badger social groups at undisclosed locations in the Colwich to Yarlet area	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	A common and widespread species recorded during field surveys in the Colwich to Yarlet area. Field surveys recorded four main setts within or adjacent to the land required for the construction of the original scheme.	Survey to search for signs of badger presence.	<p>An additional subsidiary and two additional outlier setts (associated with a main sett that was mentioned in the main ES) were recorded within the land required for the construction of the AP revised scheme.</p> <p>An additional main, an additional subsidiary and five additional outlier setts were recorded outside of the land required for the construction of the AP revised scheme. In total six of these seven setts are located more than 30m from the land required for the construction of the Revised Scheme.</p>	<p>No change.</p> <p>The additional subsidiary and two additional outlier setts recorded within the land required for the AP revised scheme will be lost during construction. The loss of these additional subsidiary and outlier setts will not change the impacts on the badger social groups that utilise them (which were mentioned in the main ES).</p> <p>The additional main sett, subsidiary sett and five outlier setts recorded outside of the land required for the construction of the AP revised scheme will not be damaged and are unlikely to be subject to disturbance or</p>	No change.	No change. Although there will be no significant effects on badger populations in this area, mitigation measures to address the potential disturbance of badgers will be provided in accordance with the Ecological Principles of Mitigation within the SMR Addendum. This will include the provision of badger proof fencing and replacement setts where necessary.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						isolation effects. Where construction works occur within 30m of one of the aforementioned outlier setts there is potential for it to be damaged and/or badgers disturbed. Such impacts will not represent new or different effects upon the badger social groups that utilise these setts.		
CA2 Colwich to Yarlet	Wintering bird assemblage at Tithebarn Farm	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	<p>Wintering bird surveys conducted in 2015 and 2016 recorded low densities of common birds at Tithebarn Farm within and adjacent to the land required for the construction of the original scheme.</p> <p>The wintering bird assemblage comprised 32 species of which nine are notable.</p> <p>The wintering bird assemblage recorded at Tithebarn Farm is of</p>	Wintering bird survey visits conducted between January and March 2017.	The recorded wintering bird assemblage increased to 37 species of which 15 are notable. The recorded wintering bird assemblage is associated within and adjacent to land required for the construction of the AP revised scheme.	No change.  The additional wintering bird species and numbers do not change the level of significance of this adverse effect because they do not meet the Staffordshire criteria (Webb et al, 2014 <sup>5</sup> ) for county value and therefore remain as of local/parish importance.	No change.	No change.

<sup>5</sup> Webb, J., Lawley, S., Cadman, D., Slawson, C., Smith, J. and Weightman, J. (2014), *Guidelines for the selection of sites of county biological importance in Staffordshire*. Staffordshire Wildlife Trust, Stafford

