

High Speed Rail (West Midlands - Crewe) Supplementary Environmental Statement and Additional Provision Environmental Statement

Volume 5: Technical appendices

Register of local level ecological effects (EC-003-000)

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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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1 Introduction

- 1.1.1 This document is an appendix which forms part of Volume 5 of the Supplementary Environmental Statement (SES) and Additional Provision Environmental Statement (AP ES).
- 1.1.2 This appendix presents a summary of local/parish level effects, new or different from those reported within the High Speed Rail (West Midlands Crewe) Environmental Statement (ES)¹ 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. The document should be read in conjunction with Volume 2 (community area reports 1, 3, 4 and 5) and Volume 3 (route-wide effects assessment) of the SES and AP ES as well as Volume 5: Appendix EC-016-001², Volume 5: Appendix EC-016-003³ and Volume 5: Appendix EC-016-005⁴ of the main ES. In addition this document should be read in conjunction with Background Information and Data (BID) document BID-EC-004-000⁵ that accompanies the SES and AP ES.
- 1.1.3 This appendix covers the following community areas (CAs):
 - CA1: Fradley to Colton;
 - CA3: Stone and Swynnerton;
 - CA4: Whitmore Heath to Madeley; and
 - CA5: South Cheshire.
- 1.1.4 Supplementary environmental information considered within this appendix includes a range of additional ecological baseline data that was not reported in the main ES. Table 1 presents a summary of new or different local/parish level effects from those reported within the main ES that have been assessed in each of the relevant community areas.
- 1.1.5 In this report the scheme is referred to as the original scheme, which is the Bill scheme submitted to Parliament in July 2017 and assessed in the main ES, and the AP revised scheme, which is the original scheme as amended by the SES changes and AP amendments.

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

² HS2 Ltd (2017), High Speed Two Phase 2a (West Midlands - Crewe). Volume 5: Technical appendices. CA1: Fradley to Colton. Ecology register of local level effects (EC-016-001). <u>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/628298/E88_EC-016-001_WEB.pdf</u> ³ HS2 Ltd (2017), High Speed Two Phase 2a (West Midlands - Crewe). Volume 5: Technical appendices. CA3: Stone and Swynnerton. Ecology register of local level effects (EC-016-003). <u>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/628403/E128_EC-016-003</u>. <u>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/628403/E128_EC-016-003</u>.

⁴ HS2 Ltd (2017), High Speed Two Phase 2a (West Midlands - Crewe). Volume 5: Technical appendices. CA5: South Cheshire. Ecology register of local level effects (EC-016-005). <u>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/628479/E164_EC-016-005_WEB.pdf</u> ⁵ HS2 Ltd (2018), High Speed Two (HS2) Phase 2a (West Midlands - Crewe), SES and AP ES, Background Information and Data, Supplementary ecological baseline data, BID-EC-004-000. <u>www.gov.uk/hs2</u>

2 Summary table

Table 1: Summary of additional local/parish level adverse effects arising from the construction/operation of the AP revised scheme

