

High Speed Rail (West Midlands - Crewe)

Supplementary Environmental Statement 2 and
Additional Provision 2 Environmental Statement

Volume 5: Technical appendices

Agriculture, forestry and soils data assessment
(AG-001-000)

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Department for Transport

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

High Speed Two (HS2) Limited,
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.hs2.org.uk

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

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1 Introduction

1.1 Structure of this appendix

- 1.1.1 This report is an appendix to the agriculture, forestry and soils assessment which forms part of Volume 5 of the Supplementary Environmental Statement 2 (SES2) and Additional Provision 2 Environmental Statement (AP2 ES). This report covers the following community areas (CA):
- CA1: Fradley to Colton;
 - CA2: Colwich to Yarlet;
 - CA3: Stone and Swynnerton;
 - CA4: Whitmore Heath to Madeley; and
 - CA5: South Cheshire.
- 1.1.2 This appendix provides details of changes to the agriculture, forestry and soils assessment since the production of the High Speed Two (HS2) Phase 2a (West Midlands - Crewe) Environmental Statement (ES)¹ published in July 2017 (the main ES), as well as the Supplementary Environmental Statement (SES1) and Additional Provision Environmental Statement (AP1 ES) published in March 2018².
- 1.1.3 This report should be read in conjunction with Volume 5, Appendices AG-001-001 to AG-001-005, which accompanied the main ES.
- 1.1.4 This report comprises information on:
- soils and agricultural land classification surveys;
 - commercial forestry; and
 - the assessment of effects on farm holdings.
- 1.1.5 This report is structured into two parts: Part 1 – SES2 and Part 2 – AP2 ES. These parts are subdivided into community areas, and then into the relevant SES2 design changes and AP2 amendments which are of relevance to the agriculture, forestry and soils assessment.
- 1.1.6 Maps referred to in this report are contained in the SES2 and AP2 Volume 5, Agriculture, forestry and soils Map Book, Map Series AG-01, AG-02 and AG-04.
- 1.1.7 In order to differentiate between the original scheme and the subsequent changes, the following terms are used:
- ‘the original scheme’ – the Bill scheme submitted to Parliament in July 2017, which was assessed in the main ES;

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

² HS2 Ltd (2018), *High Speed Two (HS2) Phase 2a (West Midlands - Crewe), Supplementary Environmental Statement and Additional Provision Environmental Statement*, <https://www.gov.uk/government/collections/hs2-phase-2a-supplementary-environmental-statement-and-additional-provision-environmental-statement>

- 'the SES₁ scheme' – the original scheme with the changes described in the SES₁ submitted in March 2018;
- 'the AP₁ revised scheme' – the SES₁ scheme as amended by the AP₁ submitted in March 2018;
- 'the SES₂ scheme' – the SES₁ scheme with the changes described in the SES₂; and
- 'the AP₂ revised scheme' – the SES₂ scheme as amended by the AP₂.

1.2 Scope of the assessment

- 1.2.1 The scope of the assessment in this report is limited to SES₂ design changes and AP₂ amendments which are considered likely to introduce a new significant effect, remove a significant effect, or result in a materially different significant effect on agricultural land, farm and forestry holdings.
- 1.2.2 This report provides additional baseline soil and agricultural land classification information where the AP₂ amendment is likely to involve soils and agricultural land not already reported in the main ES.

1.3 Methodology, assumptions and limitations

- 1.3.1 The assessment scope, key assumptions and limitations are as set out in the main ES Environmental Impact Assessment Scope and Methodology Report and its Addendum (see main ES Volume 5: Appendix CT-001-001³ and Volume 5: Appendix CT-001-002⁴).

Soils and agricultural land classification

- 1.3.2 The soils and agricultural land classification baseline data has been established from desktop records and relates to the identification of soil resources within additional land required for the AP₂ revised scheme within the Fradley to Colton area (CA1) and the Whitmore Heath to Madeley area (CA4).
- 1.3.3 Information gathered relates primarily to the identification of soil resources; the associated physical characteristics of geology, topography and climate which underpin the assessment of agricultural land quality; and the disposition of land uses. The main sources of information has included:
- National Soil Map⁵;
 - the regional soils bulletin⁶;
 - solid and superficial deposits from the Geology of Britain viewer⁷;

³ HS2 Ltd (2017), *High Speed Two (HS2) Phase 2a (West Midlands - Crewe), Environmental Impact Assessment Scope and Methodology Report, Main ES, Volume 5: Appendix CT-001-001*,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/627187/E23_EIA_SMR_CT-001-001_WEB.pdf

⁴ HS2 Ltd (2017), *High Speed Two (HS2) Phase 2a (West Midlands - Crewe), Environmental Impact Assessment Scope and Methodology Report Addendum, Main ES, Volume 5: Appendix CT-001-002*,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/627188/E24A_CT-001-002_Part_1_WEB.pdf and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/627189/E24-B_CT-001-002_Part_B_WEB.pdf

⁵ Cranfield University (2001), *The National Soil Map of England and Wales* (1:250,000)

⁶ Ragg, J.M. (1984), *Soil Survey of England and Wales Bulletin No. 12: Soils and Their Use in Midland and Western England*, Rothamsted Experimental Station, Harpenden

⁷ British Geological Survey, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

- gridpoint meteorological data for Agricultural Land Classification of England and Wales⁸;
- provisional Agricultural Land Classification of England and Wales (1:250,000)⁹; and
- aerial photography.

Farm holdings and forestry

- 1.3.4 Information obtained from Farm Impact Assessment surveys has been taken as a factual representation of local agricultural and commercial forestry interests and has not been subject to further evaluation.
- 1.3.5 Where Farm Impact Assessment surveys have not been possible, land holding boundaries have been based on aerial photography and available land registry information.

⁸ Meteorological Office (1989), *Gridpoint Meteorological data for Agricultural Land Classification of England and Wales and other Climatological Investigations*

⁹ Ministry of Agriculture, Fisheries and Food (MAFF) (1983), *Agricultural Land Classification of England and Wales (1:250,000)*

2 Part 1: Supplementary Environmental Statement 2

2.1 Introduction

2.1.1 The environmental baseline relevant to the agriculture, forestry and soils assessment of SES2 design changes is described below. Any new or different likely significant environmental effects as a result of the SES2 design changes are then identified and compared to those reported in the main ES.

2.2 Fradley to Colton (CA1)

Relocation of a balancing pond associated with the B5014 Uttoxeter Road realignment at Blithbury Reindeer Lodge (SES2-001-006)

Soils and agricultural land classification

2.2.1 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA1, Section 4 and Volume 5, Appendix AG-001-001 of the main ES.

Farm holdings and forestry

2.2.2 Table 1 sets out the farm holdings that will be affected by the SES2 design change. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the SES2 design change.