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			local/parish importance.					
CA2 Colwich to Yarlet	Wintering bird assemblage at Upper Hanyards	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	<p>Wintering bird surveys conducted in 2015 and 2016 recorded low densities of common birds at Upper Hanyards, west of Ingestre, within and adjacent to the land required for the construction of the original scheme.</p> <p>The recorded wintering bird assemblage comprised 31 species of which 10 are notable.</p> <p>The wintering bird assemblage recorded at Upper Hanyards is of local/parish importance.</p>	Wintering bird survey visits conducted between January and March 2017.	The recorded wintering bird assemblage increased to 45 species of which 19 are notable. The recorded wintering bird assemblage is associated within and adjacent to land required for the construction of the AP revised scheme.	<p>No change.</p> <p>The additional wintering bird species and numbers do not change the level of significance of this adverse effect because they do not meet the Staffordshire criteria (Webb <i>et al</i>, 2014<sup>5</sup>) for county value and therefore remain as of local/parish importance.</p>	No change.	No change.
CA2 Colwich to Yarlet	Great crested newt	Volume 2, CA 2, paragraph 8.3.29 (Table 16)	The main ES reported a great crested newt metapopulation in 27 ponds centred on Moreton Farm (AMP 2.1). Field surveys recorded great crested newt presence within three ponds, with the largest population being of small size class. On a	<p>Further great crested newt surveys undertaken since production of the main ES have confirmed:</p> <ul style="list-style-type: none"> <li>• Absence of great crested newt within 11 ponds where great</li> </ul>	A re-assessment of the composition of all metapopulations across the Colwich to Yarlet area has been undertaken from updated field survey data and consideration of habitat connectivity. In addition to the confirmed great crested newt populations within	<p>No change.</p> <p>The AP revised scheme would not result in the loss of any additional ponds that support known or assumed great crested newt populations that form part of this metapopulation.</p>	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			<p>precautionary basis, medium populations of great crested newt were assumed to occur in 24 further ponds. The metapopulation is valued at county level within the main ES.</p>	<p>crested newt populations were previously assumed to be present and to form part of this metapopulation. These ponds no longer form part of the metapopulation;</p> <ul style="list-style-type: none"> <li>• Presence of great crested newt within four ponds where great crested newt populations were previously assumed to be present and to form part of this metapopulation. These ponds still form part of the metapopulation; and</li> <li>• Presence of great crested newt within seven ponds that were not previously part of this</li> </ul>	<p>this metapopulation from the main ES (three ponds) and the confirmed populations within this metapopulation identified from further surveys (11 ponds), there are 31 further ponds with assumed populations that are considered to form part of AMP 2.1. The revised metapopulation therefore includes 45 ponds with confirmed or assumed populations of great crested newt with the largest population being of medium size class. This metapopulation occurs partially within the land required for the AP revised scheme. The increase in the number of ponds with confirmed or assumed populations of great crested newt does not change the county level value of the great crested newt metapopulation centred on Moreton Farm (AMP 2.1).</p>	<p>There is no new or different significant effect upon this metapopulation.</p>		

