High Speed Rail (West Midlands - Crewe)

Supplementary Environmental Statement and Additional Provision Environmental Statement

Volume 2: Community Area report

CA2: Colwich to Yarlet

March 2018

G10

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Department for Transport

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

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Structure of the HS2 Supplementary Environmental Statement and Additional Provision Environmental Statement

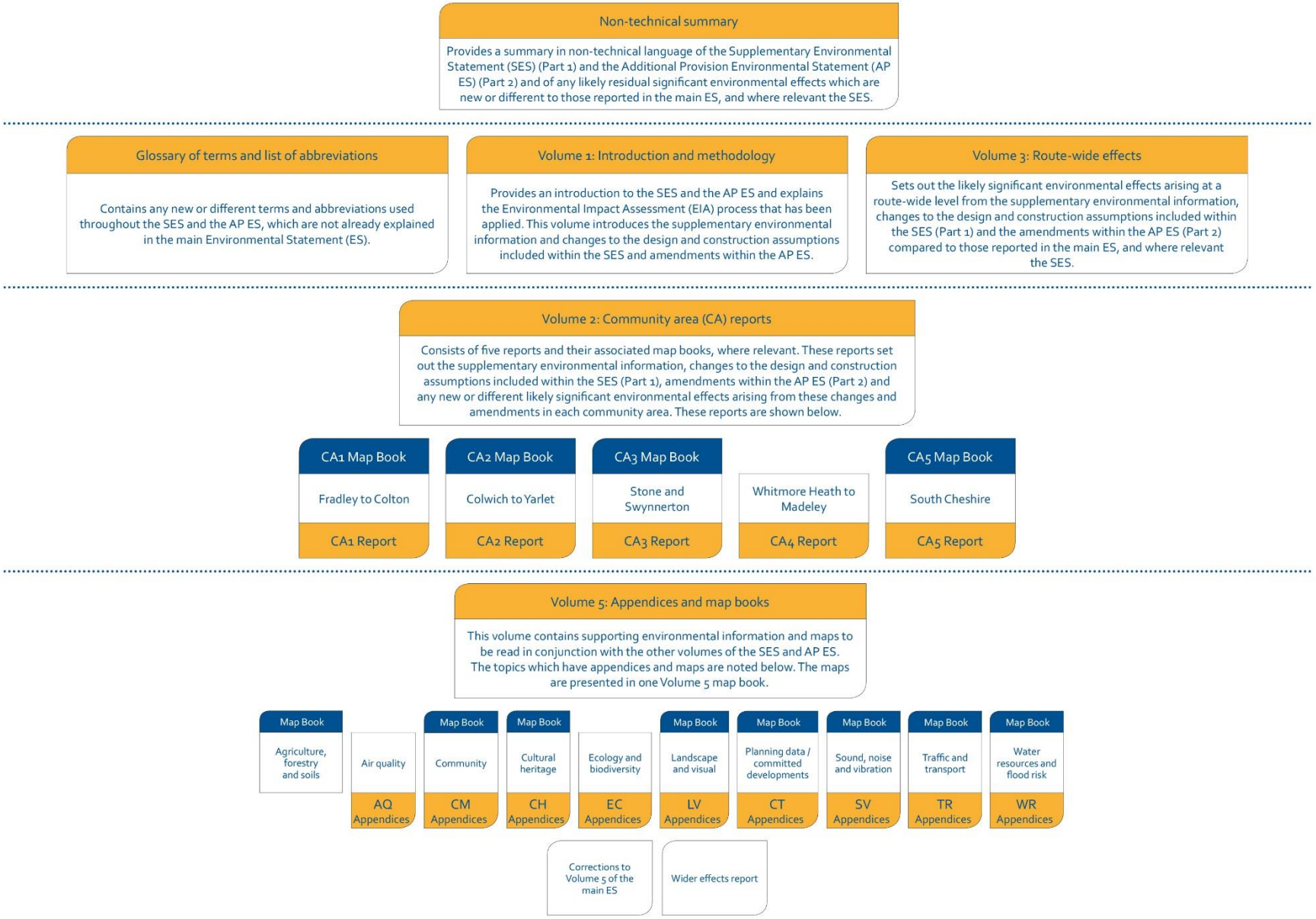
This report is part of the suite of documents that make up the Supplementary Environmental Statement (SES) and Additional Provision Environmental Statement (AP ES) for Phase 2a of the High Speed Two (HS2) rail network between the West Midlands and Crewe. The SES and the AP ES are separate documents, however, they are bound together and presented in a number of volumes as described below. The structure of the SES and AP ES is shown in Figure 1.

- Non-technical summary (NTS). This provides a summary in non-technical language of the SES (Part 1) and the AP ES (Part 2). It presents a summary of any likely residual significant environmental effects (i.e. effects which are likely to remain after mitigation measures are put in place), both beneficial and adverse, which are new or different to those reported in the Environmental Statement (ES) submitted to Parliament in July 2017 in support of the hybrid Bill for Phase 2a of HS2 ('the main ES'), and where relevant the SES;
- Glossary of terms and list of abbreviations. This contains any new or different terms and abbreviations used throughout the SES and the AP ES which are not already explained in the main ES;
- Volume 1: Introduction to the SES and the AP ES. This introduces the supplementary environmental information, changes to the design and construction assumptions included within the SES and amendments within the AP ES. The report explains the environmental impact assessment (EIA) process which has been applied;
- Volume 2: Community area reports and map books. These report the supplementary environmental information and changes to the design and construction assumptions included within the SES (Part 1), amendments within the AP ES (Part 2) and any new or different likely significant environmental effects arising from these changes and amendments in each community area. These effects are compared to those reported in the main ES, and where relevant, the SES. The maps relevant to each community area are provided in separate Volume 2 map books and should be read in conjunction with the relevant community area report;
- Volume 3: Route-wide effects. This describes any new or different likely significant environmental effects arising at a route-wide level from the supplementary environmental information and changes to the design and construction assumptions included within the SES (Part 1) and the amendments within the AP ES (Part 2) compared to those reported in the main ES, and where relevant the SES; and
- Volume 5: Appendices and map book. These contain supporting environmental information and associated maps.

A Volume 4: Off-route effects report was produced as part of the main ES. A separate Volume 4 has not been produced as part of the SES and AP ES as off-route effects are very limited in number and are reported in the most relevant Volume 2 community area report.

Certain reports and maps containing background information and data (BID) have been produced, which do not form part of the SES and AP ES. These documents are available on the HS2 website. The BID documents and maps present background survey information and other relevant background material.

Figure 1: Structure of the SES and AP ES



Structure of this report

This volume of the SES and AP ES is divided into five community area (CA) reports, which are in turn divided into two parts, except CA4 which has no proposed amendments to the design and therefore has no Part 2.

Part 1 for each community area provides supplementary environmental information, where relevant, relating to:

- new baseline information with respect to environmental surveys completed and additional information received since the production of the main ES;
- changes to the design and construction assumptions which do not require changes to the Bill; and
- corrections to the main ES.

Part 2 for CAs 1, 2, 3 and 5 provides environmental assessment information relating to proposed amendments to the design, which have resulted in the need to alter the powers conferred by the Bill.

Parts 1 and 2 include, where relevant:

- a description of the SES changes (Part 1) or the proposed amendments (Part 2) within the community area that have triggered the need for reassessment;
- an assessment of the environmental effects of the SES changes (Part 1) or the proposed amendments (Part 2) for relevant environmental topics considering the:
  - scope, assumptions and limitations of the assessment;
  - environmental baseline;
  - effects arising during construction;
  - effects arising from operation; and
  - mitigation and residual effects; and
- a summary of any new or different likely residual significant effects as a result of the SES changes (Part 1) and the proposed amendments (Part 2).

1 Introduction

1.1.1 The High Speed Rail (West Midlands - Crewe) Bill was submitted to Parliament together with an Environmental Statement (ES) in July 2017 ('the main ES'). If enacted by Parliament, the Bill will provide the powers to construct, operate and maintain Phase 2a of HS2.

1.1.2 Since the deposit of the Bill, a number of updates or changes to environmental information, the design and construction assumptions have occurred, which may lead to new or different significant effects. These effects, depending on the type of change, are reported in the SES or the AP ES, which form Part 1 and Part 2 of this document respectively.

1.1.3 The SES contains updated environmental baseline information and scheme information relating to changes within the current limits and powers of the Bill, and therefore, which do not require an Additional Provision to the Bill. The SES changes within the Colwich to Yarlet area include:

- additional environmental baseline information for ecology and biodiversity;
- changes to the construction assumptions which do not require changes to the Bill; and
- corrections to the main ES.

1.1.4 These changes are described in Part 1 and are assessed on a topic by topic basis where relevant using the same approach adopted in the main ES.

1.1.5 The purpose of the SES is to provide an assessment of any new or different likely significant environmental effects arising from the changes described.

1.1.6 The AP ES describes the likely significant effects of amendments to the design of the scheme, which require the use of land outside the original limits of the Bill, additional access rights, or other extensions to the powers conferred by the Bill, making it necessary to submit an Additional Provision to the Bill.

1.1.7 The amendments within the Colwich to Yarlet area assessed within the AP ES include:

- additional land permanently required for the amendment to a fuel pipeline diversion, A51 Lichfield Road;
- additional land required for a temporary laydown area at Trent North embankment;
- additional land permanently required for the A518 Weston Road realignment;
- additional land permanently required for a turning head near Homestall Barn;
- additional land required and change to Bill powers for works associated with new and existing minor utilities; and
- other changes to Bill powers to enable permanent access for maintenance over certain areas of land.

1.1.8 The AP ES reports the assessment of each amendment separately for all relevant topics. The purpose of the AP ES is to provide an assessment of any new or different likely significant environmental effects arising from the amendments.

1.1.9 The standard measures that will be used to mitigate likely significant adverse environmental effects during construction and operation of the scheme are described in the main ES, Volume 1, Section 9 and the draft Code of Construction Practice (CoCP)[1] submitted in support of the Bill. Implementation of these measures has been assumed in this SES and AP ES.

1.1.10 The following terms are used to differentiate between changes included in the SES and those included in the AP ES:

- 'SES design changes' – changes to the scheme design reported in the SES that do not require additional powers;
- 'SES changes' – all changes reported in the SES that do not require additional powers. This may include new baseline information, changes to the design and construction assumptions, and corrections; and
- 'AP amendments' – changes to the scheme reported in the AP ES that include requirements for additional powers in the Bill.

1.1.11 In order to differentiate between the original proposals assessed as part of the main ES and subsequent changes and amendments, the following terms are used to define the scheme as it relates to the HS2 Phase 2a project:

- 'the original scheme' – the Bill scheme submitted to Parliament in July 2017, which was assessed in the main ES;
- 'the SES scheme' – the original scheme with any changes described in the SES that are within the existing powers of the Bill; and
- 'the AP revised scheme' – the original scheme as amended by the SES changes and AP amendments.

[1] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, draft Code of Construction Practice (CT-003-000). Available online at https://www.gov.uk/government/publications/draft-code-of-construction-practice-for-hs2-phase-2a

Part 1: Supplementary Environmental Statement

2 Summary of changes in the Colwich to Yarlet area

2.1 New environmental baseline information

Ecology and biodiversity

2.1.1 Since the production of the main ES ecological surveys for Phase 1 habitat, hedgerow, wintering birds, bats, great crested newt, badger, otter and water vole have been completed in the Colwich to Yarlet area.

2.1.2 Details of additional ecological surveys completed in the Colwich to Yarlet area are provided in Background Information and Data (BID) documents[2] (BID-EC-004-000 and Map Series EC-02, EC-04, EC-05, EC-10 and EC-12), which accompany the SES and AP ES.

2.1.3 SES and AP ES Volume 5: Appendix EC-002-000 provides a summary of additional ecological survey data, which has resulted in no change to the conclusions of the main ES. SES and AP ES Volume 5: Appendix EC-003-000 identifies additional local/parish level effects that are likely to occur as a consequence of SES changes and AP amendments, but which will not be not significant.