Table 1: Summary of assessment of effect on farm holding - Relocation of a balancing pond associated with the B5014 Uttoxeter Road realignment at Blithbury Reindeer Lodge (SES2-001-006)

Holding reference, name and description	Temporary effects	Permanent effects
CA1/28 Blithbury Reindeer Lodge Owner-occupied 12ha livestock holding used to graze 180 reindeer. Other animals include sheep, donkeys and goats Reindeer used for on-site Christmas attraction, hire for film and TV, and reindeer workshops. Café and shop also at the farm	Land required: Negligible 0.2ha; 2% of holding required for construction. The SES2 design change, which relocates a balancing pond, will reduce the total area of land temporarily required from the holding by 0.8ha compared to that reported in the main ES Severance: Negligible. No change to disruptive effects resulting from the SES2 design change Disruptive effects: Low. No change to disruptive effects resulting from the SES2 design change	Land required: Negligible 0.1ha; <1% of holding required. The relocation of a balancing pond will reduce the total area of land permanently required from the holding by 0.8ha compared to that reported in the main ES Severance: Negligible. No change to severance resulting from the SES2 design change Infrastructure: Negligible. No change to infrastructure impacts resulting from the SES2 design change

3 Part 2: Additional Provision 2 Environmental Statement

3.1 Introduction

3.1.1 The environmental baseline relevant to the agriculture, forestry and soils assessment of AP2 amendments is described below. Any new or different likely significant environmental effects as a result of the AP2 amendments are then identified and compared to those reported in the main ES.

3.2 Fradley to Colton (CA1)

Additional land and a change to Bill powers required to make alterations to the Handsacre Junction connection into the West Coast Main Line (AP2-001-001)

Soils and agricultural land classification

3.2.1 The baseline agriculture, forestry and soils information for the AP2 amendment is as described in Volume 2, CA1, Section 4 and Volume 5, Appendix AG-001-001 of the main ES, and Volume 2, CFA22, Section 7¹⁰ and Volume 5, SES and AP2 ES 3.5.1.9¹¹ of the Phase One SES and AP2 ES.

Farm holdings and forestry

3.2.2 Table 2 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and the Phase One SES and AP2 ES and any changes as a result of the implementation of the AP2 amendment.

Table 2: Summary of assessment of effect on farm holdings - Additional land and a change to Bill powers required to make alterations to the Handsacre Junction connection into the West Coast Main Line (AP2-001-001)

Holding reference, name and description	Temporary effects	Permanent effects
CA1/12 (CFA22/17) [†] Hunts Farm 32ha mixed arable and livestock Environmental Stewardship – Higher Level Scheme and Entry Level Scheme	Land required: High 22.3ha; 70% of holding required for construction of Phase One and Phase 2a. No additional land required during construction resulting from the AP2 amendment Severance: Negligible. No change to severance resulting from the AP2 amendment Disruptive effects: Negligible. No change to disruptive effects resulting	Land required: Medium 4.4ha; 14% of holding required for Phase One and Phase 2a. The AP2 amendment requires an additional 0.9ha for Ravenshaw Wood embankment, but also removes the requirement for 0.7ha of land for a balancing pond in the HS2 Phase One AP2 revised scheme. The net increase in land required as a result of the AP2 amendment is 0.2ha compared to that reported in main ES and Phase One SES and AP2 ES

¹⁰ HS2 Ltd (2015), *High Speed Two (HS2) Phase One (London - West Midlands), Supplementary Environmental Statement and Additional Provision 2 Environmental Statement, Volume 2, CFA22 Whittington to Handsacre*, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/442226/SES_and_AP2_ES_Volume_2_CFA22.pdf

¹¹ HS2 Ltd (2015), *High Speed Two (HS2) Phase One (London - West Midlands), Supplementary Environmental Statement and Additional Provision 2 Environmental Statement, Volume 5, CFA22 Whittington to Handsacre*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/444084/Volume_5_CFA22_Whittington_to_Handsacre.pdf

SES2 and AP2 ES Appendix AG-001-000

Holding reference, name and description	Temporary effects	Permanent effects
	from the AP2 amendment	<p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/5 (CFA22/15 and 22/19)²²</p> <p>Common Lane Farm</p> <p>Owner-occupied/grazing licence (annual rolling agreement for past 15 years)</p> <p>385ha dairy and beef cattle</p> <p>Commercial, industrial and residential lets</p>	<p>Land required: Medium</p> <p>52.4ha; 14% of holding required for construction of Phase One and Phase 2a. 1.9ha is required for the AP2 amendment. Land required for construction works relating to Shaw Lane embankment and Lilac North embankment</p> <p>Severance: Medium. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>9.5ha; 2% of holding required for Phase One and Phase 2a. No change to land required resulting from the AP2 amendment</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/61 (CFA22/20)[†]</p> <p>Tuppenhurst Field</p> <p>7ha arable and potatoes</p>	<p>Land required: High</p> <p>6ha; 86% of holding required for construction of Phase One and Phase 2a. 0.5ha is required for the AP2 amendment. Land required for construction works relating to Lilac North embankment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: High</p> <p>4.9ha; 70% of holding required for Phase One and Phase 2a. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the amendment</p>
<p>CA1/62 (CFA22/18)[†]</p> <p>New Farm</p> <p>33ha Horticulture – fruit grower</p> <p>Processing and packing facility</p>	<p>Land required: High</p> <p>10.6ha; 32% of holding required for construction of Phase One and Phase 2a. 6.2ha is required for the AP2 amendment for construction works relating to Lilac South embankment, maintenance access points, associated access roads and soil storage</p> <p>Severance: Medium. No change to severance resulting from the AP2 amendment</p>	<p>Land required: High</p> <p>7.4ha; 22% of holding required for Phase One and Phase 2a. 3.6ha is required for the AP2 amendment Land required for Lilac South embankment</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: High. AP2 amendment will require demolition of polytunnels</p>

²² Phase One SES and AP2 ES refers to Hanchwood (CFA22/15) and Ashton Hayes Farm (CFA22/19). Subsequent Farm Impact Assessment surveys have established that both these parcels of land form part of Common Lane Farm (CA1/5)

Holding reference, name and description	Temporary effects	Permanent effects
	Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment	
CA1/63 (CFA22/16) [†] Brownfields Farm 283ha mixed arable and livestock	Land required: Low 21.1ha; 7% of holding required for construction of Phase One and Phase 2a. 1ha is required for the AP2 amendment. Land required for construction works and Spode Avenue main compound. Severance: Negligible. No change to severance resulting from the AP2 amendment Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment	Land required: Low 18.0ha; 6% of holding required for Phase One and Phase 2a. 0.5ha is required for the AP2 amendment for Lilac north and south embankments and enlarged balancing pond Severance: Negligible. No change to severance resulting from the AP2 amendment Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment

* No Farm Impact Assessment interview conducted; data estimated

[†] High Speed Two (HS2) Phase One (London - West Midlands), Supplementary Environmental Statement and Additional Provision 2 Environmental Statement (SES and AP2 ES), Volume 2, CFA22 Whittington to Handsacre

Additional land temporarily required and a change to Bill powers for the realignment of a site haul route and the removal of HS2 maintenance access at Pipe Lane (AP2-001-011)

Soils and agricultural land classification

3.2.3 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA1, Section 4 and Volume 5, Appendix AG-001-001 of the main ES.