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
				metapopulation, which are now considered to form part of this metapopulation.				
CA3 Stone and Swynnerton	Scrub.	BID-EC-002-000, paragraph 2.3.71	The main ES reported the loss of 2.3ha of scrub within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 2.8ha of scrub.	No change. The increased area of scrub loss does not result in a new or different significant effect.	No change.	No change.
CA3 Stone and Swynnerton	Improved grassland.	BID-EC-002-000, paragraph 2.3.79	The main ES reported the loss of 143ha of improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 153.2ha of improved grassland.	No change. The increased area of improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA3 Stone and Swynnerton	Species-poor semi-improved grassland	BID-EC-002-000, paragraph 2.3.79	The main ES reported the loss of 10ha of species-poor semi-improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 12.8ha of species-poor semi-improved grassland.	No change. The increased area of species-poor semi-improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA3 Stone and Swynnerton	Amenity grassland	BID-EC-002-000, paragraph 2.3.79	The main ES reported the loss of 4ha of amenity grassland within the land required for the	Further habitat surveys were undertaken since	The AP revised scheme will result in the loss of 4.8ha of amenity grassland.	No change. The increased area of amenity grassland loss does not result in	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			construction of the original scheme.	production of the main ES.		a new or different significant effect.		
CA3 Stone and Swynnerton	Water bodies	Volume 2, CA 3, paragraph 8.3.26	The main ES reported the loss of 78 water bodies within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 65 water bodies.	No change. The decreased number of water bodies lost does not result in a new or different significant effect.	No change.	No change. As per the mitigation stated in the main ES, at least one pond will be created for every pond lost.
CA3 Stone and Swynnerton	Arable and cultivated land	BID-EC-002-000, paragraph 2.3.91	The main ES reported the loss of 240ha of arable/cultivated land within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 239.5ha of arable/cultivated land.	No change. The small decrease in area of arable and cultivated land loss does not result in a new or different significant effect.	No change.	No change.
CA3 Stone and Swynnerton	Hedgerow network across the Stone and Swynnerton area	Volume 2, CA3, paragraph 8.3.22, bullet two	Hedgerows within the land required for the original scheme include 25.7km of native species-rich hedgerow; of which, 3.4km are also classified as 'important' according to the 'Wildlife and Landscape' criteria described in The Hedgerows Regulations 1997.	Hedgerow survey	'Important' hedgerow identified at Yarlet embankment (approximately 180m in length).	No change. The hedgerow will be partially lost, and remaining sections fragmented by construction of Yarlet embankment. However the hedgerow was assumed to be species-rich and potentially important within the main ES. The hedgerow loss was assessed as part	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						of the loss and fragmentation effect reported within the main ES and proposed mitigation took account of this.		
CA <sub>3</sub> Stone and Swynnerton	Badger social groups at undisclosed locations in the Stone and Swynnerton area	Volume 2, CA <sub>3</sub> , paragraph 8.3.29 (Table 14)	Six main setts were identified, indicating the likely presence of six social groups of badgers in undisclosed locations within the land required for the original scheme in the Stone and Swynnerton area.	Badger survey	<p>Three additional main badger setts, six additional outlier badger setts and one additional subsidiary badger sett were recorded within the land required for the AP revised scheme.</p> <p>Three additional main setts, three additional outlier setts and one subsidiary sett were recorded outside of the land required for the AP revised scheme.</p>	<p>No change.</p> <p>Three of the additional main setts fall within or directly adjacent to the land required for the AP revised scheme and are reported in the local/parish effects register.</p> <p>The six additional outlier and one additional subsidiary badger setts recorded within the land required for the AP revised scheme will be lost during construction. The loss of outlier or subsidiary setts is not considered to be significant and does not change the assessment reported in the main ES.</p> <p>The three additional main setts recorded</p>	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						<p>outside of the land required for the AP revised scheme will not be damaged and are unlikely to be subject to disturbance or isolation effects.</p> <p>The three additional outlier setts, and one additional subsidiary sett recorded outside of the land required for the AP revised scheme will not be affected by the AP revised scheme.</p>		
CA3 Stone and Swynnerton	Metapopulation of great crested newt south-west of A519 Newcastle Road	Volume 2, CA3, paragraph 8.3.29 (Table 14)	A metapopulation of great crested newt (AMP3.3) has been identified across a network of four ponds south-west of the A519 Newcastle Road and west of the A51 Stone Road. Construction of the Stone Swynnerton North cutting will result in the loss of woodland, grassland and hedgerow habitats that are likely to be used by great crested newts for foraging, dispersal and shelter. This has the	Amphibian surveys.	The new baseline information has confirmed the absence of great crested newt within three of the four ponds comprising the metapopulation. This metapopulation has therefore been reclassified as an isolated population associated with one pond.	The AP revised scheme will result in the loss of terrestrial habitats associated with this isolated population, however these habitats are greater than 280m from the pond, on the far side of the A519 Newcastle Road, and equal or higher quality habitats are located in closer proximity to the pond. The habitats lost to the AP revised scheme	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			potential to result in a permanent adverse effect on the great crested newt meta-population south-west of the A519 Newcastle Road and west of the A51 Stone Road, which will be significant at up to county level.			are therefore considered to represent low quality terrestrial habitats for this population. The impact of the loss of terrestrial habitats, associated with this isolated population, to construction of the AP revised scheme is considered to be negligible.		
CA3 Stone and Swynnerton	Isolated population of great crested newts	Volume 2, CA3, paragraph 8.3.29 (Table 14)	Of the 78 ponds within the land required for the original scheme within the Stone and Swynnerton area, 21 ponds have been assessed as unsuitable for great crested newts, 23 have been accessible for presence/absence survey, and of these, six have been confirmed as supporting great crested newts. In the absence of survey information, the remaining 34 ponds are assumed to support populations of great crested newts. This is highly precautionary and it is likely that a	Amphibian surveys	The presence of an isolated population of great crested newt to the south-east of Lower Hatton was not reported within the main ES. The population is valued at district/borough level.	The AP revised scheme will result in the loss of terrestrial habitats associated with this pond, however the pond is located approximately 220m from the land required for the AP revised scheme and higher quality terrestrial habitats are present within closer proximity to the pond than those lost. The loss of the terrestrial habitats associated with this population is not,	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			proportion of the un-surveyed ponds do not support great crested newt populations. The loss of any ponds supporting great crested newts would result in a permanent adverse effect on amphibian populations that will be, in each case, significant at up to county level.			therefore, considered to be significant.		
CA4 Whitmore Heath to Madeley	Woodland	BID-EC-002-000, paragraph 2.3.96	The main ES reported the loss of 33.7ha of woodland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since the production of the main ES.	The AP revised scheme will not result in the additional loss of woodland but there is potential for indirect impacts.	No change. No additional loss of woodland and the indirect impacts will not be significant.	No change.	No change.