2.1.4 Detail of supplementary ecological information that is relevant to the SES assessment is provided in Section 3.

2.2 Changes to the construction assumptions not requiring a change to the Bill

2.2.1 Since submission of the Bill the need to make changes to construction assumptions has been identified. These changes relate to railway systems compounds and are detailed further below. These do not require a change to the Bill.

Railway systems compounds

2.2.2 The Bill provides for land to be acquired for establishment and operation of a number of railway systems compounds from which railway installation works will be managed. These works include: installation of the hydraulically bound layer[3] and pre-cast slab, rails (including crossovers) and overhead line equipment, installation of auto-transformer stations; and changes to the existing rail network.

2.2.3 Since the submission of the Bill further information relating to the construction methodology for the installation of a slab track formation has required a change to the operational characteristics of one railway systems compound in the Colwich to

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

[3] Aggregate mixture incorporating cement, lime-based or other binders, which harden in-situ by a chemical/hydraulic reaction.

Yarlet area. The change to this compound relates to: a change to the operational period (duration and start/end date); a change in the number of railway system workers (peak and/or average); and a change in railway systems construction traffic numbers (heavy goods vehicle (HGV) and cars/light goods vehicles (LGV)).

2.2.4 Volume 1 of the SES and AP ES provides further detail on the approach taken to considering the potential for new or different significant effects from those reported in the main ES in relation to the changes to railway systems compounds. The change to the operational characteristics of the existing compound in this area does not require a change to the Bill and is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

2.2.5 While the changes to the construction methodology for the installation of a slab track formation will increase the number of railway systems HGV movements, these will be generally later in the construction programme than civil engineering HGV movements. Any increase in traffic due to these changes will generally be relatively small in comparison to the peak level of traffic generated by the civil engineering works. As there will only be a small increase in peak traffic levels, it is not expected that there will be any new or different significant traffic effects on the road network to those reported in the main ES.

2.2.6 Table 1 provides details on the changes to the operational characteristics of the existing railway systems compound in this area.

Table 1: Summary of changes to construction assumptions within the existing powers of the Bill in the Colwich to Yarlet area

Details of changes to construction assumptions	Description of the original scheme	Description of the SES scheme	Change to significant effects
Change to the operational duration[4], railway systems worker numbers, and railway systems HGV trips for the Sandon Road auto-transformer station satellite compound	This railway systems compound would be operational for a total of one year and three months, commencing during 2024. This railway systems compound would support an average of 30 railway systems workers per day (40 workers at peak times). This railway systems compound would generate up to 10 railway systems HGV trips per day during busy periods[5] and within the peak month of activity. (Map CT-05-216, C6 to B6 in the main ES, Volume 2 CA2 Map Book)	This compound will be operational for a total of one year and six months, commencing during 2024. There will be an increase in the number of railway systems workers supported by this compound with an average of 55 railway systems workers per day (80 workers at peak times). There will be an increase in the number of railway systems HGV trips generated by this compound with 161-164 trips per day during the busy periods and within the peak month of activity. This compound will support the implementation of track works.	No change. The increase in duration of the compound to support the extended duration of railway systems works is relatively small in comparison to the overall duration of the compound. The increase in railway systems worker numbers at the compound is small in comparison to the overall construction phase employment. The consequential increase in traffic associated with the increased worker numbers is also small in relation to the peak traffic volumes in the area which will occur during the construction phase.

[4] The Volume 2 scheme description of the construction phase represents the duration of works in a different way to the Volume 5 Transport Assessment. The Volume 2 scheme description is based on quarters (each representing three months), e.g. December (Quarter 4) to February (Quarter 1) is rounded to six months, whereas the Volume 5 Transport Assessment counts the absolute duration e.g. three months.
[5] The busy period is the period during which HGV traffic serving that compound will be greater than 50% of the HGV traffic in the peak month. The average daily combined two-way vehicle trips for the busy period is the lower end of the range and for the peak month is the upper end of the range.

Details of changes to construction assumptions	Description of the original scheme	Description of the SES scheme	Change to significant effects
			The increase in railways systems HGV movements will increase the total daily movements from the compound. This will not, however, materially change the overall impact of the combination of these HGV movements and those associated with other compounds in the area compared to the traffic levels assessed in the original scheme. Therefore, the level of significance reported in the main ES with regard to compound durations, worker numbers and traffic will not change.

2.3 Corrections to the main ES

2.3.1 Since submission of the Bill, the need for a number of corrections to the contents of the main ES has been identified. Table 2 provides a list of those instances where there has been a need to correct the Volume 2 community area report for the Colwich to Yarlet area because of the potential to alter the significant environmental effects reported in the main ES or a factual inaccuracy relating to a significant effect that has been identified. Table 2 also clarifies elements of the scheme description reported in the main ES. The table gives the location of the text that is subject to the correction in the main ES, the reason for the correction, replicates the text from the main ES, where applicable provides revised text, and identifies whether the correction changes a significant effect reported in the main ES.

Table 2: Summary of corrections to the main ES in the Colwich to Yarlet area

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
Overview of the area and description of the Proposed Scheme Paragraph 2.3.101, Volume 2, CA2 of the main ES Map CT-05-219a, Volume 2 Map Book, CA2 of the main ES	The temporary diversion of Marston Footpath 2 was incorrectly described in the scheme description. The third temporary diversion should have been reported as a temporary diversion of Whitgreave Footpath 2 managed from Yarlet South cutting satellite compound. The temporary diversion at Whitgreave Footpath 2 was not included in the assessment. Volume 2: Map CT-05-219a of the main ES incorrectly labelled Whitgreave Footpath 2 as part of Marston Footpath 2. This has been corrected within the SES and AP ES Volume 2: Map CT-05-219a.	Paragraph 2.3.101 - second bullet: • two temporary diversions of Marston Footpath 2 for a period of three years during construction. The first temporary diversion, 350m in length, will divert users east to the realigned Marston Lane, on the northern side of the Proposed Scheme. A second diversion route, 150m in length, will divert users west around an area of planting. The third temporary diversion, 500m in length, will join the A34 Stone Road, to the southern side of the Proposed Scheme. On completion of construction, Marston Footpath 2 will be permanently diverted by 375m, to join the realigned Marston Lane;	Paragraph 2.3.101 - second bullet: • two temporary diversions of Marston Footpath 2 for a period of three years during construction. The first temporary diversion, 350m in length, will divert users east to the realigned Marston Lane, on the northern side of the Proposed Scheme. A second diversion route, 150m in length, will divert users west around an area of planting. On completion of construction, Marston Footpath 2 will be permanently diverted by 375m, to join the realigned Marston Lane. New paragraph to be inserted following paragraph 2.3.114: The works to be managed from this compound will require the following works to PRoW: • temporary diversion of the Whitgreave Footpath 2, for a period of three years and nine months. The temporary diversion, *440m* in length, will join the A34 Stone Road, to the southern side of the Proposed Scheme. On completion of construction, Whitgreave Footpath 2 will be returned to its existing alignment.	Yes This correction will result in a new minor adverse significant effect due to increased travel distance. This correction will not require a change to mitigation reported in the main ES.
Traffic and transport Paragraph 14.3.16, 14.4.31 and 14.4.40, Volume 2, CA2 of the main ES		Paragraph 14.3.16: The route of the Proposed Scheme will cross the existing route of 16 PRoW, including seven bridleways in the Colwich to Yarlet area. A further nine PRoW in the area will be affected either temporarily or permanently due to, for example, temporary diversion of PRoW during construction and permanent upgrades for maintenance access to the Proposed Scheme. Paragraph 14.4.31: No text exists within the main ES for this correction.	Paragraph 14.3.16: The route of the Proposed Scheme will cross the existing route of 16 PRoW, including seven bridleways in the Colwich to Yarlet area. A further *10* PRoW in the area will be affected either temporarily or permanently due to, for example, temporary diversion of PRoW during construction and permanent upgrades for maintenance access to the Proposed Scheme. Paragraph 14.4.31, insert new bullet (seventh bullet): • Whitgreave Footpath 2 – minor adverse significant effect from increase in distance of up to 400m;	

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
		Paragraph 14.4.40: There will be temporary adverse significant effects due to increased travel distance during construction on non-motorised users of: …Marston Footpath 2 (minor adverse); Marston Bridleway 8 (minor adverse);….	Paragraph 14.4.40: There will be temporary adverse significant effects due to increased travel distance during construction on non-motorised users of: … Marston Footpath 2 (minor adverse); *Whitgreave Footpath 2 (minor adverse);* Marston Bridleway 8 (minor adverse);….	
Community Paragraph 6.5.8 and 6.5.15, Volume 2, CA2 of the main ES	The community assessment reported significant noise and visual effects during operation for approximately 30 properties in Marston and Yarlet. The operation of the original scheme will result in noise and visual effects on 28 properties.	Paragraph 6.5.8: …The operation of the Proposed Scheme will result in significant noise effects at these residential properties during the daytime and night-time due to the running of the trains…. The noise and visual effects will result in a permanent in-combination effect on the amenity of residents at these properties…. Paragraph 6.5.15 – ninth bullet: • thirty residential properties in Marston and Yarlet due to the combination of noise and visual effects;	Paragraph 6.5.8: …The operation of the Proposed Scheme will result in significant noise effects at *28 of* these residential properties during the daytime and night-time due to the running of the trains…. The noise and visual effects will result in a permanent in-combination effect on the amenity of residents at *28* residential properties…. Paragraph 6.5.15 - ninth bullet: • *twenty-eight* residential properties in Marston and Yarlet due to the combination of noise and visual effects;	Yes. This correction will result in a different significant community effect, due to a reduction in the number of properties reported to be affected by the operation of the original scheme from 30 to 28, but will not change the level of significance of the effect reported in the main ES.
Ecology and biodiversity Paragraphs 8.4.52, 8.4.54,8.4.62 and 8.4.82, Volume 2, CA2 of the main ES	Areas of woodland, grassland and hedgerow habitat creation were incorrectly reported in the ecology assessment, but were shown correctly on the Volume 2: Maps CT-06 of the main ES for CA2. There is no requirement for additional land as a result of this correction.	Paragraph 8.4.52 - first bullet: • approximately 3.4ha on the south side of Trent North embankment, which will enhance ecological connectivity east of the retained woodland at Flushing Covert…..; Paragraph 8.4.52 - third bullet: • approximately 1.9ha on the south side of Marston North embankment, which will enhance ecological connectivity with retained hedgerows along Marston Lane; Paragraph 8.4.52 - fourth bullet:	Paragraph 8.4.52 - first bullet: • approximately *3.9ha* on the south side of Trent North embankment, which will enhance ecological connectivity east of the retained woodland at Flushing Covert…..; Paragraph 8.4.52 - third bullet: • approximately *2.4ha* on the south side of Marston North embankment, which will enhance ecological connectivity with retained hedgerows along Marston Lane; Paragraph 8.4.52 - fourth bullet:	No change. The assessment was based on the correct areas and therefore this correction will not change the level of significance of the effect reported in the main ES.