Farm holdings and forestry

3.2.4 Table 3 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

SES2 and AP2 ES Appendix AG-001-000

Table 3: Summary of assessment of effect on farm holdings - Additional land temporarily required and a change to Bill powers for the realignment of a site haul route and the removal of HS2 maintenance access at Pipe Lane (AP2-001-011)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/22*</p> <p>Land at Luthbur</p> <p>1ha grassland used to graze horses (non-commercial)</p>	<p>Land required: Low</p> <p>0.1ha; 10% of holding required. The AP2 amendment reduces the land required from the holding for AP1 amendment AP1-001-003 by 0.2ha, as agricultural land no longer required for construction works for site haul route</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>0.0ha; 0% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from AP2 amendment</p>
<p>CA1/25</p> <p>Quinton's Orchard Farm</p> <p>Owner-occupied</p> <p>316ha arable, beef cattle and sheep farm (farmed with nearby Longacre Farm)</p> <p>Substantial fishery enterprise and horse breeding enterprise</p> <p>Land in Higher Level Stewardship (HLS) and Entry Level Stewardship (ELS)</p> <p>Non-commercial shoot</p>	<p>Land required: Negligible</p> <p>15.7ha; 5% of holding required. The AP2 amendment increases the overall area of land required from holding by 1.1ha. Land required for haul route</p> <p>Cumulative land temporarily required for construction of Parkgate grid supply point connection (AP2-001-015) and this AP2 amendment. Cumulative loss of land holding is 16ha; 5% of holding</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>9ha; 3% of holding required. The AP2 amendment increases land permanently required from holding by 0.2ha</p> <p>No permanent cumulative impacts associated with land required for Parkgate grid supply point connection (AP2-001-015) and this AP2 amendment</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

* No Farm Impact Assessment interview conducted, data estimated

Additional land and a change in Bill powers required for a grid supply point connection to National Grid Parkgate substation (AP2-001-015)

Soils and agricultural land classification

- 3.2.5 This section describes the findings of a desktop study that has identified existing soil and agricultural land resources within the additional land required for the Parkgate grid supply point connection. The location and extent of soil types displaying different characteristics and of agricultural land in the different Agricultural Land Classification (ALC) grades are influenced by topography, drainage, geology and soil parent material.
- 3.2.6 Information on soils and agricultural land classification for land required for the Rugeley grid supply point connection, as detailed in the original scheme, is provided in Volume 5, Appendix AG-001-001 of the main ES.

Topography and Drainage

- 3.2.7 The broad valley of the River Blithe and Little Blithe, and the narrow valleys of the Ash Brook, Pur Brook and other unnamed water courses are the main topographical features of the additional land required for the Parkgate grid supply point connection. Valley sides are mostly shallow to moderately sloping, although are steeper and more irregular in form to the west of Yoxall Road.
- 3.2.8 The highest altitudes are north of the B5234 Ashbrook Lane and to the west of Fieldhouse Farm, where the land plateaus at around 135m AOD. The lowest altitudes are in the valley of the River Blithe, at 80m AOD.

Geology and Soil Parent Materials

- 3.2.9 The principal bedrock geology mapped by the British Geological Survey (BGS) is of the Mercia Mudstone Group which includes dominantly red mudstones with subordinate siltstones.
- 3.2.10 Superficial alluvium deposits are associated with the River Blithe and Little Blithe, Ash Brook and Pur Brook.
- 3.2.11 Superficial deposits of glacial till are mapped from Newlands Lane to Newlands Farm; from west of Orange Lane to west of Ash Brook; from east of Ash Brook to Blunts Hollow; north of Barn Farm; and east and west of Thorney Lanes.
- 3.2.12 Glaciofluvial sand and gravel overlies the bedrock east of B5014 Lichfield Road.

Description and Distribution of Soil Types

- 3.2.13 The characteristics of the soils are described by the Soil Survey of England and Wales bulletin that accompanies the National Soil Map. The soils are grouped into soil associations of a range of soil types (soil series) and are summarised in Table 4 and their distribution is shown in the SES2 and AP2 ES Volume 5, Map Series AG-02.

Table 4: Soil associations relating to the additional land required for the Parkgate grid supply point connection (AP2-001-015)

Soil association: code shown on Map AG-02-101-R1	Soil association: name	Description	Wetness class ³³
712f	Crewe	Slowly permeable, seasonally waterlogged clayey and fine loamy over clayey	IV
714b	Oak 1	Slowly permeable, seasonally waterlogged fine loamy over clayey	IV
711m	Salop	Slowly permeable, seasonally waterlogged reddish fine loamy over clayey	IV
711b	Brockhurst 1	Slowly permeable, seasonally waterlogged reddish fine loamy over clayey	IV
711c	Brockhurst 2	Slowly permeable, seasonally waterlogged reddish fine loamy over clayey and clayey soils	IV
572f	Whimple 3	Fine loamy or fine silty over slowly permeable clayey subsoils	III

³³ The Wetness Class (WC) of a soil is classified according to the depth and duration of waterlogging in the soil profile and has 6 categories from WC I which is well drained to WC VI which is very poorly drained

Soil association: code shown on Map AG-02-101-R1	Soil association: name	Description	Wetness class ³³
431	Worcester	Variably calcareous clayey soils over mudstone	III
572l	Flint	Fine loamy over clayey with slight seasonal waterlogging	II-III
712b	Denchworth	Slowly permeable, seasonally waterlogged clayey soils	IV
813c	Fladbury 2	Stoneless clayey soils variably affected by groundwater	IV

3.2.14 The National Soil Map shows the additional land required for the Parkgate grid supply point connection to include the following 10 soil associations:

- the most extensive soils are of the Crewe and Oak 1 associations, which both developed in glacial till. Topsoil is of clay loam or sandy clay loam and overlies slowly permeable clay subsoil;
- soils of the Salop association developed in reddish till on relatively flat land and are characterised by clay loam over slowly permeable clay. The similar Brockhurst 1 and Brockhurst 2 associations also comprise of clay loam over clay, developed in reddish mudstone;
- Whimple 3 and Worcester soils are also developed over mudstone and may include silty clay loam topsoils, over imperfectly drained clay or silty clay subsoils. Worcester soils are mapped over moderately to steeply sloping ground;
- the Flint association is mapped to the east of Glass Lane. Developed in glacial till, Flint soils are characterised by clay loam topsoils over imperfectly drained clay subsoils; and
- the least extensive soils are of the Denchworth and Fladbury 2 associations, present north of the B5234 Ashbrook Lane and within the alluvium of the River Blithe valley. Both profiles are characterised by clay throughout, and suffer severe waterlogging.

Soil and Land Use Interactions

Agricultural Land Quality

3.2.15 There is no detailed soil survey data available for the additional land required for the Parkgate grid supply point connection.

3.2.16 The provisional ALC maps of England and Wales, produced by the former Ministry of Agriculture, Fisheries and Food (MAFF) in the 1960s and 1970s shows the land to be of Grade 3, with Grade 4 quality land associated with the watercourses. These maps were originally published at a scale of 1:63,360 and are available at a scale of 1:250,000 in paper and digital formats. The main limitations of these provisional maps are that they are published at strategic scales only and according to a classification methodology which has been revised twice since the maps were published. Therefore, they cannot be used to definitively classify individual sites.

- 3.2.17 The principal physical factors influencing agricultural production and land quality are climate, site and soil, and the interactions between them.

Agro-climatic limitations

- 3.2.18 The local agro-climatic data have been interpolated from the Meteorological Office's standard 5km grid point data set for three points within the additional land required for the Parkgate grid supply point connection. The data show the area to be moderately cool and moist. The average number of Field Capacity Days (FCDs) is 170 which is greater than the average for lowland England and is slightly unfavourable for providing opportunities for agricultural land working. This data is shown in Table 5.