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
CA1 Fradley to Colton	АР	Habitat: Woodland	A small copse of semi- natural broadleaved woodland, at the junction of Common Lane and Ridware Road.	Construction	Permanent loss of 300m ² of semi-natural broadleaved woodland at the junction of Common Lane and the B5014 Ridware Road as a result of the amendment (AP-001-003). This is a new impact that was not reported in the main ES but, due to the small amount of woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA1 Fradley to Colton	AP	Habitat: Woodland	A small copse of semi- natural broadleaved woodland, adjacent to Pipe Wood Lane.	Construction	Permanent loss of 900m ² of semi-natural broadleaved woodland adjacent to Pipe Wood Lane as a result of the amendment (AP-001-004). This is a new impact that was not reported in the main ES but, due to the small amount of woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA1 Fradley to Colton	SES	Habitat: Woodland	An un-named woodland, south of Quinton's Orchard and north-east of Hill Ridware.	Construction	Permanent loss of a 0.3ha of semi-natural broadleaved woodland, south of Quinton's Orchard. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA1 Fradley to Colton	SES	Habitat: Woodland	An un-named woodland located, south of Bank Top Farm.	Construction	Permanent loss of a 0.3ha of semi- natural broadleaved woodland, south of Bank Top Farm. The woodland is dominated by pedunculate oak. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA1 Fradley to Colton	SES	Habitat: Woodland	An un-named woodland, north-west of New Barn.	Construction	Permanent loss of o.2ha of semi- natural broadleaved woodland, north-west of New Barn, south of Colton. The woodland is dominated by pedunculate oak and bramble is abundant. This is a different impact to that	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
					reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	
CA1 Fradley to Colton	SES	Habitat: Woodland	A plantation mixed woodland, south-west of Colton Hall Farm.	Construction	Permanent loss of o.2ha of plantation mixed woodland supporting European larch, hazel, pedunculate oak, spindle and goat willow, south-west of Colton Hall Farm. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA1 Fradley to Colton	АР	Habitat: Grassland	Species-poor semi- improved grassland alongside Pipe Wood Lane, adjacent to Luth Burn.	Construction	Permanent loss of o.2ha of species-poor semi- improved grassland adjacent to Common Lane as a result of the amendment (AP-001-003). This is a new impact that was not reported in the main ES but, due to the small amount of grassland loss involved, it is considered to result in a local/parish level effect to the grassland.	Yes
CA1 Fradley to Colton	SES	Habitat: Grassland	Wildflower margin, north-west of Church Farm.	Construction	Permanent loss of a 7m wide strip of sown, species- rich wildflower margin around an arable field, north- west of Church Farm. This is a different impact to that reported in the main ES but, due to the small amount of additional grassland loss involved, it is considered to result in a local/parish level effect to the grassland.	Yes
CA1 Fradley to Colton	SES	Habitat: Grassland	Wildflower margin, east of Bentley Hall Farm.	Construction	Permanent loss of a 10m wide strip of sown, species- rich wildflower margin around an arable field, east of Bentley Hall Farm. This is a different impact to that reported in the main ES but, due to the small amount of additional grassland loss involved, it is considered to result in a local/parish level effect to the grassland.	Yes
CA1 Fradley to Colton	AP	Habitat: Watercourse	Luth Burn	Construction	The amendment (AP-001-003) will result in a culvert being created to convey Luth Burn, which is a new impact that was not reported in the main ES. Luth Burn is of local/parish value due to its poor water quality and this change is considered to result in a local/parish level effect to the watercourse.	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
CA1 Fradley to Colton	SES	Species: Badger	At least nine social groups identified within undisclosed locations in the Fradley to Colton area in the main ES and one additional group found since.	Construction	Surveys undertaken since the production of the main ES have identified a main sett. This sett is surrounded by land required for the construction of the original scheme, which could result in the isolation of the social group, north-east of Newlands Lane. This is a new impact that was not reported in the main ES and is considered to result in a local/parish level effect to badgers.	Yes
CA3 Stone and Swynnerton	AP	Habitat: Woodland	Area of young mixed deciduous woodland with conifer components at Blakelow.	Construction	The main ES reported the permanent loss of small parcels of young mixed deciduous woodland at Blakelow. This resulted in a local/parish level effect. The amendment (AP-003-001) will result in the further permanent loss of 0.1ha of mixed deciduous woodland at Blakelow. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA3 Stone and Swynnerton	AP	Habitat: Woodland	Area of young mixed deciduous woodland with conifer components, west of the M6.	Construction	The main ES reported the permanent loss of small parcels of young mixed deciduous woodland, west of the M6. This resulted in a local/parish level effect. The amendment (AP-003-002) will result in the permanent loss of an additional 0.1ha of the belt of woodland along the west of the M6. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA3 Stone and Swynnerton	AP	Species group: Amphibians	Populations of palmate newt, smooth newt, common frog and common toad throughout the Stone and Swynnerton area.	Construction	The main ES reported the permanent loss of habitats used by common amphibian species. This resulted in a local/parish effect. The amendments (AP-003-001 and AP-003-002) will result in the further permanent loss of woodland, hedgerow and grassland habitats (including those within proximity to ponds known to support amphibians) that offer foraging and dispersal opportunities for amphibians. This is a different impact to that reported in the main ES, but it is	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
					considered to result in a local/parish level effect to the amphibian populations.	
CA3 Stone and Swynnerton	AP	Species group: Wintering bird assemblage	Assemblage of 40 wintering bird species at Highlow Meadows Local Wildlife Site (LWS).	Construction	The main ES reported the loss of foraging habitats and likely increase disturbance levels to the wintering bird assemblage at Highlow Meadows LWS. The amendment (AP-003-001 and AP-003-002) will result in the loss of an additional 0.2ha of grassland foraging habitats. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect to the wintering bird assemblage.	Yes
CA3 Stone and Swynnerton	АР	Species group: Breeding bird assemblage	Assemblage of 34 breeding bird species at Highlow Meadows LWS.	Construction	The main ES reported the loss of foraging habitats and likely increase disturbance levels to the breeding bird assemblage at Highlow Meadows LWS. The amendment (AP-003-001 and AP-003-002) will result in the loss of an additional 0.2ha of grassland foraging habitats. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect to the breeding bird assemblage.	Yes