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
		• approximately 3.2ha in total at two locations on the south side of Yarlet South cutting, which will enhance ecological connectivity between retained woodland at Yarlet Wood….; and Paragraph 8.4.54: Within the Colwich to Yarlet area, approximately 40.3ha of further woodland habitat creation will be undertaken to compensate primarily for adverse effects upon non-ancient woodland, at locations including the following: • approximately 6.7ha the north side of Trent North embankment…; • approximately 4.4ha either side of Brancote South cutting on the west side of Ingestre Park Golf Club…; and Paragraph 8.4.62: …Approximately 31.8km of new hedgerows will be planted and the species composition will be characteristic of the surrounding area. This represents a net loss in hedgerow of approximately 2.1km after mitigation, which represents a residual adverse effect that is significant at the district/borough level…. Paragraph 8.4.82: On a precautionary basis, it is assumed that there is a net loss in hedgerow of approximately 2.1km, which will result in a permanent adverse residual effect that is significant at the district/borough level….	• approximately *3.3ha* at two locations on the south side of Yarlet South cutting, which will enhance ecological connectivity between retained woodland at Yarlet Wood….; and Paragraph 8.4.54: Within the Colwich to Yarlet area, approximately *52.5ha* of further woodland habitat creation will be undertaken to compensate primarily for adverse effects upon non-ancient woodland, at locations including the following: • approximately *6.8ha* the north side of Trent North embankment…; • approximately *3.3ha* either side of Brancote South cutting on the west side of Ingestre Park Golf Club…; and Paragraph 8.4.62: …Approximately *27.8km* of new hedgerows will be planted and the species composition will be characteristic of the surrounding area. This represents a net loss in hedgerow of approximately *6.1km* after mitigation, which represents a residual adverse effect that is significant at the district/borough level…. Paragraph 8.4.82: On a precautionary basis, it is assumed that there is a net loss in hedgerow of approximately *6.1km*, which will result in a permanent adverse residual effect that is significant at the district/borough level….	

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
Ecology and biodiversity Paragraphs 8.4.60, Volume 2, CA2 of the main ES	Mitigation at Lount Farm local wildlife site (LWS) was reported as being distributed between the Fradley to Colton area and the Colwich to Yarlet area, whereas all the mitigation is provided within the Fradley to Colton area, with none in the Colwich to Yarlet area. The distribution of mitigation to the east and west side of Moreton Brook was incorrectly described.	Paragraph 8.4.60 - first bullet: • approximately 2.7ha of lowland meadow at Lount Farm LWS will be restored and enhanced on the west side of Moreton Brook. An additional 2.7ha of species-rich grassland will be created on land to the east side of Moreton Brook within the Fradley to Colton area (CA1). These measures will partly compensate for the loss of 8.4ha of lowland meadow within and adjacent to Lount Farm LWS in the Colwich to Yarlet area (4.4ha of which is within the LWS);	Paragraph 8.4.60 - first bullet: • approximately 8.7ha of lowland meadow will be created or enhanced alongside Moreton Brook, in order to connect the two currently disparate sections of Lount Farm LWS, within the Fradley to Colton area (CA1). The majority of this mitigation (7.4ha) occurs to the immediate west of Moreton Brook, with 1.3ha to the east (beneath the Moreton Brook viaduct). In particular, this will in part compensate for the loss of 11.7ha of lowland meadow from Lount Farm LWS (7.7ha) and its surrounding area (4ha). Of these losses, 8.4ha occur within the Colwich to Yarlet area, 4.4ha within Lount Farm LWS and 4ha within its surrounding area. These losses result from the construction of the Moreton North embankment and works associated with the underground diversion of an existing 132kV power line.	No change. The overall area of mitigation at Lount Farm LWS was correctly described and assessed in the main ES, and so there is no change to the significant effects reported in the main ES.
Ecology and biodiversity Paragraphs 8.4.79, Volume 2, CA2 of the main ES	The residual net loss of lowland meadow at Lount Farm LWS was incorrectly reported in the ecology assessment.	Paragraph 8.4.79: There will be a permanent residual effect due to the net loss of 3.1ha of lowland meadow habitat of principal importance at Lount Farm LWS and surrounds that is significant at the district/ borough level….	Paragraph 8.4.79: There will be a permanent residual effect due to the net loss of *3ha* of lowland meadow habitat of principal importance at Lount Farm LWS and surrounds that is significant at the district/ borough level. …	No change. The overall area of mitigation at Lount Farm LWS was correctly described and assessed in the main ES, and so there is no change to the significant effects reported in the main ES.
Ecology and biodiversity Paragraph 8.4.60, Volume 2, CA2 of the main ES	The description of wet grassland habitat creation at Hoo Mill states that there will be provision of a 4.8ha area	Paragraph 8.4.60 - second bullet: • approximately 4.8ha of native species-rich wetland grassland will be created to the east of Hoo Mill adjacent to the River Trent…;	Paragraph 8.4.60 - second bullet: • approximately *4.9ha* of native species-rich wet grassland will be created to the east of Hoo Mill adjacent to the River Trent…;	No change. The assessment was based on the correct area and therefore this correction will not change the level of

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
	and a 5ha area of wet grassland habitat. The area of wet grassland should have been reported as 4.9ha. The additional 5ha is a duplication and should not have been reported.	Paragraph 8.4.60 - fourth bullet: • approximately 5ha of wet grassland creation will take place on land to the east of Hoo Mill.	Paragraph 8.4.60 - fourth bullet: Bullet removed. No replacement text required.	significance of the effect reported in the main ES.
Sound, noise and vibration Paragraph 13.4.11, Volume 2, CA2 of the main ES	Two properties (Bank Top House, Hopton and Hill Top Farm, Yarlet) were not included in the list of properties forecast to experience noise above the eligibility criteria as defined in the HS2 noise insulation and temporary rehousing policy. The total number of properties forecast to experience noise above the eligibility criteria is 10.	Paragraph 13.4.11: …the following eight residential properties are forecast to experience noise above the eligibility criteria as defined in the HS2 noise insulation and temporary rehousing policy….	Paragraph 13.4.11: …the following *10* residential properties are forecast to experience noise above the eligibility criteria as defined in the HS2 noise insulation and temporary rehousing policy…. Insert new bullets (fifth and sixth bullet): • Bank Top House, Hopton (assessment location ref.: 12158); and • Hill Top Farm, Yarlet (assessment location ref.: 12218).	Yes. Two additional properties are identified as being subject to a significant adverse effect, and are consequently estimated to be likely to qualify for noise insulation. Further information regarding the construction noise levels are provided in SES and AP ES Volume 5: Appendix SV-002-000.
Sound, noise and vibration Paragraph 13.4.16 (Table 33), Volume 2, CA2 of the main ES	The main ES reported approximately 10 properties affected at Hopton for the sound, noise and vibration assessment, and incorrectly reported 11 properties for the community assessment. This should have been reported as nine properties for the community assessment.	Paragraph 13.4.16 - Table 33, fourth entry (CSV02-C04): **Location**: Approximately 10 dwellings in Hopton to the west and east of the Proposed Scheme.	Paragraph 13.4.16 - Table 33, fourth entry (CSV02-C04): **Location**: Approximately *20* dwellings in Hopton to the west and east of the Proposed Scheme.	Yes. This correction will result in a different significant airborne noise effect due to an increase in the number of properties affected by the construction of the original scheme from approximately 10 to approximately 20 but will not change the level of significance of

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
	In addition, three construction noise locations, which represent seven properties, were not included in the sound, noise and vibration assessment at Hopton. Consequently, these were not reported or assessed in the community assessment.			the effect reported in the main ES. Further information regarding the construction noise levels are provided in SES and AP ES Volume 5: Appendix SV-002-000.
Community Paragraph 6.4.7 and 6.4.34, Volume 2, CA2 of the main ES	To correct for the additional seven properties, this should have been reported as approximately 20 properties for the sound, noise and vibration assessment and 16 properties affected for the community assessment. The sound, noise and vibration and community assessment methodologies represent the number of residential properties in a different way. The sound, noise and vibration assessment rounds numbers of properties to the nearest 5, e.g. 16 is rounded to 20, whereas the community assessment counts absolute numbers of properties.	Paragraph 6.4.7: …Approximately 11 residential properties will experience significant noise effects in the daytime and night-time due to demolitions, utility works, earthworks and other construction works…. Within Hopton approximately 11 residential properties will experience visual and noise effects, with five of these additionally experiencing HGV effects. This will result in an in-combination effect on the amenity of residents of up to 11 residential properties for up to one year in total. Paragraph 6.4.34 - fifth bullet: • eleven residential properties in Hopton due to the combination of noise and visual effects, five of which will also have HGV effects;	Paragraph 6.4.7: …Approximately *16* residential properties will experience significant noise effects in the daytime and night-time due to demolitions, utility works, earthworks and other construction works…. Within Hopton approximately *16* residential properties will experience visual and noise effects, with five of these additionally experiencing HGV effects. This will result in an in-combination effect on the amenity of residents of up to *16* residential properties for up to one year in total. Paragraph 6.4.34- fifth bullet: • s*ixteen* residential properties in Hopton due to the combination of noise and visual effects five of which will also have HGV effects;	Yes. This correction will result in a different significant community effect, due to an increase in the number of properties reported to be affected by the construction of the original scheme from 11 to 16, but will not change the level of significance of the effect reported in the main ES.

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
Sound, noise and vibration Paragraph 13.5.23 (Table 34), Volume 2, CA2 of the main ES	Two residential properties at Moreton were not included in the sound, noise and vibration and community assessment. Assessment location references 12007 and 12004 should each have included one additional property. The main ES reports approximately 10 properties affected at Moreton for the sound, noise and vibration and community assessments. This should have been reported as approximately 15 properties for the sound, noise and vibration assessment and 12 properties affected for the community assessment.	Paragraph 13.5.23 - Table 34, first entry (OSV02-CO1): **Location and details**: Approximately 10 dwellings in the vicinity of Moreton/Bishton Lane….	Paragraph 13.5.23 - Table 34, first entry (OSV02-C01): **Location and details:** Approximately *15* dwellings in the vicinity of Moreton/Bishton Lane….	Yes. This correction will result in a different significant operational noise effect due to an increase in the number of properties affected by the construction of the original scheme from approximately 10 to approximately 15, but will not change the level of significance of the effect reported in the main ES.
Community Paragraph 6.5.2 and 6.5.15, Volume 2, CA2 of the main ES		Paragraph 6.5.2: Approximately 10 residential properties in Moreton will be in proximity to the Proposed Scheme. The operation of the Proposed Scheme will result in significant noise effects at the residential properties during the daytime and night-time due to the running of the trains…. Paragraph 6.5.15 - second bullet: • ten residential properties in Moreton due to the combination of noise and visual effects;	Paragraph 6.5.2: Approximately *12* residential properties in Moreton will be in proximity to the Proposed Scheme. The operation of the Proposed Scheme will result in significant noise effects at *12* residential properties during the daytime and night-time due to the running of the trains… Paragraph 6.5.15 - second bullet: • *twelve* residential properties in Moreton due to the combination of noise and visual effects;	Yes. This correction will result in a different significant community effect, due to an increase in the number of residential properties reported to be affected by the operation of the original scheme from 10 to 12, but will not change the level of significance of the effect reported in the main ES.
Water resources and flood risk Paragraph 15.3.21, Volume 2, CA2 of the main ES	Lionlodge Covert LWS was reported as a high value receptor in the water resources and flood risk assessment in Volume 2, CA2 of the main ES. This LWS is a moderate value receptor,	Paragraph 15.3.21 - third bullet: • Lionlodge Covert LWS is located to the north-west of Great Haywood and contains an inland salt meadow supported from brine springs. These springs have been assessed as high value receptors.	Paragraph 15.3.21 - third bullet: • Lionlodge Covert LWS is located to the north-west of Great Haywood and contains an inland salt meadow supported from brine springs. These springs have been assessed as *moderate* value receptors.	No change. The reported value of Lionlodge LWS as a water dependant habitat has been reduced from high to moderate, however

Reference in the main ES	Reason for correction	Text in the main ES	Revised text	Change to significant effects and mitigation
	as correctly reported in Volume 5: Appendix WR-002-002.			this remains a significant effect and was correctly assessed and reported as such in Volume 5 of the main ES.

3 Assessment of changes in the Colwich to Yarlet area

3.1 Introduction

3.1.1 Section 3 reports the assessment for ecology and biodiversity as a result of the SES changes.

3.2 Ecology and biodiversity

Introduction

3.2.1 The environmental baseline relevant to the ecology and biodiversity assessment is described below. Any new or different likely significant environmental effects as a result of the changes introduced in Section 2 are then identified, compared to the original scheme. Consideration is given to the potential for impacts on habitats, species and sites designated on the basis of their importance for nature conservation.