Table 5: Local agro-climatic conditions relating to the additional land required for the Parkgate grid supply point connection (AP2-001-015)

Climatic Parameter	Measurement West	Measurement Centre	Measurement East
Altitude	80m AOD	130m AOD	115m AOD
Average Annual Rainfall	713mm	725mm	718mm
Accumulated Temperature >0°C	1,381 day°	1,322 day°	1,339 day°
Field Capacity Days	169 days	172 days	170 days
Average Moisture Deficit, wheat	96mm	88mm	92mm
Average Moisture Deficit, potatoes	85mm	75mm	80mm

Site limitations

- 3.2.19 Site limitations considered within the ALC assessment typically relate to how topography affects the use of agricultural machinery. The primary factors assessed are gradient, microrelief and flood risk.
- 3.2.20 Flood risk is a limiting factor within the valleys and flood plains within the additional land required for the Parkgate grid supply point connection. Land is classified as Flood Zone 3, resulting in a limitation to Subgrade 3b.
- 3.2.21 Agricultural land quality in the east of the additional land required for the Parkgate grid supply point connection is likely to be limited by moderately steeply sloping valley sides. The limitation is also likely to be to Subgrade 3b.

Soil limitations

- 3.2.22 The main soil limitations that affect the cropping potential and management requirements of land are texture, structure, depth, stoniness and chemical fertility. Together they influence the functions of soil and affect water availability for crops, drainage, workability and trafficability¹⁴.

¹⁴ The suitability of soil conditions to accept trafficking by machinery without causing structural damage to the soil

3.2.23 There are five distinct soil characteristics within the additional land required for the Parkgate grid supply point connection. These are:

- poorly drained (Wetness Class IV (WC IV)) clay loam over clay of the Salop, Brockhurst 1 and Brockhurst 2 associations;
- poorly drained (WC IV) clays of the Denchworth and Crewe associations;
- poorly or imperfectly drained (WC III or IV) clay loam or sandy clay loam over clay of the Oak 1 and Flint associations, developed in reddish till;
- imperfectly drained (WC III) clay loam or silty clay loam over silty clay or clay of the Whimple 3 and Worcester associations; and
- poorly drained (WC IV) clays of the Fladbury 2 association, developed in alluvium.

Interactive limitations

3.2.24 The physical limitations that result from interactions between climate, site and soil are soil wetness and droughtiness. Each soil can be allocated a Wetness Class¹⁵ based on soil structure, evidence of waterlogging and the number of FCDs. The topsoil texture then determines the ALC grade according to Table 6 of the MAFF ALC guidelines¹⁶ as shown in Figure 1.

3.2.25 Within the additional land required for the Parkgate grid supply point connection, subject to an average of 170 FCDs, poorly drained profiles of WC IV with clay loam or clay topsoils are limited by wetness and workability to Subgrade 3b.

3.2.26 Imperfectly drained profiles (WC III) of the Oak 1, Flint, Whimple 3 and Worcester associations are also classified as Subgrade 3b where the topsoils are of heavy clay loam or heavy silty clay loam. Where the topsoils are of medium clay loam, medium silty clay loam or sandy clay loam, the wetness and workability limitation is less severe and classified as Subgrade 3a.

¹⁵ The Wetness Class (WC) of a soil is classified according to the depth and duration of waterlogging in the soil profile and has 6 categories from WC I which is well drained to WC VI which is very poorly drained

¹⁶ MAFF (1988), *Agricultural Land Classification of England and Wales – Revised guidelines and criteria for grading the quality of agricultural land*

Figure 1: ALC grade according to soil wetness for mineral soils²⁷

Wetness Class	Texture ¹ of the top 25 cm	Field Capacity Days				
		<126	126-150	151-175	176-225	>225
I	S ² LS ³ SL SZL	1	1	1	1	2
	ZL MZCL MCL SCL	1	1	1	2	3a
	HZCL HCL	2	2	2	3a	3b
	SC ZC C	3a(2)	3a(2)	3a	3b	3b
II	S ² LS ³ SL SZL	1	1	1	2	3a
	ZL MZCL MCL SCL	2	2	2	3a	3b
	HZCL HCL	3a(2)	3a(2)	3a	3a	3b
	SC ZC C	3a(2)	3b(3a)	3b	3b	3b
III	S ² LS SL SZL	2	2	2	3a	3b
	ZL MZCL MCL SCL	3a(2)	3a(2)	3a	3a	3b
	HZCL HCL	3b(3a)	3b(3a)	3b	3b	4
	SC ZC C	3b(3a)	3b(3a)	3b	4	4
IV	S ² LS SL SZL	3a	3a	3a	3b	3b
	ZL MZCL MCL SCL	3b	3b	3b	3b	3b
	HZCL HCL	3b	3b	3b	4	4
	SC ZC C	3b	3b	3b	4	5
V	S LS SL SZL	4	4	4	4	4
	ZL MZCL MCL SCL	4	4	4	4	4
	HZCL HCL	4	4	4	4	4
	SC ZC C	4	4	4	5	5

Soils in Wetness Class VI - Grade 5

Farm holdings and forestry

- 3.2.27 Table 6 sets out the farm holdings relating to the additional land required for the Parkgate grid supply point connection. It details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

²⁷ Table reproduced from MAFF (1988), *Agricultural Land Classification of England and Wales – Revised guidelines and criteria for grading the quality of agricultural land*

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Table 6: Summary of assessment of effect on farm holdings within the additional land required within the Parkgate grid supply point connection (AP2-001-015)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/64*</p> <p>Park Farm, Abbots Bromley</p> <p>44ha dairy</p>	<p>Land required: Low</p> <p>3.8ha; 9% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines and associated access</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/65*</p> <p>Land at Fieldhouse Coppice</p> <p>5ha grassland</p>	<p>Land required: Medium</p> <p>0.6ha; 12% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines and implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Low</p> <p>0.4ha; 8% of holding required. Land required for habitat creation</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/66*</p> <p>Bromley Park Farm</p> <p>93ha dairy, arable and commercial equestrian</p>	<p>Land required: Low</p> <p>5.2ha; 6% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines and associated access</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/67</p> <p>Fieldhouse Farm</p> <p>Owner-occupied</p> <p>76ha dairy and beef cattle. Large proportion of farm used to grow miscanthus which is processed for horse bedding</p> <p>Commercial shoot</p> <p>Holiday cottages, commercial lets</p>	<p>Land required: Medium</p> <p>14.3ha; 19% of holding required for construction of the AP2 amendment. Land required for materials storage area, construction works to existing National Grid power lines and new Parkgate grid supply point connection and associated access, and implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0.8ha; 1% of holding required. Land required for habitat creation and electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/68</p> <p>Daisy Bank Farm</p> <p>Owner-occupied, Farm Business Tenancy and Agricultural Holdings Act (AHA) tenancy</p>	<p>Land required: Low</p> <p>21ha; 5% of holding required for construction of the AP2 amendment. Owner-occupied land required for utility compound, construction works to existing National Grid power lines and new substation, and implementation of</p>	<p>Land required: Negligible</p> <p>9.4ha; 2% of holding required. Owner-occupied land required for new substation and habitat creation</p> <p>Severance: Negligible</p>