CA4 Whitmore Heath to Madeley	Scrub	BID-EC-002-000, paragraph 2.3.101	The main ES reported the loss of 0.1ha of scrub within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 0.4ha of scrub.	No change. The increased area of scrub loss does not result in a new or different significant effect.	No change.	No change.
CA4 Whitmore Heath to Madeley	Improved grassland	BID-EC-002-000, paragraph 2.3.106	The main ES reported the loss of 192ha of improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 166ha of improved grassland.	No change. The decreased area of improved grassland loss does not result in a new or different significant effect.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA4 Whitmore Heath to Madeley	Species-poor semi-improved grassland	BID-EC-002-000, paragraph 2.3.106	The main ES reported the loss of 28ha of species-poor semi-improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 28.1ha of species-poor semi-improved grassland.	No change.  The small increase in area of species-poor semi-improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA4 Whitmore Heath to Madeley	Amenity grassland	BID-EC-002-000, paragraph 2.3.106	The main ES reported the loss of 2.2ha of amenity grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme would result in the loss of 1.9ha of amenity grassland.	No change.  The decreased area of amenity grassland loss does not result in a new or different significant effect.	No change.	No change.
CA4 Whitmore Heath to Madeley	Water bodies	Volume 2, CA4, paragraph 8.3.27	The main ES reported the loss of 37 water bodies within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 48 water bodies.	No change.  The loss of an additional 11 water bodies does not result in a new or different significant effect to that reported in the main ES.	No change.	No change.  As per the mitigation stated in the main ES, at least one pond will be created for every pond lost.
CA4 Whitmore Heath to Madeley	Arable and cultivated land	BID-EC-002-000, paragraph 2.3.112	The main ES reported the loss of 73.7ha of arable/cultivated land within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 80.6ha of arable/cultivated land.	No change.  The increased area of arable and cultivated land loss does not result in a new or different significant effect.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
CA4 Whitmore Heath to Madeley	Hedgerow network within Whitmore Heath to Madeley area	Volume 2, CA4, paragraph 8.3.23	<p>There are approximately 22.7km of hedgerows within the land required for the original scheme in the Whitmore Heath to Madeley area. Hedgerows within the land required for the original scheme comprise approximately:</p> <ul style="list-style-type: none"> <li>• 8.7km of native species-poor hedgerow; and</li> <li>• 14km of native species-rich hedgerow, of which 3.8km are also classified as 'Important' according to the 'Wildlife and Landscape criteria described in The Hedgerows Regulations 1997.</li> </ul>	An additional 17 hedgerows were surveyed in 2017 (with a combined length of approximately 1.5km).	One additional 'Important' hedgerow (approximate length of 60m) has been identified.	<p>No change.</p> <p>The hedgerow network as a whole is of district/ borough value and remains unchanged to that reported in the main ES.</p>	No change.	No change.
CA4 Whitmore Heath to Madeley	Bat assemblage associated with habitats between Hey	Volume 2, CA4, paragraph 8.3.30 (Table 13)	Field surveys recorded a maternity roost within a residential building gm from the	Tree climbing survey inspection on land south-east of Hey Sprink.	Transitional soprano pipistrelle roost identified in a trunk cavity 92m to the south-	<p>No change.</p> <p>Roost is outside the land required for the AP revised scheme</p>	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
	Sprink and Barhill Wood		original scheme indicative of <i>Pipistrellus</i> species, a day/summer roost within a building containing a single common pipistrelle and two soprano pipistrelles, and two day/summer roosts of <i>Myotis</i> species bats were recorded in trees. Two day/summer roosts containing individual soprano pipistrelle were also recorded in trees during field surveys. These roosts were recorded within and adjacent to the land required for the original scheme.		west of the AP revised scheme.	and will not be impacted.		
CA4 Whitmore Heath to Madeley	Bat assemblage associated with habitats between Hey Sprink and Barhill Wood	Volume 2, CA4 paragraph 8.3.30 (Table 13)	Field surveys recorded a maternity roost within a residential building indicative of <i>Pipistrellus</i> species, a day/summer roost within a building containing a single common pipistrelle and two soprano pipistrelles, and two day/summer roosts of <i>Myotis</i> species bats were recorded in trees.	Internal inspections of buildings at Bowerend Farm.	<i>Pipistrellus</i> species and brown long-eared bat roost identified in residential building at Bowerend Farm 14m to the north-east of the AP revised scheme.	No change.  Roost is outside the land required for the AP revised scheme and will not be impacted.	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
			Two day/summer roosts containing individual soprano pipistrelle were also recorded in trees during field surveys. A single bat of unidentified species was recorded roosting in a tree within the land required for the original scheme, north of Manor Road. As species is unknown it is assumed to be of a rarer species.					
CA4 Whitmore Heath to Madeley	Small population of otter throughout the Whitmore Heath to Madeley area	Volume 2, CA4 paragraph 8.3.30 (Table 13)	Desk study information indicate otter presence along the River Lea. An incidental sighting of an otter print was confirmed during field surveys indicating that otter are likely to use the Meece Brook and associated waterbodies for foraging and as a corridor for movement.	Additional survey for otter.	Four potential holts were recorded within the land required for the AP revised scheme during surveys in the Whitmore Heath to Madeley area. Additional otter activity was noted along Meece Brook, the River Lea and surrounding areas.	No change.  The presence of potential holts and additional field signs are likely to be associated with existing confirmed and assumed otter populations described in the main ES. This additional survey information does not change the population described within the main ES and therefore there are no new or different effects	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						associated with this change.		
CA4 Whitmore Heath to Madeley	Populations of water vole using Meece Brook, River Lea and other watercourse in the Whitmore Heath and Madeley area	Volume 2, CA4 paragraph 8.3.30 (Table 13)	No direct evidence of water voles were identified in the desk study or field surveys. However, habitats along the Meece Brook and River Lea are suitable and small populations are assumed to be present.	Additional surveys for water vole.	Confirmed water vole activity was recorded within the Whitmore Heath to Madeley area to include a latrine and feeding signs.	No change.  Populations of water vole were assumed present despite no confirmed evidence. This new survey data therefore does not change the assessment of an assumed population reported in the main ES.	No change.	No change.
CA4 Whitmore Heath to Madeley	Badger social groups at undisclosed locations in the Whitmore Heath to Madeley area	Volume 2, CA4 paragraph 8.3.30 (Table 13)	Eleven social groups in undisclosed locations in the Whitmore Heath to Madeley area. Five main setts have been identified within the land required for the original scheme. A further six main setts have been identified within 100m of the land required for the original scheme.	Additional badger field signs surveys.	An additional six active entrances have been recorded at an existing main sett within the land required for the AP revised scheme.  An additional outlier sett and an additional subsidiary sett have been recorded within the land required for the AP revised scheme.	No change.  The additional active entrances are part of an existing social group described within the main ES therefore there are no new or different effects associated with this change.  A single outlier badger sett and a single additional subsidiary sett recorded within the land required for the AP revised scheme will be lost during construction. The	No change.	No change.