Scope, assumptions and limitations

3.2.2 The assessment scope, key assumptions and limitations for ecology and biodiversity are as set out in Volume 1, the Scope and Methodology Report (SMR)[6] and the SMR Addendum[7] of the main ES.

3.2.3 To address any limitations in data, a precautionary baseline has been considered according to the guidance reported within the SMR and SMR Addendum. This constitutes a 'reasonable worst-case' basis for the subsequent assessment.

SES changes of relevance to this assessment

3.2.4 New baseline information on great crested newt resulting from additional ecological surveys in the Colwich to Yarlet area is relevant to the assessment.

Environmental baseline

Existing baseline

3.2.5 The baseline ecology and biodiversity information for the Colwich to Yarlet area is as described in Volume 2, CA2, Section 8 of the main ES. A summary of the baseline information relevant to the assessment of the SES change is provided below.

3.2.6 Details of surveys completed since the production of the main ES are provided in the BID documents (BID-EC-004-000 and Map Series EC-02, EC-04, EC-05, EC-10 and EC-12), which accompany the SES and AP ES.

[6] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, Environmental Impact Assessment Scope and Methodology Report (Appendix CT-001-001). Available online at https://www.gov.uk/government/publications/scope-and-methodology-report-for-hs2-phase-2a

[7] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, Environmental Impact Assessment Scope and Methodology Report Addendum (Appendix CT-001-002). Available online at https://www.gov.uk/government/publications/scope-and-methodology-report-for-hs2-phase-2a

Species

3.2.7 The outcomes of additional ecological surveys undertaken for great crested newt have formed the basis of a review of the composition of metapopulations[8] across the Colwich to Yarlet area. This review has included a consideration of the quality and connectivity of terrestrial habitat between ponds in order to determine the location of distinct clusters of ponds that are likely to support metapopulations of great crested newt. This review has resulted in changes to the composition of all metapopulations reported within the main ES, and in the addition of new metapopulations. Each metapopulation includes one or more ponds where the presence of great crested newt has been confirmed by survey, in addition to any ponds that are considered likely to support this species (on the basis of their habitat quality and quantity) and that are connected to the confirmed population (or populations) by suitable terrestrial habitat.

3.2.8 Many ponds described within the main ES as supporting assumed populations of great crested newt were not allocated to metapopulations due to their limited proximity to confirmed populations of great crested newt. For some of these ponds the additional surveys have confirmed the presence of great crested newt either within these ponds, or within nearby ponds connected by suitable terrestrial habitat, which has resulted in them being added to a new or revised metapopulation. Overall this means that the number of ponds associated with metapopulations, either new or revised, has increased and the number of individual assumed populations outside of metapopulations has decreased. The details of the revised composition of each metapopulation are provided within BID-EC-004-000, which accompanies the SES and AP ES. The changes to metapopulations from those described within the main ES are summarised below.

3.2.9 The main ES reported a great crested newt metapopulation in 12 ponds centred on Ingestre Park Golf Club (assumed metapopulation (AMP) 2.2). Field surveys recorded great crested newt presence within seven ponds, with the largest population being of medium size class. On a precautionary basis, the presence of medium size populations of great crested newt was assumed in five further ponds. This metapopulation is valued at county level in the main ES.

3.2.10 Additional surveys have confirmed the absence of great crested newt within two ponds where great crested newt populations were previously assumed to be present and form part of this metapopulation. These ponds no longer form part of the metapopulations.

3.2.11 In addition to the confirmed great crested newt populations within this metapopulation reported in the main ES (seven ponds), there are nine further ponds with assumed populations that are considered to form part of AMP 2.2. The revised metapopulation therefore includes 16 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 original scheme. The increase in the number of ponds with confirmed or assumed populations of great crested newt does not change the value of AMP 2.2, as reported in the main ES.

[8] A metapopulation is a group of spatially separated populations that interact.

3.2.12 The main ES reported a great crested newt metapopulation in 10 ponds centred on Hopton Lane (AMP 2.3). Field surveys recorded great crested newt presence within one pond, comprising a population of small size class. On a precautionary basis, the presence of medium size populations of great crested newt was assumed to occur in nine further ponds. This metapopulation is valued at county level in the main ES.

3.2.13 Additional surveys have confirmed:

- absence of great crested newt within one pond where great crested newt populations were previously assumed to be present and form part of this metapopulation. This pond no longer forms part of the metapopulation;
- presence of great crested newt within one pond where great crested newt populations were previously assumed to be present. This pond still forms part of the metapopulation; and
- presence of great crested newt within one pond that was not previously considered to form part of this metapopulation. This pond is now included in this metapopulation.

3.2.14 In addition to the confirmed great crested newt population within this metapopulation reported in the main ES (one pond) and the confirmed populations within this metapopulation identified from additional surveys (two ponds), there are 21 further ponds with assumed populations that are considered to form part of AMP 2.3. The revised metapopulation, therefore, includes 24 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 original scheme. The increase in the number of ponds with confirmed or assumed populations of great crested newt does not change the value of AMP 2.3, as reported in the main ES.

3.2.15 Additional surveys have identified a new great crested newt metapopulation in 24 ponds centred on Marston (AMP 2.4), not previously reported in the main ES. Additional surveys recorded great crested newt presence within 13 ponds, with the largest population being of medium size class. This metapopulation occurs partially within the land required for the original scheme and is valued at a county level.

3.2.16 In addition to the known and assumed great crested newt populations that are considered to form metapopulations, there are two additional ponds that occur within the land required for the original scheme in this area where the presence or absence of great crested newt has not been confirmed. On a precautionary basis, each of these ponds is assumed to support a medium size breeding population of great crested newt of up to county value.

Future baseline

Construction (2020) and operation (2027)

3.2.17 SES and AP ES Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2020 and 2027 respectively, additional to those identified in the main ES (Volume 5: Appendix CT-004-000).

3.2.18 None of the identified developments affect the assessment of the SES scheme's likely construction and operational impacts on ecology and biodiversity.

Effects arising during construction

Avoidance and mitigation measures

3.2.19 No further measures are applicable to this assessment, above those stated in the draft Code of Construction Practice (CoCP)[9].

Assessment of impacts and effects

Species

3.2.20 The main ES reported the loss of two ponds associated with the great crested newt metapopulation centred on Ingestre Park Golf Club (AMP 2.2), comprising one pond with a confirmed population of great crested newt and one pond assumed to support great crested newt. The main ES also reported the loss of great crested newt terrestrial habitat associated with construction. This would result in a permanent adverse effect on the great crested newt metapopulation that is significant at a county level, as reported in the main ES. Following additional surveys being undertaken, the number of ponds associated with this metapopulation, and the number that will be lost as a result of the construction of the original scheme, will increase to three. The increase in the number of great crested newt populations to be impacted by the original scheme will result in a different significant effect to that reported in the main ES, however, this will not change the level of significance of the effect reported in the main ES.

3.2.21 The main ES reported the loss of great crested newt terrestrial habitat during construction associated with the great crested newt metapopulation centred on Hopton Lane (AMP 2.3). This would result in a permanent adverse effect on the great crested newt metapopulation that is significant at a county level, as reported in the main ES. Following additional surveys being undertaken, two ponds associated with this metapopulation will be lost as a result of the construction of the original scheme. The increase in the number of great crested newt populations to be impacted by the original scheme will result in a different significant effect to that reported in the main ES, however, this will not change the level of significance of the effect reported in the main ES.

3.2.22 The presence of the great crested newt metapopulation centred on Marston (AMP2.4) was not reported in the main ES. Construction of the original scheme will result in the loss of two ponds and terrestrial habitat associated with this metapopulation. This will result in a new permanent adverse effect on this metapopulation, which will be significant at a county level.

3.2.23 In summary, taking account of the baseline information from the additional surveys undertaken, there is a reduction in the number of known or assumed great crested newt ponds to be lost across the Colwich to Yarlet area as a result of construction of

[9] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, draft Code of Construction Practice (CT-003-000). Available online at https://www.gov.uk/government/publications/draft-code-of-construction-practice-for-hs2-phase-2a

the original scheme. The number of great crested newt ponds that will be lost will reduce from up to 32, as reported in the main ES, to up to 14.

Other mitigation measures

Species

3.2.24 The main ES reported that significant effects to the great crested newt metapopulations within the Colwich to Yarlet area would be addressed by provision of measures within the ecological habitat creation areas at Moreton, Ingestre Park Golf Club, Marston and Yarlet. These measures would comprise provision of ponds, species-rich neutral grassland and broadleaved woodland that would be designed to compensate for the loss of breeding sites, foraging habitat and places of shelter used by great crested newt and other amphibian species. Provision of these habitats will also contribute to compensation for route-wide losses of ponds, grassland and woodland. Following implementation, the adverse effects on the amphibian populations in the Colwich to Yarlet area would be reduced to a level that is not significant.

3.2.25 The assessment undertaken, following the consideration of additional baseline information, has concluded that the impacts of the original scheme on great crested newt will be reduced from those reported in the main ES. The provision of compensatory habitats as reported in the main ES, once established, will reduce the adverse effects on amphibian populations to a level that is not significant.

Summary of likely residual significant effects

3.2.26 There are no changes to the likely residual significant construction ecology and biodiversity effects identified in the main ES as a result of the new baseline information.

Cumulative effects

3.2.27 There are no new or different likely significant cumulative effects for ecology and biodiversity as a result of the new baseline information acting in combination with any other SES changes.

Effects arising from operation

3.2.28 There are no new or different significant operational effects for ecology and biodiversity as a result of the new baseline information, in comparison with the main ES.

Part 2: Additional Provision Environmental Statement

4 Summary of amendments in the Colwich to Yarlet area

4.1 Introduction

4.1.1 In the Colwich to Yarlet area, the following types of amendments are proposed in the AP revised scheme:

- engineering amendments;
- minor utility amendments; and
- other amendments requiring changes to Bill powers.