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Holding reference, name and description	Temporary effects	Permanent effects
385ha dairy, beef cattle and arable Commercial shoot	habitat creation Severance: Negligible Disruptive effects: Negligible	Infrastructure: Negligible
CA1/69 Thorntree Hall Farm Owner-occupied 41ha beef cattle Commercial shoot Light industrial lets	Land required: Negligible 0.6ha; 1% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines Severance: Negligible Disruptive effects: Negligible	Land required: Negligible 0ha; 0% of holding required Severance: Negligible Infrastructure: Negligible
CA1/70 Three Lanes End Farm Owner-occupied, AHA tenancy from Staffordshire County Council (SCC) 43ha dairy Countryside Stewardship Scheme (CSS) - mid-tier	Land required: Low 2.5ha; 6% of holding required for construction of the AP2 amendment. AHA tenancy land required for construction works to existing National Grid power lines Severance: Negligible Disruptive effects: Negligible	Land required: Negligible 0ha; 0% of holding required Severance: Negligible Infrastructure: Negligible
CA1/71* Land west of Yoxall Road 5ha grassland	Land required: Low 0.4ha; 8% of holding required for construction of the AP2 amendment. Land required for implementation of habitat creation Severance: Negligible Disruptive effects: Negligible	Land required: Low 0.3ha; 6% of holding required. Land required for habitat creation Severance: Negligible Infrastructure: Negligible
CA1/72* Land at Newborough End 9ha grassland	Land required: High 3.3ha; 37% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines Severance: Negligible Disruptive effects: Negligible	Land required: Negligible 0ha; 0% of holding required Severance: Negligible Infrastructure: Negligible
CA1/73* Newborough End Farm 16ha beef cattle and commercial equestrian	Land required: Medium 1.9ha; 12% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines Severance: Negligible Disruptive effects: Negligible	Land required: Negligible 0ha; 0% of holding required Severance: Negligible Infrastructure: Negligible

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Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/74*</p> <p>Land at Hoar Cross</p> <p>24ha grassland</p>	<p>Land required: Medium</p> <p>2.6ha; 11% of holding required for construction of the AP2 amendment. Land required for construction works to existing National Grid power lines and implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0.4ha; 2% of holding required. Land required for habitat creation</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/75*</p> <p>Forge Farm</p> <p>285ha arable and dairy</p>	<p>Land required: Medium</p> <p>33.7ha; 12% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection and associated access, and implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>7.1ha; 2% of holding required. Land required for habitat creation and electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/76</p> <p>Bromley Wood Farm</p> <p>Owner/occupied</p> <p>55ha dairy, beef cattle and sheep</p>	<p>Land required: Medium</p> <p>5.7ha; 10% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p><0.1ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/77*</p> <p>Land north of Blunts' Hollow</p> <p>9ha arable and grassland</p>	<p>Land required: High</p> <p>8.6ha; 100% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p><0.1ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/78*</p> <p>Slate House Farm</p> <p>25ha livestock</p>	<p>Land required: Negligible</p> <p>0.2ha; 1% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>

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Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/79*</p> <p>Land south of Blunts' Hollow (west)</p> <p>6ha grassland</p>	<p>Land required: High</p> <p>4.6ha; 77% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p><0.1ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/80*</p> <p>Land south of Blunts' Hollow (east)</p> <p>4ha grassland</p>	<p>Land required: Medium</p> <p>0.8ha; 20% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/81*</p> <p>Bentilee Park</p> <p>128ha arable</p>	<p>Land required: Medium</p> <p>15ha; 12% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p><0.1ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/82*</p> <p>Bentilee</p> <p>49ha livestock</p>	<p>Land required: Negligible</p> <p>2.3ha; 5% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p><0.1ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/83*</p> <p>Land west of Glass Lane</p> <p>8ha grassland</p>	<p>Land required: High</p> <p>4.8ha; 60% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p><0.1ha; 0% of holding required. Land required for electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>

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Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/84*</p> <p>Ash Farm</p> <p>13ha grassland</p>	<p>Land required: Medium</p> <p>2.4ha; 18% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Low</p> <p>0.7ha; 5% of holding required. Land required for habitat creation</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/85*</p> <p>South Hill Farm</p> <p>3ha grassland</p>	<p>Land required: High</p> <p>2.4ha; 80% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/86</p> <p>Gilleon's Hall Farm</p> <p>Owner-occupied</p> <p>15ha beef cattle</p>	<p>Land required: Negligible</p> <p>0.4ha; 3% of holding required for construction of the AP2 amendment. Land required for implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0.4ha; 3% of holding required. Land required for habitat creation</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/87</p> <p>Hart's Farm</p> <p>Owner-occupied</p> <p>7ha sheep</p>	<p>Land required: Negligible</p> <p>0.3ha; 4% of holding required for construction of the AP2 amendment. Land required for implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0.3ha; 4% of holding required. Land required for habitat creation</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA1/88</p> <p>Ashbrook Farm</p> <p>Owner-occupied, Farm Business Tenancy (FBT)</p> <p>170ha arable and beef cattle (contract reared)</p> <p>South Staffordshire water scheme – wildflower mix</p>	<p>Land required: High</p> <p>4.1ha; 24% of holding required for construction of the AP2 amendment. Owner-occupied and FBT land required for construction works for the Parkgate grid supply point connection and implementation of habitat creation</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>7.9ha; 5% of holding required. Land required for habitat creation and electricity pylons</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>

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Holding reference, name and description	Temporary effects	Permanent effects
CA1/89 Rookery Farm Owner-occupied 164ha arable, dairy and beef cattle Holiday lets and syndicate shoot South Staffordshire water scheme – wildflower mix	Land required: Low 9.9ha; 6% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection and implementation of habitat creation Severance: Low Disruptive effects: Negligible	Land required: Negligible 1ha; 1% of holding required. Land required for habitat creation and electricity pylons Severance: Negligible Infrastructure: Negligible
CA1/90* Land east of Newlands Lane 63ha grassland	Land required: High 20.8ha; 33% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection and implementation of habitat creation Severance: Negligible Disruptive effects: Negligible	Land required: Low 3.6ha; 6% of holding required. Land required for habitat creation and electricity pylons Severance: Negligible Infrastructure: Negligible
CA1/91* St Stephens Hill Farm 180ha dairy	Land required: Negligible 1.6ha; 1% of holding required for construction of the AP2 amendment. Land required for implementation of habitat creation Severance: Negligible Disruptive effects: Negligible	Land required: Negligible 1.7ha; 1% of holding required. Land required for habitat creation Severance: Negligible Infrastructure: Negligible
CA1/92* Beacon Bank Farm 7ha grassland	Land required: High 4.1ha; 59% of holding required for construction of the AP2 amendment. Land required for construction works for the Parkgate grid supply point connection Severance: Negligible Disruptive effects: Negligible	Land required: Negligible <0.1ha; 0% of holding required. Land required for electricity pylons Severance: Negligible Infrastructure: Negligible
CA1/93* Tollgate House Farm 210ha arable Wind turbine	Land required: Negligible 0.5ha; <1% of holding required for construction of the AP2 amendment. Land required for implementation of habitat creation Severance: Negligible Disruptive effects: Negligible	Land required: Negligible 0.4ha; <1% of holding required. Land required for habitat creation Severance: Negligible Infrastructure: Negligible