CA3 Stone and Swynnerton	AP	Species group: Terrestrial invertebrates assemblage	Assemblages of terrestrial invertebrates within the Stone and Swynnerton area.	Construction	The main ES reported the loss of woodland at Clifford's Wood and grassland at Highlow Meadows and decrease foraging and shelter opportunities for terrestrial invertebrates. The amendment (AP-003- 002) will result in the loss of an additional 0.2ha of grassland foraging and shelter habitats. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect to the terrestrial invertebrate assemblage.	Yes
CA3 Stone and Swynnerton	AP	Species: Otter	Otter presence (from desk study) in numerous locations on the River Trent and Filly Brook (a tributary of the Trent). This includes a record between Filly Brook	Construction	The main ES reported the loss of potential dispersal, foraging and breeding opportunities for otter from the realignment of Filly Brook and loss of marginal habitats along the realigned section. Embedded mitigation within the original scheme included provision of a de-culverted section of open naturalised channel for the realigned Filly Brook, which partially mitigated the effect upon otter by providing	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
			and ponds, east of the M6.		replacement habitat suitable for this species. This resulted in a local/parish effect. The amendment (AP- 003-001 and AP-003-002) will result in an additional loss of approximately 30m of marginal habitats along Filly Brook compared to the original scheme. The culverting of the realigned sections of Filly Brook will result in a shorter length of de-culverted and open naturalised channel than was part of the original scheme, however this still represents approximately 100m of restored and de-culverted watercourse in this location. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect upon otter.	
CA3 Stone and Swynnerton	AP	Species: Water vole	Suitable habitats for water vole on the Filly Brook, adjacent to Filly Brook (west of Stone) LWS. Desk study records have identified this species on the River Trent, of which the Filly Brook is a tributary.	Construction	Initial habitat surveys undertaken and reported in the main ES indicated the habitats of Filly Brook as being of negligible suitability for water vole. Surveys undertaken since the publication of the main ES have confirmed the presence of suitable habitats, food sources and connectivity for water vole along a section of the Filly Brook, partially within the land required for the AP revised scheme, at Filly Brook (west of Stone) LWS. While no water vole field signs have been identified, the survey was constrained by limited access therefore it is assumed on a precautionary basis that water vole are present on this stretch of the Filly Brook. The amendment (AP-003-001 and AP-003-002) will require the realignment and temporary culverting of a section of the Filly Brook alongside the Norton Bridge to Stone Railway, resulting in the loss of bankside and channel habitats that are potentially utilised by water voles for foraging, shelter and dispersal. This is a new impact that was not reported in the main ES and is considered to result in a local/parish level effect to water vole.	Yes
CA3 Stone and Swynnerton	SES	Species: Badger	At least six social groups of badger identified within undisclosed locations	Construction	Surveys undertaken since the production of the main ES have identified an additional six main setts within the land required for the original scheme indicating the likely presence of an additional six social groups	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
			throughout the Stone and Swynnerton area in the main ES and an additional six groups found during surveys since.		throughout the Stone and Swynnerton area. The construction of the original scheme will result in the loss of badger setts, including potential main setts, and the loss of woodland, hedgerows, grassland and pond habitat that form a foraging resource for badger social groups. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect upon badger.	
CA3 Stone and Swynnerton	SES	Species group: Amphibians	An isolated great crested newt population, south east of Lower Hatton.	Construction	Surveys undertaken since the production of the main ES and subsequent re-assessment of the composition of metapopulations have identified the presence of isolated great crested newt populations, located to the south-east of Lower Hatton. This comprises a population of small size class within one pond. The original 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 original scheme and higher quality terrestrial habitats are present within closer proximity to the pond than those lost. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect upon amphibians.	Yes
CA4 Whitmore Heath to Madeley	SES	Habitat: Woodland	Un-named semi- natural broadleaved woodland, adjacent to Manor Road.	Construction	Permanent loss of a o.1ha of semi-natural broadleaved woodland, adjacent to Manor Road. Woodland comprises pedunculate oak, sycamore and wych elm. The understory consists of blackthorn and hawthorn. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA4 Whitmore Heath to Madeley	SES	Habitat: Woodland	Un-named semi- natural broadleaved woodland located, adjacent to Bower End Lane and west of Madeley.	Construction	Permanent loss of o.2ha of semi-natural broadleaved woodland, adjacent to Bower End Lane and west of Madeley. Woodland comprises pedunculate oak, beech and ash, the understorey contains hazel, elder and holly. This is a different impact to that reported in the main ES but, due to the small amount of	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
					additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	
CA4 Whitmore Heath to Madeley	SES	Habitat: Woodland	Un-named plantation mixed woodland, adjacent to Bent Lane.	Construction	Permanent loss of 0.5 ha of broadleaved plantation mixed woodland adjacent to Bent Lane. Woodland comprises European Larch, common lime, hawthorn and elder. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA4 Whitmore Heath to Madeley	SES	Habitat: Woodland	Un-named plantation mixed woodland, adjacent to Bent Lane.	Construction	Permanent loss of o.1 ha of plantation mixed woodland, adjacent to Bent Lane. Woodland comprises European Larch, common lime, hawthorn and elder. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA5 South Cheshire	AP	Habitat: Woodland	Lowland mixed deciduous woodland at Basford Hall.	Construction	The main ES reported the permanent loss of 20m ² of lowland mixed deciduous woodland at Basford Hall. This resulted in a local/parish effect. The amendment (AP-005-001) will result in an additional permanent loss of 0.1ha of this habitat. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA5 South Cheshire	AP	Habitat: Woodland	Lowland mixed deciduous woodland adjacent and to the north of the A500 Shavington Bypass.	Construction	Permanent loss of approximately 1ha of lowland mixed deciduous woodland adjacent to the A500 Shavington Bypass as a result of amendment (AP- 005-122). This is a new impact that was not reported in the main ES, but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA5 South Cheshire	АР	Habitat: Woodland	Lowland mixed deciduous woodland adjacent and to the	Construction	Permanent loss of approximately 0.5ha of lowland mixed deciduous woodland adjacent to the A500 Shavington Bypass as a result of amendment (AP- 005-119). This is a new impact that was not reported	Yes