4.2 Engineering amendments

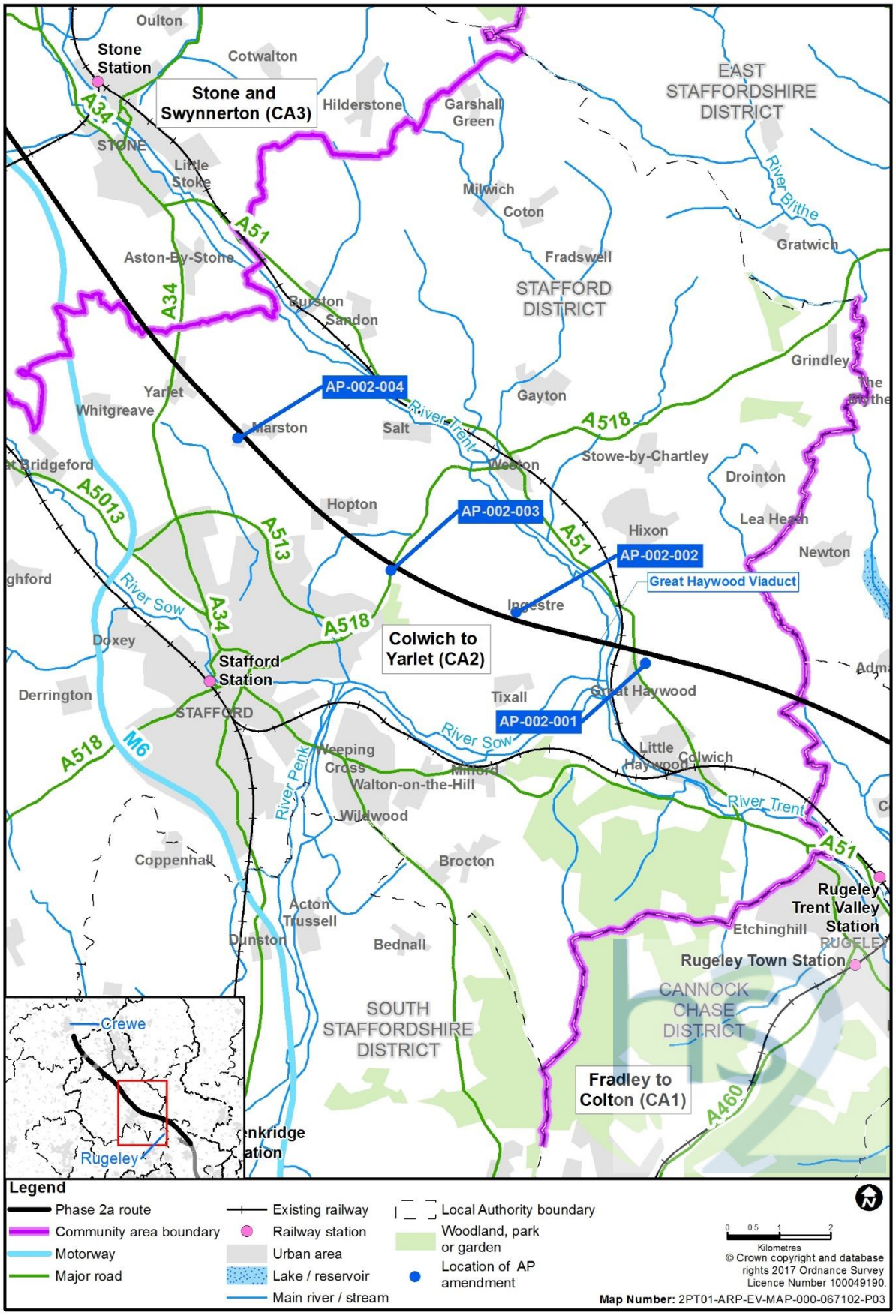
4.2.1 Engineering amendments will be required in the Colwich to Yarlet area that will result in changes to the land or Bill powers required for the original scheme. Table 3 provides a summary of the engineering amendments. Figure 2 shows the locations of the engineering amendments.

Table 3: Summary of engineering amendments in the Colwich to Yarlet area

Name of amendment	Description of the original scheme	Description of the AP revised scheme
Additional land permanently required for amendment to a fuel pipeline diversion, A51 Lichfield Road AP-002-001 Map CT-06-212, J7 to H8, in the SES and AP ES Volume 2, CA2 Map Book	Permanent acquisition of land for the diversion of a British Pipeline Agency (BPA) 10-inch diameter fuel pipeline crossing the A51 Lichfield Road.	Additional land for the permanent diversion of a section of a BPA 10-inch diameter fuel pipeline.
Additional land required for a temporary laydown area at Trent North embankment AP-002-002 Map CT-05-213, F5 to F3, in the SES and AP ES Volume 2, CA2 Map Book	Permanent acquisition of land for the diversion of a BPA 10-inch diameter fuel pipeline crossing the HS2 route beneath the Trent North embankment.	Additional land for a temporary laydown area required during construction of a BPA 10-inch diameter fuel pipeline diversion.

Name of amendment	Description of the original scheme	Description of the AP revised scheme
Additional land permanently required for the A518 Weston Road realignment AP-002-003 Map CT-06-215, F10 to D6 and E4 to E3, in the SES and AP ES Volume 2, CA2 Map Book	Permanent acquisition of land for the realignment of the A518 Weston Road, west of its existing alignment, passing over the HS2 route via the A518 Weston Road overbridge. Access to the Staffordshire County Showground would be provided off the realigned A518 Weston Road, on the north side of the HS2 route, connecting to an existing underpass which provides pedestrian access.	Additional land on the south side of the HS2 route to permanently extend the A518 Weston Road realignment, south-west of its existing alignment, and for the relocation of existing and proposed hedgerow habitat at the junction between A518 Weston Road and Trent Walk. Additional land on the north side of the HS2 route to improve visibility, from the access road junction with the realigned A518 Weston Road.
Additional land permanently required for a turning head near Homestall Barn AP-002-004 Map CT-06-218, H6, in the SES and AP ES Volume 2, CA2 Map Book	Permanent acquisition of land for the realignment of Marston Lane, north of its existing alignment, crossing the HS2 route via the Marston Lane underbridge. A section of Marston Lane, south of the HS2 route, would be retained for access to properties but closed to through-traffic.	Additional land for the permanent provision of a turning head at the eastern end of the retained Marston Lane near Homestall Barn, on the south side of the HS2 route, east of its junction with the realigned Marston Lane.

Figure 2: Locations of engineering amendments in the Colwich to Yarlet area



4.3 Minor utility amendments

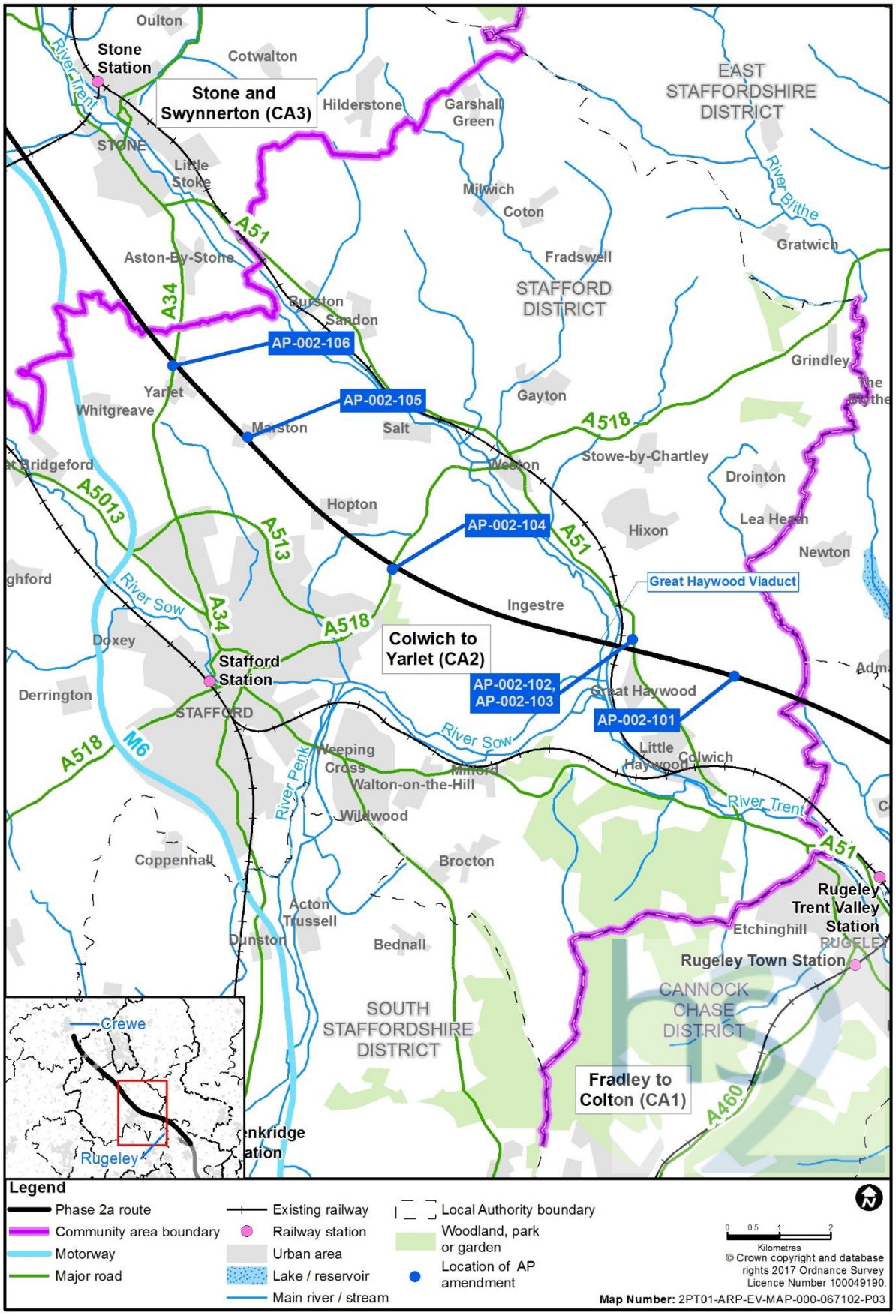
4.3.1 Amendments to minor utilities will be required in the Colwich to Yarlet area to provide connections to construction compounds and to maintain continuity of supply in the area. This will result in changes to the land or Bill powers required for the original scheme. Typically, works associated with minor utility amendments will be small in scale and similar to the types of works undertaken routinely by utility providers in the normal course of their activities. The duration of minor utility works will generally be short term in nature. Provision of access to adjacent properties will usually be maintained during the works with alternative access arrangements being made where necessary. The implementation of the works will be subject to the appropriate traffic management measures to ensure that disruption to non-motorised users and vehicular traffic is reduced insofar as reasonably practicable. Table 4 provides a summary of the minor utility amendments and the changes to land or Bill powers required. Figure 3 shows the general location of the minor utility amendments.

Table 4: Summary of minor utility amendments in the Colwich to Yarlet area

Utility	Description of the activities	Change to Bill powers
BT Openreach overhead telecommunications cable AP-002-101 Map CT-06-210, D5, C5 to A3 and C6 to A8, and CT-06-211, J5 to H3 and J6 to G9, in the SES and AP ES Volume 2, CA2 Map Book	Permanent diversion of utility, 1.3km in length, to follow the alignment of Moreton Lane.	Additional land permanently required.
Two Severn Trent Water foul rising sewers and one Severn Trent Water gravity foul sewer AP-002-102 Map CT-06-212, F1 to E2, in the SES and AP ES Volume 2, CA2 Map Book	Permanent diversion of three utilities, 880m in length, to run adjacent to the Macclesfield to Colwich Line.	Additional land permanently required.
BT Openreach underground fibre optic telecommunications cable and BT Openreach overhead telecommunications cable AP-002-103 Map CT-06-212, G3 to F1, in the SES and AP ES Volume 2, CA2 Map Book	Permanent underground diversion of two utilities, 1.2km in length, to follow the alignment of the A51 Lichfield Road and cross the HS2 route along the A51 Lichfield Road underbridge alignment.	Additional land permanently required.
BT Openreach overhead telecommunications cable AP-002-104 Map CT-06-215, G5 to G6 and F4 to F5, in the SES and AP ES Volume 2, CA2 Map Book	Permanent diversion of utility, 420m in length, within the Staffordshire County Showground.	Additional land permanently required.
BT Openreach overhead telecommunications cable AP-002-105 Map CT-06-218, H8 to G7, in the SES and AP ES Volume 2, CA2 Map Book	Permanent diversion of utility, 1.2km in length, along Yarlet Lane.	Additional land permanently required.

Utility	Description of the activities	Change to Bill powers
Cadent 90mm low pressure gas main AP-002-106 Map CT-06-219a, F5 to E3, in the SES and AP ES Volume 2, CA2 Map Book	Permanent diversion of utility, 170m in length, along the access road to Yarlet School.	Change in Bill land powers at three plots of land from temporary to permanent acquisition.

Figure 3: Locations of minor utility amendments in the Colwich to Yarlet area



4.4 Other amendments requiring changes to Bill powers

4.4.1 Since submission of the Bill, the need for amendments to the Bill plans and Schedule 8 of the Bill ('Lands where powers of acquisition are limited to acquisition of rights or impositions of restrictive covenants') have been identified.

4.4.2 The amendments relate to the rights for use of certain plots of land, which have been identified on the Bill plans and in Schedule 8 of the Bill as only being required for access during the construction phase of the original scheme. However, it has been ascertained that these land plots will also be required by the nominated undertaker, Network Rail and third party utility providers during the operational phase for access for inspection and maintenance purposes.