* No Farm Impact Assessment interview conducted; data estimated

3.2.28 Table 7 sets out the farm holdings with land required for the amendment and the original scheme. It details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 7: Summary of assessment of effect on farm holdings within the original scheme which will be still required as part of the amendment (AP2-001-015)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/18</p> <p>Pipe Hall Farm</p> <p>Owner-occupied, Farm Business Tenancy and grazing agreements</p> <p>405ha dairy, beef cattle and arable</p> <p>Land in ELS</p>	<p>Land required: Medium</p> <p>44.2ha; 11% of holding required for construction. The AP2 amendment reduces land required from holding by 13.1ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>7ha; 2% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from AP2 amendment</p>
<p>CA1/25</p> <p>Quinton's Orchard Farm</p> <p>Owner-occupied</p> <p>316ha arable, beef cattle and sheep (farmed with nearby Longacre Farm)</p> <p>Substantial fishery enterprise and horse breeding enterprise</p> <p>Land in HLS and ELS</p> <p>Non-commercial shoot; forestry plantation</p>	<p>Land required: Negligible</p> <p>14.9ha; 5% of holding required for construction. The AP2 amendment requires an additional 2.3ha for construction works for the Parkgate grid supply point connection and access to habitat creation area. The AP2 amendment removes the need for 2ha which was required for the construction of the Rugeley grid supply point connection. Therefore, the AP2 amendment increases the overall area of land required temporarily from the holding by 0.3ha.</p> <p>Cumulative land temporarily required for the revised alignment of haul route and maintenance access route from Pipe Lane (AP2-001-011) and this AP2 amendment. Cumulative loss of land holding is 16ha; 5% of holding</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>Land required: 8.8ha; 3% of holding required. Of which <0.1ha is required for the AP2 amendment. Additional land required for electricity pylons and access to habitat areas</p> <p>No permanent cumulative impacts associated with land required for the revised alignment of haul route and maintenance access route from Pipe Lane (AP2-001-011) and this AP2 amendment</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

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Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/27</p> <p>Manor Farm, Blithbury</p> <p>Owner-occupied</p> <p>225ha organic dairy, arable, beef cattle. All organic forage grown on farm and fed to livestock. Some non-organic arable crops sold</p> <p>Land in Organic Countryside Stewardship</p> <p>Non-commercial shoot</p>	<p>Land required: Medium</p> <p>43.4ha; 19% of holding required for construction. The AP2 amendment requires an additional 0.4ha for construction works for the Parkgate grid supply point connection, construction of a new substation and other construction works. The AP2 amendment removes the need for 1.1ha which was required for the construction of the Rugeley grid supply point connection. Therefore, the AP2 amendment reduces the overall area of land required temporarily from the holding by 0.7ha.</p> <p>Severance: High. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Medium</p> <p>28.7ha; 13% of holding required. Of which 0.9ha is required for the AP2 amendment. Additional land required for a new substation and electricity pylons</p> <p>Severance: Medium. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/34</p> <p>Blackflatts Farm</p> <p>Owner-occupied</p> <p>84ha dairy and arable</p> <p>Land in ELS</p>	<p>Land required: Negligible</p> <p>1ha; 1% of holding required for construction. The AP2 amendment reduces land required from holding by 6.3ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>0.9ha; 1% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from AP2 amendment</p>
<p>CA1/37</p> <p>Hurstwood Farm</p> <p>SCC farm rented on Farm Business Tenancy agreement</p> <p>27ha dairy and sheep unit. 55-cow dairy herd plus replacements, and 30 ewes.</p>	<p>Land required: High</p> <p>6.3ha; 23% of holding required for construction. The AP2 amendment reduces land required from holding by 3.4ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Low</p> <p>1.7ha; 6% of holding required. The AP2 amendment reduces land required from holding by 1.3ha. Agricultural land no longer required for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from AP2 amendment</p>

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Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/38</p> <p>Town End Farm</p> <p>Owner-occupied and annual grazing licence. Main farm distant from route</p> <p>324ha dairy, beef cattle and sheep. 420-cow dairy herd plus replacements. 100-cow/bull beef herd reared from dairy herd. 50 ewes</p> <p>Non-commercial shoot</p> <p>Land in ELS</p>	<p>Land required: Low</p> <p>28.9ha; 9% of holding required for construction. The AP2 amendment requires an additional 0.9ha of owner-occupied land for construction of an access road</p> <p>Severance: High. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>15.7ha; 5% of holding required. Of which 1.7ha of owner-occupied land is required for the AP2 amendment. Additional land required for an access road</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/39*</p> <p>Holding No. 8 - Old Wood Farm</p> <p>SCC tenanted farm</p> <p>21ha dairy</p> <p>Land in ELS</p>	<p>Land required: Medium</p> <p>3.7ha; 18% of holding required for construction. The AP2 amendment reduces land required from holding by 0.7ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Low</p> <p>1.6ha; 8% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from AP2 amendment</p>

* No Farm Impact Assessment interview conducted; data estimated

3.2.29 Table 8 sets out the farm holdings with land to be removed from the Rugeley grid supply point connection and with no land required for the original scheme. It details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

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Table 8: Summary of assessment of effect on farm holdings within the land to be removed within the Rugeley grid supply point connection (AP2-001-015)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA1/40*</p> <p>Land north of Hollow Lane</p> <p>2.3ha grassland</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 2.3ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required. The AP2 amendment reduces land required from holding by 0.1ha. Agricultural land no longer required for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the amendment</p> <p>Infrastructure: Negligible. No change to in infrastructure impacts resulting from the amendment</p>
<p>CA1/41*</p> <p>Land at Bank Top Farm</p> <p>1ha grassland</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 0.3ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the amendment</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the amendment</p>
<p>CA1/42*</p> <p>Hurst Wood Meadow</p> <p>0.3ha grassland used to graze horses (non-commercial)</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 0.3ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/43*</p> <p>Holding No. 2 - Old Wood Farm</p> <p>SCC tenanted farm</p> <p>38ha dairy unit</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 12.3ha. Agricultural land no longer required for construction works for the</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required. The AP2 amendment reduces land required from holding by 1.8ha. Agricultural land no longer required for the Rugeley grid supply point connection</p>

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Holding reference, name and description	Temporary effects	Permanent effects
	<p>Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/44*</p> <p>Land at New Barn</p> <p>6ha grassland and non-commercial equestrian use</p> <p>Numerous lakes at the holding assumed to be associated with fishing enterprise</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 0.7ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA1/45</p> <p>Cawarden Springs Farm</p> <p>121ha arable</p> <p>Reclaimed building materials suppliers, industrial lets</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 2.1 ha. Agricultural land no longer required for construction works for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>oha; 0% of holding required. The AP2 amendment reduces land required from holding by 1.6ha. Agricultural land no longer required for the Rugeley grid supply point connection</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

* No Farm Impact Assessment interview conducted; data estimated

3.3 Colwich to Yarlet (CA2)

Additional land and a change to Bill powers required for the removal of Moreton retaining wall and to realign the access track to Moreton House and Moreton House Farm (AP2-002-002)

Soils and agricultural land classification

3.3.1 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

3.3.2 Table 9 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 9: Summary of assessment of effect on farm holding - Additional land and a change to Bill powers required for the removal of Moreton retaining wall and to realign the access track to Moreton House and Moreton House Farm (AP2-002-002)

Holding reference, name and description	Temporary effects	Permanent effects
CA2/6 Moreton House Farm Owner-occupied 136ha arable and beef cattle holding with 50-60 suckler cows and all progeny sold finished. Large agricultural contracting business also operated Woodland – 4.5ha woodland under the Woodland Grant Scheme and actively managed Land in HLS and ELS Diversified activity includes renting out fishing lake to a local angling club.	Land required: Low 11.6ha; 9% of holding required for construction. 0.2ha is required for the AP2 amendment. Land required for construction of Moreton Cutting Severance: Low. No change to severance resulting from the AP2 amendment Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment	Land required: Low 6.1ha; 4% of holding required. 0.1ha is required for the AP2 amendment. Land required for Moreton cutting Severance: Low. No change to severance resulting from the AP2 amendment Infrastructure: High. The AP2 amendment requires the demolition of a farm dwelling

Additional land required for the diversion of a National Grid gas pipeline and a new utility compound, west of Colwich Bridleway 35 accommodation overbridge (AP2-002-004)