CA (number and name)	Arising from SES changes or AP amendments	Habitat, species or species/group	Receptor/location	Effect arising from construction or from operation	Description of effect prior to 'other mitigation'	Effect addressed by mitigation and/or compensation proposed? (Yes/No)
			south of the A500 Shavington Bypass.		in the main ES, but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	
CA5 South Cheshire	AP	Habitat: Woodland	Lowland mixed deciduous woodland at Wychwood Park.	Construction	The main ES reported the permanent loss of 200m ² of lowland mixed deciduous woodland at Wychwood Park. This resulted in a local/parish effect. The amendment (AP-005-118) will result in the additional permanent loss of 0.1ha of this habitat. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect to the woodland.	Yes
CA5 South Cheshire	AP	Species group: Bats	Bats at Wychwood Park.	Construction	The main ES reported the permanent loss of 200m ² of woodland that has the potential to support foraging bats and potential roosts at Wychwood Park. This resulted in a local/parish effect. The amendment (AP- 005-118) will result in the additional permanent loss of 0.1ha of this habitat. This is a different impact to that reported in the main ES but, due to the small amount of additional woodland loss involved, it is considered to result in a local/parish level effect on bats.	Yes
CA5 South Cheshire	SES	Species: Badger	At least three social groups of badger identified within undisclosed locations throughout the Crewe area in the main ES and an additional two groups found during surveys since.	Construction	Surveys undertaken since the production of the main ES have identified an additional two main setts within the land required for the original scheme indicating the likely presence of an additional two social groups throughout the South Cheshire area. This is a different impact to that reported in the main ES, but it is considered to result in a local/parish level effect upon badger.	Yes

3 References

HS2 Ltd (2017), *High Speed Two (HS2) Phase 2a (West Midlands - Crewe), Background Information and Data.* Available online at: <u>www.gov.uk/hs2.</u>

HS2 Ltd (2017), High Speed Two Phase 2a (West Midlands - Crewe). Volume 5: Technical appendices. CA1: Fradley to Colton. Ecology register of local level effects (EC-016-001). Available online at:

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