4.4.3 Regular inspection and maintenance access will be required to assets such as the following:

- habitat creation areas;
- line-side equipment;
- railway drainage system; and
- utilities.

4.4.4 During operation vehicular access will be required and the frequency will vary depending on the asset and maintenance activities. Typically, access will be required 2-4 times per year by two light goods vehicles (LGV) (e.g. long wheel-base pick-up vehicles).

4.4.5 The use of these land plots for maintenance and operation access was considered in the preparation of the main ES. Given the limited frequency of this access, it was concluded that this would not result in any significant effects. As this access was considered in the main ES, these amendments are not considered to require further assessment of the environmental effects or mitigation additional to that set out in the main ES with respect to any environmental topics.

4.4.6 Table 5 provides a list of those instances where there has been a need to amend the Bill plans and Schedule 8 of the Bill for the Colwich to Yarlet area.

Table 5: Summary of other amendments requiring changes to Bill powers in the Colwich to Yarlet area

Name of amendment	Description of the original scheme (Schedule 8 of the Bill)	Description of the AP revised scheme
Additional access rights to land plots AP1-1, AP1-3, AP1-8, AP1-10, AP1-15, AP1-17 and AP1-16 in the parish of Colwich AP-002-201 Bill plan replacement sheets 1-21 and 1-24	Provision of access for construction	Provision of access for construction and maintenance
Additional access rights to land plots AP1-1, AP1-4, AP1-2, AP1-3, AP1-5, AP1-6 and AP1-7 in the parish of Tixall AP-002-202 Bill plan replacement sheets 1-26, 1-28, 1-29 and 1-30		
Additional access rights to land plots AP1-7, AP1-9, AP1-10, AP1-17, AP1-23 and AP1-24 in the parish of Hopton and Coton AP-002-203 Bill plan replacement sheets 1-28 and 1-30		

5 Assessment of engineering amendments in the Colwich to Yarlet area

5.1 Additional land permanently required for amendment to a fuel pipeline diversion, A51 Lichfield Road (AP-002-001)

5.1.1 The Bill provides for the permanent diversion of an underground British Pipeline Agency (BPA) 10-inch diameter fuel pipeline for approximately 830m. The diversion would be located south of the HS2 route and would start approximately 230m south-east of Tolldish Lane. The diversion would continue west, crossing under the A51 Lichfield Road and Main Road, before reconnecting with the existing pipeline alignment, east of the Macclesfield to Colwich Line, approximately 50m south-east of the Great Haywood Marina. At its furthest point, the diverted pipeline would be approximately 200m south of its existing alignment. See Map CT-06-211, B7 to A7, and Map CT-06-212, J8 to F8, in the main ES Volume 2, CA2 Map Book.

5.1.2 Since submission of the Bill, a requirement has been identified through further engagement with the utility provider to reposition the point that the diverted and existing pipelines connect. The connection point will be repositioned approximately 20m south-east of the location identified in the original scheme. As part of the amendment, a 500m section of the diverted pipeline, immediately west of Main Road, will be realigned 25m to the south of the location in the original scheme. In total, the pipeline will be diverted up to 225m south of its existing alignment. See Map CT-06-212, J7 to H8, in the SES and AP ES Volume 2, CA2 Map Book.

5.1.3 The amendment will be constructed within the period set out in the main ES.

5.1.4 The realignment of the BPA 10-inch diameter fuel pipeline diversion will be outside the limits of the Bill. The amendment will result in the permanent requirement for an additional 0.3ha of land. See Map CT-06-212, J7 to H8, in the SES and AP ES Volume 2, CA2 Map Book.

Topics included in the AP assessment

5.1.5 The amendment is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

5.2 Additional land required for a temporary laydown area at Trent North embankment (AP-002-002)

5.2.1 The Bill provides for the permanent diversion of an underground BPA 10-inch diameter fuel pipeline for approximately 1.8km. The diversion would start approximately 230m south-east of Ingestre underbridge, continuing north before crossing the HS2 route beneath the Trent North embankment, approximately 120m east of Ingestre underbridge. The diversion would continue to the west, 250m north of the existing pipeline alignment at its furthest point, before reconnecting with the existing pipeline alignment approximately 450m west of Ingestre Hall. Grassland habitat creation would be provided along the entire length of the diverted pipeline easement, with the exception of a small section where the diversion would cross the HS2 route. Two areas of woodland habitat creation would be provided north of the HS2 route; one area measuring approximately 0.4ha, north of the Ingestre underbridge, and the second area measuring approximately 2ha, north-west of the Ingestre green overbridge. See Map CT-06-213, F7 to A5, and CT-06-214, J5 to F5, in the main ES Volume 2, CA2 Map Book.

5.2.2 Since submission of the Bill, a requirement has been identified through further engagement with the utility provider to realign a 1.2km section of the diverted 10-inch diameter BPA pipeline on the north side of the HS2 route, included in the original scheme. The pipeline diversion will be realigned 25m to the south of the location proposed in the original scheme to bring the diversion closer to the engineering and landscape earthworks associated with Brancote South cutting and landscape earthworks associated with Trent North embankment. See Map CT-06-213, F7 to A5, in the SES and AP ES Volume 2, CA2 Map Book.

5.2.3 The realigned pipeline diversion will result in the reduction of woodland habitat creation proposed in the original scheme by approximately 0.3ha. Two areas of grassland habitat creation, having a combined area of approximately 0.4ha, will be provided. The first area of grassland will be located immediately north of Ingestre underbridge and the second area will be located 50m north-west of Ingestre green overbridge. See Map CT-06-213, F6 to A5, in the SES and AP ES Volume 2, CA2 Map Book.

5.2.4 A new temporary laydown area, which will be used during construction of the pipeline diversion, will also be required. The temporary laydown area will be located immediately north of a temporary material stockpile, approximately 200m north-east of Ingestre underbridge. See Map CT-05-213, F5 to F3, in the SES and AP ES Volume 2, CA2 Map Book.

5.2.5 The amendment will be constructed within the period set out in the main ES.

5.2.6 The realignment of the pipeline diversion is within the limits of deviation[10] as set out in the Bill. The land required for the temporary laydown area is outside the limits of the Bill and will result in the temporary requirement for an additional 0.5ha of land. See Map CT-05-213, F5 to F3, in the SES and AP ES Volume 2, CA2 Map Book.

[10] The design shown on the Bill drawings is a preliminary design. The powers within the Bill must therefore be sufficiently flexible to allow adjustments once detailed design has been carried out. This is achieved by including powers to deviate from the position of the works shown on the Parliamentary plans by a small amount; this deviation is restricted by the limits of deviation marked on the plans.

Topics included in the AP assessment

5.2.7 The amendment is considered to only require reassessment of the environmental effects and mitigation described in the main ES for ecology and biodiversity.

Ecology and biodiversity

Scope, assumptions and limitations

5.2.8 The assessment scope, key assumptions and limitations for ecology and biodiversity are as set out in Volume 1, the Scope and Methodology Report (SMR)[11], and the SMR Addendum[12] of the main ES.

5.2.9 To address any limitations in data, a precautionary baseline has been considered according to the guidance reported within the SMR and the SMR Addendum. This constitutes a 'reasonable worst-case' basis for the subsequent assessment. The precautionary approach to the assessment that has been adopted identifies the likely significant ecological effects of the AP revised scheme.

Existing environmental baseline

5.2.10 The ecological baseline of the land required for the amendment has been based on field data collated for the main ES, aerial photography, and relevant existing information from regional and local sources. In addition, the baseline has been informed by additional Phase 1 habitat, hedgerow, wintering birds, bats, badger, great crested newt, otter and water vole surveys and updated information from national data sources held by Natural England.

5.2.11 A summary of the baseline information relevant to the assessment of the amendment is provided below. This takes account of any relevant new or updated baseline information provided in Background Information and Data (BID) documents[13] (BID-EC-004-000 and Map Series EC-02, EC-04, EC-05, EC-10 and EC-12), which accompany the SES and AP ES. For those receptors described in the main ES, further details are provided in Volume 2, CA2, Section 8, and in Volume 5, including Map Series EC-01 of the main ES. Baseline ecology reports that accompanied the main ES are provided in BID-EC-002-000 to BID-EC-014-000 and Map Series EC-02 to EC-12[14].

Designated sites

5.2.12 There is one special area of conservation (SAC) of relevance to the assessment of the amendment, which is of international value. Pasturefields Salt Marsh SAC is located approximately 1.2km north-east of the land required for the amendment.

[11] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, Environmental Impact Assessment Scope and Methodology Report (Appendix CT-001-001). Available online at https://www.gov.uk/government/publications/scope-and-methodology-report-for-hs2-phase-2a

[12] HS2 Ltd (2017), *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, Environmental Impact Assessment Scope and Methodology Report Addendum (Appendix CT-001-002). Available online at https://www.gov.uk/government/publications/scope-and-methodology-report-for-hs2-phase-2a

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

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

5.2.13 The land required for the amendment is located within the Natural England Impact Risk Zone[15] for the following sites of special scientific interest (SSSI), which are of national value:

- Pasturefields Salt Marsh SSSI (which is the same area as the SAC), approximately 1.2km north-east of the land required for the amendment;
- Rawbones Meadow SSSI, approximately 1.3km south of the land required for the amendment; and
- Baswich Meadows SSSI, approximately 3km south-west of the land required for the amendment.

5.2.14 There is one local wildlife site (LWS) of relevance to the assessment of the amendment, which is of county value. Lionlodge Covert LWS is designated for its broadleaved semi-natural woodland and inland salt meadow. Lionlodge Covert LWS is located approximately 50m south-east of the land required for the amendment.

5.2.15 There are three woodlands of relevance to the assessment of the amendment that were added to the ancient woodland inventory (AWI) on the basis of the heritage review undertaken by HS2 Ltd to inform the main ES. Each of these woodlands are of up to county value. These are:

- Flushing Covert, immediately south of the land required for the amendment;
- Town Field Plantation, approximately 100m south-west of the land required for the amendment; and
- Ingestre Wood, immediately north of the land required for the amendment.

Habitats

5.2.16 Habitats within the land required for the amendment include woodland, hedgerow, amenity grassland, improved grassland and arable land. The habitats of relevance to the assessment of the amendment are described in further detail below.

5.2.17 There is a woodland belt, which is likely to qualify as lowland mixed deciduous woodland, a habitat of principal importance in Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006)[16] and a conservation priority of the Staffordshire Biodiversity Action Plan (BAP)[17]. The woodland is partially within the land required for the amendment, on the west side of Ingestre Park Golf Club. This woodland is of up to district/borough value.

[15] The Impact Risk Zones are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals and indicate the types of development proposal which could potentially have adverse impacts. In this case the Impact Risk Zone for infrastructure has been considered in each of these SSSIs.
[16] Natural Environment and Rural Communities Act 2006 (2006 CHAPTER 16). Her Majesty's Stationery Office, London.
[17] Staffordshire Biodiversity Partnership. *Staffordshire Biodiversity Action Plan* [online]. Available at: http://www.sbap.org.uk/

5.2.18 Hedgerows within the land required for the amendment are predominantly species-rich. Hedgerow with at least 80% cover of native woody species is a habitat of principal importance[18]. The hedgerow network within the Colwich to Yarlet area is of district/borough value.

Species

5.2.19 Protected and notable species that are known or assumed to occur within the land required for the amendment include bats and great crested newt.

5.2.20 The main ES reported a bat assemblage associated with habitats at Ingestre Park Golf Club. Field surveys in this area recorded a Myotis species maternity roost, three soprano pipistrelle day roosts and a common pipistrelle day roost in trees at Ingestre Park Golf Club. Two of the soprano pipistrelle day roosts are located within land required for the amendment. Grassland and woodland habitats at Ingestre Park Golf Club provide suitable foraging and commuting habitat for the bat assemblage. The land required for the amendment contains potential bat roosting, foraging and commuting habitats that have the potential to be used by this bat assemblage. The bat assemblage includes several species of principal importance and other species that are conservation priorities of the Staffordshire BAP. The assemblage is of up to regional value.