CA (number and name)	Receptor	Document and paragraph reference for relevant baseline information within the main ES or BID document	Extract of relevant baseline information reported in the main ES	Relevant additional survey undertaken since main ES	Summary of relevant supplementary ecological information	Changes to construction impacts/effects reported in the main ES	Changes to operational impacts/effects reported in the main ES	Implications for ecology mitigation/compensation provision reported in the main ES
						loss of the outlier and subsidiary setts is not considered to be significant and does not change the assessment reported in the main ES.		
CA4 Whitmore Heath to Madeley	Wintering Bird assemblage at Meece Meadows	Volume 2, CA4 paragraph 8.3.30 (Table 13)	<p>Wintering bird surveys conducted in 2015 and 2016 recorded a total of 36 species at Meece Meadows within the land required for the original scheme. The species recorded are typical of the habitat present.</p> <p>The recorded wintering bird assemblage comprised nine species of Principal importance and /or conservation priorities of the Local Biodiversity Action Plan (BAP).</p>	Wintering bird survey visits conducted between January and March 2017.	<p>Field surveys recorded a total of 48 species at Meece Meadows, 20 of which are notable, which includes nine Red list species.</p> <p>The recorded wintering bird assemblage comprised 10 species of Principal importance and /or conservation priorities of the Local BAP.</p> <p>The wintering bird assemblage recorded at Meece Meadows is of local/parish importance.</p>	<p>No change.</p> <p>The additional wintering bird species and numbers do not change the level of significance of this adverse effect because they do not meet the Staffordshire criteria (Webb <i>et al</i>, 2014<sup>6</sup>) for county value and therefore remain as of local/parish importance.</p>	No change.	No change.
CA4 Whitmore Heath to Madeley	A meta-population of great crested newt across a network of two	Volume 2, CA4 paragraph 8.3.30 (Table 13)	Field surveys recorded an assumed medium population of great crested newts, which includes a small	A re-assessment of the composition of meta-populations across the Whitmore Heath to	There are two further ponds with assumed populations considered to form part of this meta-population. The	<p>No change.</p> <p>The AP revised scheme would not result in the loss of any additional ponds</p>	No change.	No change.