5.2.21 The main ES, updated by the SES, reports a great crested newt metapopulation[19] centred on Ingestre Park Golf Club (assumed metapopulation (AMP) 2.2). Field surveys determined the presence of great crested newt in seven ponds, within a network of 16 ponds assumed to be used by this metapopulation, within 250m of the land required for the AP revised scheme. Two of the ponds within the metapopulation are within the land required for the original scheme. No additional ponds within the metapopulation are within the land required for the amendment. Terrestrial habitats likely to be used by this metapopulation occur within the land required for the amendment, in the form of grassland, woodland and hedgerows. Great crested newt is an Annex 2[20] species, a species of principal importance, and a conservation priority of the Staffordshire BAP. The metapopulation is of county value as reported within the SES.

Future environmental baseline

Construction (2020) and operation (2027)

5.2.22 SES and AP ES Volume 5: Appendix CT-004-000 provides details of the developments which are assumed to have been implemented by 2020 and 2027 respectively, additional to those identified in the main ES (Volume 5: Appendix CT-004-000).

5.2.23 None of the identified developments affect the assessment of the AP revised scheme's likely construction and operation impacts on ecology and biodiversity.

[18] *UK Biodiversity Action Plan: Priority Habitat Descriptions*. BRIG (ed Ant Maddock) 2008. (Updated Dec 2011). Available at: http://jncc.defra.gov.uk/

[19] A metapopulation is a group of spatially separated populations that interact. Metapopulations are described in BID-EC-007-000 (which accompanied the main ES) and BID-EC-004-000 (which accompanies the SES and AP ES).

[20] Annex 2 of the EU's Habitats Directive (1992) lists priority species whose conservation requires the designation of Special Areas of Conservation.

Effects arising during construction

Avoidance and mitigation measures

5.2.24 No further measures are applicable to this assessment, above those stated in the draft Code of Construction Practice (CoCP)[21].

Assessment of impacts and effects

Designated sites

5.2.25 The amendment will not give rise to new or different significant effects on designated sites due to the scale of the works and the distance from those sites. It will not change the level of significance of the effects reported in the main ES.

Habitats

5.2.26 The main ES reported that construction of the Brancote South cutting would result in the loss of approximately 1ha (33%) of lowland mixed deciduous woodland belt on the west side of Ingestre Park Golf Club. The permanent loss of lowland mixed deciduous woodland belt would result in a permanent adverse effect, which is significant at up to district/borough level. There will be no change to the extent of lowland mixed deciduous woodland loss resulting from the amendment to that reported in the main ES and the level of significance remains unchanged.

5.2.27 On a precautionary basis, the main ES assumed a permanent loss and/or fragmentation of approximately 33.9km of hedgerow habitat within the land required for construction of the original scheme within the Colwich to Yarlet area. The permanent loss and/or fragmentation of the hedgerow networks would result in a permanent adverse effect, which is significant at district/borough level. The amendment will result in the further loss of approximately 45m of hedgerow with trees. In the context of the hedgerow network within the Colwich to Yarlet area, this small additional loss does not represent a new or different significant effect.

5.2.28 It is not likely that any other effects on habitats of relevance at more than the local/parish level will occur as a result of the amendment. Additional local/parish level effects arising from the AP revised scheme are listed in SES and AP ES, Volume 5: Appendix EC-003-000.

Species

5.2.29 The main ES reported a direct loss of bat roosts and loss and fragmentation of foraging and commuting habitat used by the assemblage of bats at Ingestre Park Golf Club, which was reported as a permanent adverse effect that is significant at up to regional level. The amendment does not result in the loss of additional roosts and there is no additional loss or fragmentation of bat foraging and commuting habitat. The effect on the bat assemblage resulting from the amendment is unchanged from that reported in the main ES.

[21] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, draft Code of Construction Practice (CT-003-000). Available online at https://www.gov.uk/government/publications/draft-code-of-construction-practice-for-hs2-phase-2a

5.2.30 The main ES, as updated in the SES, reported a loss of great crested newt breeding ponds and terrestrial foraging and dispersal habitats at Ingestre Park Golf Club, which was reported as a permanent adverse effect on the great crested newt metapopulation (AMP 2.2) that is significant at a county level. The extent of aquatic and terrestrial habitat loss, and fragmentation effect on the great crested newt metapopulation (AMP 2.2), resulting from the amendment, remains unchanged from that reported in the SES, and as such there is no change to the level of significance reported in the SES.

5.2.31 It is not likely that any other effects on species of relevance at more than the local/parish level will occur as a result of the amendment. Additional local/parish level effects arising from the AP revised scheme are listed in SES and AP ES, Volume 5: Appendix EC-003-000.

Mitigation and residual effects

Other mitigation measures

5.2.32 The main ES reported habitat creation areas on both sides of the Brancote South cutting to compensate for loss of terrestrial habitats used by the great crested newt metapopulation (AMP 2.2) at Ingestre Park Golf Club. These areas comprise grassland and woodland habitat creation. The area of woodland and grassland habitat creation on the north side of Brancote South cutting will be altered by the amendment. In the original scheme, this area consisted of 9.8ha of compensatory terrestrial habitat for great crested newt, comprising of 2.5ha of woodland habitat creation and 7.3ha of grassland habitat creation. Of the 9.8ha of compensatory terrestrial habitat for great crested newt, approximately 1.9ha would be provided as advance planting. The advance delivery of this planting would ensure that this habitat creation area was established sufficiently early to receive translocated great crested newt, which would be moved from areas of habitat to be lost to construction of the original scheme.

5.2.33 Changes to the areas of habitat creation to north of Brancote South cutting, due to the realignment of the pipeline diversion, will result in an overall slight increase in compensatory terrestrial habitat for great crested newt to 9.9ha, comprising of 2.2ha of woodland habitat creation and 7.7ha of grassland habitat creation. The provision of compensatory terrestrial habitat for great crested newt will increase, however, only 1ha will be provided as advance planting. The reduction in the area being provided as advance planting will compromise its function as an area to receive translocated great crested newt in advance of construction. In the absence of the provision of alternative mitigation, the realignment of the pipeline diversion would, therefore, result in a new adverse residual effect on the great crested newt metapopulation (AMP2.2) that will be significant at a county level.

5.2.34 However, approximately 1.2ha of grassland and woodland habitat creation, to the south-west of Hopton Pools and north of Hopton South cutting will be provided as advance planting and new ponds will be created to receive translocated great crested newt. This area is located approximately 3km north-west of the great crested newt metapopulation (AMP 2.2) at Ingestre Park Golf Club. New planting will be established in accordance with the ecological principles of mitigation set out in the SMR Addendum of the main ES. Following implementation, no new or different significant effects will arise from the amendment.

Summary of likely residual significant effects

5.2.35 There are no changes to the likely residual significant construction ecology and biodiversity effects identified in the main ES as a result of the amendment.

Cumulative effects

5.2.36 There are no new or different likely significant cumulative effects for ecology and biodiversity as a result of the amendment acting in combination with any other amendments.

Effects arising from operation

Avoidance and mitigation measures

5.2.37 No avoidance or mitigation measures, additional to those reported in the main ES, are required.

Assessment of impacts and effects

5.2.38 There are no new or different significant operational effects for ecology and biodiversity as a result of the amendment, in comparison with the main ES.

Mitigation and residual effects

Other mitigation measures

5.2.39 No other mitigation measures are required above the measures reported in the main ES.

Summary of likely residual significant effects

5.2.40 There are no changes to the likely residual significant operational ecology and biodiversity effects identified in the main ES as a result of the amendment.

Cumulative effects

5.2.41 There are no new or different likely significant cumulative effects for ecology and biodiversity as a result of the amendment acting in combination with any other amendments.

Monitoring

5.2.42 Volume 1, Section 9 of the main ES sets out the general approach to environmental monitoring during operation of the original scheme.

5.2.43 There are no changes to the monitoring requirements identified in the main ES for ecology and biodiversity as a result of the amendment.

Summary of new or different likely residual significant effects as a result of the amendment

5.2.44 The realignment of the pipeline diversion and the additional land required for the temporary lay down area will not give rise to any new or different likely residual significant effects or change the likely residual significance of the environmental effects as set out in the main ES.

5.3 Additional land permanently required for the A518 Weston Road realignment (AP-002-003)

5.3.1 The Bill provides for the permanent realignment of the A518 Weston Road, over a distance of 750m, 30m west of its existing alignment. The A518 Weston Road would pass over the HS2 route via the A518 Weston Road overbridge. There would be landscape earthworks with landscape mitigation planting along both sides of the road and on the southern approach to the A518 Weston Road overbridge, to help integrate the road realignment into the landscape. There would be an area of woodland habitat creation located along the east side of the A518 Weston Road, adjacent to an area of existing woodland, to provide ecological connectivity. There would also be a small area of woodland habitat creation to the west of the A518 Weston Road, south of the HS2 route. Access to the Staffordshire County Showground would be provided off the realigned A518 Weston Road, on the north side of the route, with pedestrian access beneath the A518 Weston Road via an existing underpass. See Map CT-06-215, E9 to E4, in the main ES Volume 2, CA2 Map Book.

5.3.2 Since submission of the Bill, it has been identified that there is a need to amend the A518 Weston Road realignment. The amendment will ensure that the transition between the curved and straight sections of the road is smoother. As a result, approximately 0.6ha of additional land will be required permanently. The changes include:

- the southern end of the A518 Weston Road realignment works will extend approximately 50m further south to the junction with Trent Walk. To improve visibility heading north from the junction between Trent Walk and the A518 Weston Road, on the south side of the HS2 route, a junction bell-mouth[22] will be provided to accommodate turning vehicles. See Map CT-06-215, F10 to E9, in the SES and AP ES Volume 2, CA2 Map Book;
- the A518 Weston Road realignment and associated earthworks, to the south of the A518 Weston Road overbridge, will be moved south-west by up to 40m. No change is required to the Berryhill (North) drop inlet culvert as a result of the change to earthworks. See Map CT-06-215, E9 to D6, in the SES and AP ES Volume 2, CA2 Map Book;
- an area of woodland habitat creation of approximately 0.4ha, included in the original scheme, will be extended between the existing and realigned A518 Weston Road and on the southern approach earthworks. See Map CT-06-215, E9 to E7, in the SES and AP ES Volume 2, CA2 Map Book;
- hedgerow habitat creation, included in the original scheme, to the south of the HS2 route, will be relocated with the realignment of the A518 Weston Road, resulting in an increase of approximately 65m of new hedgerow habitat creation. See Map CT-06-215, E10 to D6, in the SES and AP ES Volume 2, CA2 Map Book;

[22] A term used to refer to a new access junction with the highway or another access. The new carriageway for the access is shaped like a bell.

- a small area of woodland habitat creation of approximately 630m², included in the original scheme, on the west side of the A518 Weston Road realignment will not be implemented due to the earthworks associated with its realignment;
- the northern end of the A518 Weston Road works will extend approximately 50m further north than the original scheme, approximately 20m north of the main entrance to Staffordshire County Showground. Two junctions will be provided to maintain access to the Staffordshire County Showground and car parking, to the west of the A518 Weston Road. See Map CT-06-215, E4 to E3, in the SES and AP ES Volume 2, CA2 Map Book; and
- a minor amendment to the alignment of the A518 Weston Road and its associated earthworks, moving it 10m east, on the north side of the A518 Weston Road overbridge. Minor highway works will be undertaken above the existing underpass, which passes beneath the A518 Weston Road approximately 225m north of the underbridge. There will be no change to the underpass itself. See Map CT-06-215, D6 to E4, in the SES and AP ES Volume 2, CA2 Map Book.

5.3.3 The amendment will be constructed within the period set out in the main ES.

5.3.4 The amendment to the alignment of the A518 Weston Road will be outside the limits of the Bill. The amendment will result in the permanent requirement for an additional 0.6ha of land. See Map CT-06-215, F10 to D6 and E4 to E3, in the SES and AP ES Volume 2, CA2 Map Book.

Topics included in the AP assessment

5.3.5 The amendment is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

5.4 Additional land permanently required for a turning head near Homestall Barn (AP-002-004)

5.4.1 The Bill provides for the permanent realignment of Marston Lane, to the north of its existing alignment. To the south of the HS2 route, a 200m section of Marston Lane would be retained for access to properties but closed to through-traffic. See Map CT-06-218, H6 to I6, in the main ES Volume 2, CA2 Map Book.

5.4.2 Since submission of the Bill, a requirement has been identified to provide a turning head to accommodate turning vehicles (including, but not limited to, refuse vehicles, emergency services, and delivery vehicles) on the retained section of Marston Lane, which will be closed to through-traffic. The turning head will be provided at the eastern end of the retained Marston Lane, approximately 100m east of the junction with the realigned Marston Lane. As a result, approximately 300m² of additional land will be required permanently to accommodate the turning head. See Map CT-06-218, H6, in SES and AP ES Volume 2, CA2 Map Book.

5.4.3 The amendment will be constructed within the period set out in the main ES.

5.4.4 The land required for the provision of a turning head will be outside the limits of the Bill. The amendment will result in the permanent requirement for an additional 300m² of land. See Map CT-06-218, H6, in SES and AP ES Volume 2, CA2 Map Book.

Topics included in the AP assessment

5.4.5 The amendment is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

6 Assessment of minor utility amendments in the Colwich to Yarlet area

6.1 Additional land for the permanent diversion of BT Openreach overhead telecommunications cable along Moreton Lane (AP-002-101)

6.1.1 Since submission of the Bill, a requirement has been identified for additional land to permanently divert an existing BT Openreach overhead telecommunication cable. This will include an underground diversion of an existing overhead telecommunications cable. The diversion of the utility will be 1.3km in length, between Moreton House and the Moreton retaining wall, and will follow the alignment of Moreton Lane on the northern side of the HS2 route. The diverted utility will cross the HS2 route within the Colwich Bridleway 35 accommodation overbridge. A section of the existing utility will be removed between Moreton House and Coley Lane. See Map CT-06-210, E3 to A8, and Map CT-06-211, J2 to F9, in the SES and AP ES Volume 2, CA2 Map Book. Approximately 1ha of additional land will be permanently required (see Map CT-06-210, D5, C5 to A3 and C6 to A8, and Map CT-06-211, J5 to H3 and J6 to G9, in the SES and AP ES Volume 2, CA2 Map Book). The additional land needed to meet this requirement is not included within the Bill, hence the need for this amendment.

6.1.2 The activities will require the removal of existing utility infrastructure (where necessary), the removal of any surface material from the area of the diversion route (this may include vegetation, soil, and road surfacing) and installation of the utility. As required and where suitable, topsoil will be temporarily stored adjacent to the working area and will be used to reinstate the area once the works are complete. Activities to divert the utility are currently planned to be carried out in 2021-2022 and are expected to take approximately six months to complete.

6.1.3 The amendment is considered to only require reassessment of the environmental effects and mitigation described in the main ES for community.

Community

6.1.4 The amendment will result in additional land for the construction of the AP revised scheme, which will be within the boundaries of residential properties and Mayfield Children's Home. The impact of the utility diversion at these properties will be small in scale and of short duration (up to three months), resulting in minor adverse effects, which are not significant. A description of the affected properties is included in SES and AP ES Volume 5: Appendix CM-001-000.

6.2 Additional land for the permanent diversion of three Severn Trent Water sewers adjacent to the Macclesfield to Colwich Line (AP-002-102)

6.2.1 Since submission of the Bill, a requirement has been identified for additional land to permanently divert two existing Severn Trent Water foul rising sewers and one existing Severn Trent Water gravity foul sewer. The existing utilities will be abandoned on their current alignment and diverted for 880m, running adjacent to the Macclesfield to Colwich Line on the north side of the Trent South embankment main compound and opposite Hoo Mill Lane. See Map CT-06-212, F1 to E7, in the SES and AP ES, Volume 2, CA2 Map Book. Approximately 0.2ha of additional land will be permanently required (see Map CT-05-212, F1 to E2, in the SES and AP ES, Volume 2, CA2 Map Book).

6.2.2 The additional land needed to meet this requirement is not included within the Bill, hence the need for this amendment. The activities will require the removal of any surface material from the area of the diversion route (this may include vegetation, soil, and road surfacing), the removal of existing utilities infrastructure (where necessary) and installation of the utilities. As required and where suitable, topsoil will be temporarily stored adjacent to the working area and will be used to reinstate the area once the works are complete. Activities to divert the utilities are currently planned to be carried out in 2021-2022 and are expected to take approximately six months to complete.

6.2.3 The amendment is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

6.3 Additional land for the permanent underground diversion of two BT Openreach telecommunications cables along the A51 Lichfield Road (AP-002-103)

6.3.1 Since submission of the Bill, a requirement has been identified for additional land to permanently divert an existing BT Openreach underground fibre optic telecommunications cable and an existing BT Openreach overhead telecommunications cable. The diversion of the utilities will be 1.2km in length, to follow the alignment of the A51 Lichfield Road and cross the HS2 route along the A51 Lichfield Road underbridge alignment. See Map CT-06-212, G8 to F1, in the SES and AP ES Volume 2, CA2 Map Book. Approximately 900m^2 of additional land will be permanently required (see Map CT-06-212, G3 to F1, in the SES and AP ES Volume 2, CA2 Map Book). The additional land needed to meet this requirement is not included within the Bill, hence the need for this amendment.

6.3.2 The activities will require the removal of existing utilities infrastructure (where necessary), the removal of any surface material from the area of the diversion route (this may include vegetation, soil, and road surfacing) and installation of the utilities. As required and where suitable, topsoil will be temporarily stored adjacent to the working area and will be used to reinstate the area once the works are complete. Activities to divert the utilities are currently planned to be carried out in 2021-2022 and are expected to take approximately six months to complete.

6.3.3 The amendment is considered to only require reassessment of the environmental effects and mitigation described in the main ES for community.

Community

6.3.4 The amendment will result in additional land for the construction of the AP revised scheme, which will be within the boundary of a residential property. The impact of the utility diversion at this property will be small in scale and of short duration (up to three months), resulting in a minor adverse effect, which is not significant. A description of the affected property is included in SES and AP ES Volume 5: Appendix CM-001-000.

6.4 Additional land for the permanent diversion of BT Openreach overhead telecommunications cable at Staffordshire County Showground (AP-002-104)

6.4.1 Since submission of the Bill, a requirement has been identified for additional land to permanently divert an existing BT Openreach overhead telecommunication cable. This will include underground diversion of a section of an existing overhead telecommunications cable. The diversion of the utility will be 420m in length, along the south-western perimeter of the Staffordshire County Showground maintaining the connection to Park Farm. A section of the existing overhead telecommunication cable will be removed where it crosses the HS2 route between Park Farm and A518 Weston Road. See Map CT-06-215, G10 to C2, in the SES and AP ES Volume 2, CA2 Map Book. Approximately 850m² of additional land will be permanently required (see Map CT-06-215, G5 to G6 and F4 to F5, in the SES and AP ES Volume 2, CA2 Map Book). The additional land needed to meet this requirement is not included within the Bill, hence the need for this amendment.

6.4.2 The activities will require the removal of existing utility infrastructure (where necessary), the removal of any surface material from the area of the diversion route (this may include vegetation, soil, and road surfacing) and installation of the utility. As required and where suitable, topsoil will be temporarily stored adjacent to the working area and will be used to reinstate the area once the works are complete. Activities to divert the utility are currently planned to be carried out in 2021-2022 and are expected to take approximately six months to complete.

6.4.3 The amendment is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

6.5 Additional land for the permanent underground diversion of BT Openreach overhead telecommunications cable along Yarlet Lane (AP-002-105)

6.5.1 Since submission of the Bill, a requirement has been identified for additional land to permanently divert an existing BT Openreach overhead telecommunications cable. This will include an underground diversion of an existing overhead telecommunications cable. The diversion of the utility will be 1.2km in length, crossing under and running along Yarlet Lane. A section of the existing utility located along Marston Lane will be removed. See Map CT-06-218, J2 to G8, in the SES and AP ES Volume 2, CA2 Map Book. Approximately 0.1ha of additional land will be permanently required (see Map CT-06-218, H8 to G7, in the SES and AP ES Volume 2, CA2 Map Book). The additional land needed to meet this requirement is not included within the Bill, hence the need for this amendment.

6.5.2 The activities will require the removal of existing utilities infrastructure (where necessary), the removal of any surface material from the area of the diversion route (this may include vegetation, soil, and road surfacing) and installation of the utility. As required and where suitable, topsoil will be temporarily stored adjacent to the working area and will be used to reinstate the area once the works are complete. Activities to divert the utility are currently planned to be carried out in 2022-2023 and are expected to take approximately six months to complete.

6.5.3 The amendment is not considered to require a reassessment of the environmental effects or mitigation as set out in the main ES with respect to any environmental topics.

6.6 Change in Bill powers for the permanent diversion of Cadent 90mm low pressure gas main at Yarlet (AP-002-106)

6.6.1 Since submission of the Bill, a requirement has been identified for a change in the Bill land powers from temporary to permanent rights at three plots to permanently divert an existing Cadent 90mm low pressure gas main. The diversion of the utility will be 170m in length, along the access road to Yarlet School. See Map CT-06-219a, H9 to E3, in the SES and AP ES Volume 2, CA2 Map Book. The permanent rights at three plots needed to meet this requirement are not included within the Bill, hence the need for this amendment (see Map CT-06-219a, F5 to E3, in the SES and AP ES Volume 2, CA2 Map Book).

6.6.2 The activities will require the removal of any surface material from the area of the diversion route (this may include vegetation, soil, and road surfacing), the removal of existing utility infrastructure (where necessary) and installation of the utility. As required and where suitable, topsoil will be temporarily stored adjacent to the working area and will be used to reinstate the area once the works are complete. Activities to divert the utility are currently planned to be carried out in 2022 and are expected to take approximately two months to complete.

6.6.3 The amendment is considered to only require reassessment of the environmental effects and mitigation described in the main ES for sound, noise and vibration and community.

Sound, noise and vibration

6.6.4 As a result of the amendment, when considered in combination with the works identified in the main ES, a new construction noise impact is identified at Yarlet School, Yarlet (represented by assessment location ref.: 12209(N)). The duration of the impact is anticipated for approximately one month. At this stage on a precautionary basis, based on the predicted sound levels and the sensitivity of the building use, these impacts are considered to be significant when taking account of the local context. Therefore, a new likely significant effect is identified at Yarlet School (ref.: CSV02-N04) for a duration of approximately one month. The works will be undertaken in accordance with the measures defined in the draft Code of Construction Practice (CoCP)[23].

Community

6.6.5 The works to the Cadent low pressure gas main will result in a new significant noise effect at Yarlet School for approximately one month. Students and staff at Yarlet School will experience significant adverse visual effects from construction of the original scheme, including the Yarlet South cutting and A34 Stone Road overbridge. The significant noise and visual effects will result in a new in-combination effect on the amenity of students and staff for approximately one month. However, as this effect will be short term, it is not considered to be significant to the community as a whole. Therefore, this will not introduce a new significant effect compared to the main ES.

[23] HS2 Ltd (2017). *High Speed Rail (West Midlands - Crewe) Environmental Statement*, Volume 5: Technical appendices, draft Code of Construction Practice (CT-003-000). Available online at https://www.gov.uk/government/publications/draft-code-of-construction-practice-for-hs2-phase-2a

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