<sup>6</sup> Webb, J., Lawley, S., Cadman, D., Slawson, C., Smith, J. and Weightman, J. (2014), *Guidelines for the selection of sites of county biological importance in Staffordshire*. Staffordshire Wildlife Trust, Stafford

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	ponds situated between Whitmore and Baldwin's Gate south of the A53 Newcastle Road/A53 Whitmore Road		population in one pond. The two ponds are both located within the land required for the original scheme.	Madeley area has been undertaken from updated field survey data and consideration of habitat connectivity.	revised meta-population therefore includes three ponds with confirmed or assumed populations of great crested newt, with the largest population being of assumed medium size class. This meta-population occurs partially within the land required for the AP revised scheme.	that support known or assumed great crested newt populations that form part of this metapopulation. There is no new or different significant effect upon this metapopulation.		
CA4 Whitmore Heath to Madeley	Additional population of great crested newt (000-AA1-237010) South-east of the Lum (River Lea corridor)	N/A	Population not reported in main ES.	Presence/absence surveys for great crested newts.	Further field surveys undertaken since the production of the main ES have confirmed the presence of an additional small size class great crested newt population. The presence of the great crested newt population located to the south-east of the Lum (River Lea corridor) was not reported within the main ES. The AP revised scheme would not result in the loss of the pond that supports this population.	No change.  There is no new or different significant effect upon this population.	No change.	No change.
CA5 South Cheshire	Woodland	Volume 2, CA5, paragraph 8.3.11	There are seven woodlands that qualify, or are likely to qualify, as lowland mixed deciduous woodland, a	Additional Phase 1 habitat surveys.	A number of small, semi-natural woodlands, located within land required for construction of the AP revised	No change.  The additional surveys confirmed these habitats as	No change.	No change.

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			habitat of principal importance as listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006).		<p>scheme, were originally mapped using aerial photographs and have now been surveyed. The additional surveys confirmed these woodlands. These woodlands comprise:</p> <ul style="list-style-type: none"> <li>• un-named woodland, approximately 0.2ha, to the north-west of Randilow Farm, west of Wrinehill.</li> <li>• un-named woodland, approximately 0.4ha, to the south-west of Lower Den Farm, north-west of Wrinehill;</li> <li>• un-named woodland, approximately 0.8ha to the west of Lower Den Farm, north-west of Wrinehill.</li> </ul>	lowland mixed deciduous woodlands. The evaluation of the woodland habitats remains as up to local/parish and unchanged from that reported in the main ES.		
CA5 South Cheshire	Scrub	BID-EC-002-000, paragraph 2.3.125	The main ES reported the loss of 7.8ha of scrub within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 9.2ha of scrub.	No change.  The increased area of scrub loss does not result in a new or different significant effect.	No change.	No change.

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CA5 South Cheshire	Improved grassland	BID-EC-002-000, paragraph 2.3.131	The main ES reported the loss of 82ha of improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 103.6ha of improved grassland.	No change. The increased area of improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA5 South Cheshire	Species-poor semi-improved grassland	BID-EC-002-000, paragraph 2.3.131	The main ES reported the loss of 25ha of species-poor semi-improved grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 56.7ha of species-poor semi-improved grassland.	No change. The increased area of species-poor semi-improved grassland loss does not result in a new or different significant effect.	No change.	No change.
CA5 South Cheshire	Amenity grassland	BID-EC-002-000, paragraph 2.3.131	The main ES reported the loss of 1.5ha of amenity grassland within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 1.9ha of amenity grassland.	No change. The increased area of amenity grassland loss does not result in a new or different significant effect.	No change.	No change.
CA5 South Cheshire	Water bodies	Volume 2, CA5, paragraph 8.3.18	The main ES reported the loss of 63 water bodies within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 52 water bodies.	No change. The decreased number of water bodies lost does not result in a new or different significant effect.	No change.	No change. As per the mitigation stated in the main ES, at least one pond will be created for every pond lost.

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CA5 South Cheshire	Arable and cultivated land	BID-EC-002-000, paragraph 2.3.135	The main ES reported the loss of 236ha of arable/cultivated land within the land required for the construction of the original scheme.	Further habitat surveys were undertaken since production of the main ES.	The AP revised scheme will result in the loss of 210ha of arable/cultivated land.	No change.  The increased area of arable and cultivated land loss does not result in a new or different significant effect.	No change.	No change.
CA5 South Cheshire	Population of otter along Checkley Brook	Volume 2, CA5, paragraph 8.3.22 (Table 18)	There is a desk study record of a dead otter in the vicinity of Checkley Brook in 2014 within the land required for the construction of the original scheme. Possible evidence was recorded adjacent to a pond associated with Checkley Brook. It is assumed that otter make use of the Brook for foraging and movement.	Additional otter surveys.	Two potential couches and a potential holt were recorded during surveys in the South Cheshire in habitats in close proximity to Checkley Brook.	No change.  The presence of potential holts and additional field signs are likely to be associated with existing confirmed and assumed otter populations described in the main ES. This additional survey information does not change the population described within the main ES and therefore there are no new or different effects associated with this change.	No change.	No change.
CA5 South Cheshire	Wintering bird assemblage at Chorlton Heath	Volume 2, CA5, paragraph 8.3.22 (Table 18)	Wintering bird surveys conducted in 2016 recorded a total of 37 bird species, of which 22 are notable, in the South Cheshire area	Wintering bird survey visits conducted between January and March 2017.	Field surveys recorded a total of 31 species at Chorlton Heath of which 12 are notable.	No change.  The additional wintering bird species and numbers do not change the	No change.	No change.

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			both within and adjacent to land required for the original scheme. The recorded bird assemblage included nine Red List species and 11 species of Principal importance.			level of significance of this adverse effect because they do not meet the Staffordshire criteria (Webb <i>et al</i> , 2014 <sup>7</sup> ) for county value and therefore remain as of local/parish importance.		

<sup>7</sup> Webb, J., Lawley, S., Cadman, D., Slawson, C., Smith, J. and Weightman, J. (2014), *Guidelines for the selection of sites of county biological importance in Staffordshire*. Staffordshire Wildlife Trust, Stafford

### 3 References

Her Majesty's Stationery Office, *The Hedgerows Regulations 1997 (No. 1160)*, London.

HS2 Ltd (2018), *High Speed Two (HS2) Phase 2a (West Midlands - Crewe), Background Information and Data*. Available online at: [www.gov.uk/hs2](http://www.gov.uk/hs2).

HS2 Ltd (2017), *High Speed Rail (West Midlands-Crewe) Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2a-environmental-statement>.

Webb, J., Lawley, S., Cadman, D., Slawson, C., Smith, J. and Weightman, J. (2014), *Guidelines for the selection of sites of county biological importance in Staffordshire*. Staffordshire Wildlife Trust, Stafford.

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