Soils and agricultural land classification

3.3.3 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

3.3.4 Table 10 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related

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interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 10: Summary of assessment of effect on farm holdings - Additional land required for the diversion of a National Grid gas pipeline and a utility compound, west of Colwich Bridleway 35 accommodation overbridge (AP2-002-004)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA2/7</p> <p>Tithebarn Farm</p> <p>Owner-occupied</p> <p>162ha arable and store cattle rearing farm. Farmed in conjunction with a 234ha AHA tenancy at Action Hill, some 16km distant</p> <p>Beef breeding herd kept at tenanted farm, progeny and purchased store cattle taken to Tithebarn Farm for rearing and finishing in sheds</p> <p>On-farm shoot</p>	<p>Land required: High</p> <p>61.7ha; 38% of holding required for construction. 13.7ha is required for the AP2 amendment. Land required for utility diversions</p> <p>Cumulative land temporarily required for diversion of a Cadent gas pipeline, east of Colwich Bridleway 58 accommodation overbridge (AP2-002-005) and this AP2 amendment. Cumulative loss of land holding is 63.3ha; 39% of holding</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: High. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>23.7ha; 15% of holding required. No change to land required resulting from the AP2 amendment</p> <p>No permanent cumulative impacts associated with land required for the diversion of a Cadent gas pipeline, east of Colwich Bridleway 58 accommodation overbridge (AP2-002-005) and this AP2 amendment.</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: High. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA2/45*</p> <p>Land at Tolldish Barn</p> <p>1ha non-commercial equestrian</p>	<p>Land required: High</p> <p>0.5ha; 50% of holding required for the AP2 amendment. Land required for utility diversions</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA2/46*</p> <p>Land at Farley Lane</p> <p>4ha grassland cut for hay</p>	<p>Land required: Medium</p> <p>0.5ha; 13% of holding required for the AP2 amendment. Land required for utility diversions</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA2/9</p> <p>Farley Farm</p> <p>Owner-occupied</p> <p>57ha permanent grassland used for grazing Welsh Black cattle, sheep and Welsh Mountain ponies</p> <p>Farmhouse rented out. 4ha grassland rented out (including to CA2/12)</p>	<p>Land required: High</p> <p>15.1ha; 26% of holding required. Of which 4.5ha is required for the construction of the AP2 amendment. Additional land required for utility diversions</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>2.3ha; 4% of holding required</p> <p>No additional agricultural land permanently required for the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p>

Holding reference, name and description	Temporary effects	Permanent effects
Diversified activities include DIY and full livery	Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment	Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment

* No Farm Impact Assessment interview conducted; data estimated

Additional land required for the diversion of a Cadent gas pipeline, east of Colwich Bridleway 58 accommodation overbridge (AP2-002-005)

Soils and agricultural land classification

3.3.5 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

3.3.6 Table 11 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 11: Summary of assessment of effect on farm holding - Additional land required for the diversion of a Cadent gas pipeline, east of Colwich Bridleway 58 accommodation overbridge (AP2-002-005)

Holding reference, name and description	Temporary effects	Permanent effects
CA2/7 Tithebarn Farm Owner-occupied 162ha arable and store cattle rearing farm. Farmed in conjunction with a 234ha AHA tenancy at Action Hill, some 16km distant Beef breeding herd kept at tenanted farm, progeny and purchased store cattle taken to Tithebarn Farm for rearing and finishing in sheds. On-farm shoot	Land required: High 49.6ha; 31% of holding required. Of which 1.6ha is required for the AP2 amendment. Additional land required for utility diversions Cumulative land required temporarily required for diversion of a National Grid gas pipeline and a utility compound, west of Colwich Bridleway 35 accommodation overbridge (AP2-002-004) and this AP2 amendment. Cumulative loss of land holding is 63.3ha; 39% of holding Severance: Low. No change to severance resulting from the AP2 amendment Disruptive effects: High. No change to disruptive effects resulting from the AP2 amendment	Land required: Negligible 23.7ha; 15% of holding required. No additional agricultural land permanently required for the AP2 amendment No permanent cumulative impacts associated with land required for the diversion of a National Grid gas pipeline and a utility compound, west of Colwich Bridleway 35 accommodation overbridge (AP2-002-004) and this AP2 amendment Severance: Low. No change to severance resulting from the AP2 amendment Infrastructure: High. No change to infrastructure impacts resulting from the AP2 amendment

Additional land and a change to Bill powers required for construction activities at Great Haywood (AP2-002-008)

Soils and agricultural land classification

3.3.7 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

3.3.8 Table 12 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 12: Summary of assessment of effect on farm holdings - Additional land required for construction activities at Great Haywood (AP2-002-008)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA2/47*</p> <p>Land at Hoo Mill Lock</p> <p>3.2ha grassland, includes marina and moorings for canal boats, craft workshops, café/shop, catering outlet, engineering workshops, boat building and repair.</p> <p>Agricultural smallholding on approximately 2ha of grassland, including poultry, pigs, alpacas, apiary, polytunnel and orchard</p>	<p>Land required: Medium</p> <p>0.5ha; 17% of holding required for construction of the AP2 amendment. Additional land required to avoid clashes between haul route and utilities and separation of haul routes</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA2/19</p> <p>Hoo Mill Lane Farm</p> <p>Part of a 113ha grassland farming business centred at Whitchurch (50 km distant). Land at Great Haywood (37ha) with a barn used for grazing beef suckler cows and followers</p>	<p>Land required: Low</p> <p>6.5ha; 6% of holding required for construction. 0.4ha is required for the AP2 amendment.</p> <p>Cumulative land temporarily required for additional land and a change to Bill powers permanently required for the diversion of a National Grid gas pipeline and a new utility compound, north-west of Great Haywood Marina (AP2-002-009) and this AP2 amendment. Cumulative loss of land holding is 11ha; 10% of holding</p> <p>Severance: Medium. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>0.5ha; <1% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

Holding reference, name and description	Temporary effects	Permanent effects
CA2/21 Land at Tixall Lane Owner-occupied 3ha non-commercial equestrian unit	Land required: High 0.7ha; 23% of holding required for construction. 0.4ha is required for the AP2 amendment. Additional land required to avoid clashes between haul route and utilities and separation of haul routes Severance: Low. No change to severance resulting from the AP2 amendment Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment	Land required: Negligible 0ha; 0% of holding required. No change to land required resulting from the AP2 amendment Severance: Negligible. No change to severance resulting from the AP2 amendment Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment

* No Farm Impact Assessment interview conducted; data estimated

Additional land and a change to Bill powers required for the diversion of a National Grid gas pipeline and a new utility compound, north-west of Great Haywood Marina (AP2-002-009)

Soils and agricultural land classification

3.3.9 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

3.3.10 Table 13 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 13: Summary of assessment of effect on farm holdings - Additional land and a change to Bill powers required for the diversion of a National Grid gas pipeline and a new utility compound, north-west of Great Haywood Marina (AP2-002-009)

Holding reference, name and description	Temporary effects	Permanent effects
CA2/19 Hoo Mill Lane Farm Part of a 113ha grassland farming business centred at Whitchurch (50 km distant). Land at Great Haywood (37ha) with a barn used for grazing beef suckler cows and followers	Land required: Low 10.6ha; 9% of holding required for construction. 4.5ha is required for the AP2 amendment. Additional land required for utility diversions Cumulative land temporarily required for additional land and a change to Bill powers temporarily required for construction activities at Great Haywood (AP2-002-008) and this AP2 amendment. Cumulative loss of land holding is 11ha; 10% of holding	Land required: Negligible 0.5ha; <1% of holding required. No change to land required resulting from the AP2 amendment Severance: Negligible. No change to severance resulting from the AP2 amendment Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment

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Holding reference, name and description	Temporary effects	Permanent effects
	<p>Severance: Medium. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	
<p>CA2/20</p> <p>Ingestre Manor Farm</p> <p>Owner-occupied</p> <p>526ha extensive holding with 105ha at Ingestre. Other land rented and owned in the area.</p> <p>Land farmed with arable, sheep and store cattle. New house and buildings erected in recent past</p> <p>Land in HLS and ELS.</p> <p>Aspiration to develop a DIY and full livery yard with indoor and outdoor schools and a cross-country course</p>	<p>Land required: Negligible</p> <p>14.1ha; 3% of holding required for construction. 7ha is required for the AP2 amendment. Additional land required for utility diversions</p> <p>Cumulative land temporarily required for the reconfiguration of Ingestre Park Golf Club (AP2-002-010) and this AP2 amendment. Cumulative loss of land holding is 67.5ha; 13% of holding</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>3.8ha; <1% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Cumulative land permanently required for the reconfiguration of Ingestre Park Golf Club (AP2-002-010) and this AP2 amendment. Cumulative loss of land holding is 57.2ha; 11% of holding</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

Additional land required for the reconfiguration of Ingestre Park Golf Club (AP2-002-010)

Soils and agricultural land classification

- 3.3.11 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

- 3.3.12 Table 14 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 14: Summary of assessment of effect on farm holdings - Additional land required for the reconfiguration of Ingestre Park Golf Club (AP2-002-010)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA2/20</p> <p>Ingestre Manor Farm</p> <p>Owner-occupied</p> <p>526ha extensive holding with 105ha at Ingestre. Other land rented and owned in the area</p> <p>Land farmed with arable, sheep and store</p>	<p>Land required: Medium</p> <p>60.5ha; 12% of holding required for construction. 53.4ha is required for the AP2 amendment. Additional land required for the reconfigured golf course</p> <p>Cumulative land temporarily required for the diversion of a National Grid gas pipeline and a new utility compound, north-west of Great Haywood Marina</p>	<p>Land required: Medium</p> <p>57.2ha; 11% of holding required. 53.4ha is required for the AP2 amendment. Additional agricultural land required for the reconfigured golf course</p> <p>Cumulative land permanently required for the diversion of a National Grid gas pipeline and a new utility compound, north-west of Great Haywood Marina</p>

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Holding reference, name and description	Temporary effects	Permanent effects
<p>cattle. New house and buildings erected in recent past</p> <p>Land in HLS and ELS</p> <p>Aspiration to develop a DIY and full livery yard with indoor and outdoor schools and a cross-country course</p>	<p>(AP2-002-009) and this AP2 amendment. Cumulative loss of land holding is 67.5ha; 13% of holding</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>(AP2-002-009) and this AP2 amendment. Cumulative loss of land holding is 57.2ha; 11% of holding</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA2/23</p> <p>Tixall Manor Farm</p> <p>Owner-occupied</p> <p>117ha arable and grassland farm managed with beef suckler cattle, selling approximately 100 store or finished cattle per annum.</p> <p>Includes 47ha rented on an AHA tenancy (Swansmoor Farm).</p>	<p>Land required: High</p> <p>31.4ha of owner-occupied land; 27% of holding required for construction. 7.6ha is required for the AP2 amendment. Additional land required for the reconfigured golf course</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: High</p> <p>23.8ha of owner-occupied land; 20% of holding required. 7.6ha is required for this AP2 amendment. Additional land required for the reconfigured golf course</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

Additional land required for replacement car parking, east of Staffordshire County Showground (AP2-002-013)

Soils and agricultural land classification

- 3.3.13 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

- 3.3.14 Table 15 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

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Table 15: Summary of assessment of effect on farm holding - Additional land required for replacement car parking, east of Staffordshire County Showground (AP2-002-013)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA2/26</p> <p>Park Farm, Stafford</p> <p>Owner-occupied</p> <p>79ha holding (including arable land farmed on a share-farming agreement). Grassland used for silage/haylage in the summer and grazed with sheep in the winter. Dwelling on site plus four houses (barn conversions) rented out. Commercial users renting building/space on farm.</p> <p>Extensive diversified activities including 2x three-day eventing per annum (March and July), space let for rail engineering firm, bed and breakfast and Certificated Location caravan site. Land rented to Stafford showground for car parking and show jumping.</p>	<p>Land required: Medium</p> <p>13.5ha: 17% of holding required.</p> <p>8.2ha of owner-occupied land is required for the AP2 amendment for replacement car parking, and assumed to be no longer in agricultural use.</p> <p>Severance: Low/Medium</p> <p>Private accommodation structure (albeit with limited headroom) provided.</p> <p>Disruptive effects: High</p> <p>General issues arising with extent of construction area, requirement for a farm crossing, and demolition of residential properties.</p>	<p>Land required: Medium</p> <p>12.6ha; 16% of holding required.</p> <p>8.2ha of owner-occupied land is required for the AP2 amendment for replacement car parking, and assumed to be no longer in agricultural use.</p> <p>Severance: Low/Medium</p> <p>Private accommodation structure (albeit with limited headroom) provided.</p> <p>Infrastructure: High</p> <p>Demolition of residential properties.</p>

Additional land and a change to Bill powers required along the A34 Stone Road for the provision of a new access to Yarlet School (AP2-002-027)

Soils and agricultural land classification

- 3.3.15 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA2, Section 4 and Volume 5, Appendix AG-001-002 of the main ES.

Farm holdings and forestry

- 3.3.16 Table 16 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

SES2 and AP2 ES Appendix AG-001-000

Table 16: Summary of assessment of effect on farm holdings - Additional land and a change to Bill powers required along the A34 Stone Road for the provision of a new access to Yarlet School (AP2-002-027)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA2/38</p> <p>Yarlet Hall Farm</p> <p>SCC tenanted farm</p> <p>47ha dairy farm augmented with approximately 70ha rented on an annual basis.</p> <p>Managed with dairy cows and beef cattle</p>	<p>Land required: High</p> <p>15.4ha; 33% of holding required for construction. 0.6ha of SCC tenanted land is required for the AP2 amendment. Additional land required for construction of Yarlet School access road</p> <p>Severance: Medium. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: High</p> <p>11.0ha; 23% of holding required. 0.6ha of SCC tenanted land is required for the AP2 amendment. Additional land required for Yarlet School access road</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA2/48*</p> <p>Spring Farm</p> <p>SCC tenanted farm</p> <p>23ha dairy farm</p>	<p>Land required: Negligible</p> <p>0.4ha; 2% of holding required for construction of the AP2 amendment. Additional land required for construction of Yarlet School access road</p> <p>Severance: Negligible</p> <p>Disruptive effects: Negligible</p>	<p>Land required: Negligible</p> <p>0.4ha; 2% of holding required for AP2 amendment. Additional land required for Yarlet School access road</p> <p>Severance: Negligible</p> <p>Infrastructure: Negligible</p>
<p>CA3/1</p> <p>New House Farm</p> <p>SCC tenanted farm</p> <p>50ha SCC tenanted farm augmented with 10ha owned locally to the south-east of the A34 Stafford Road/The Fillybrooks.</p> <p>SCC farm is the centre of the dairy operation with 90 dairy cows. Replacement heifers home-reared.</p>	<p>Land required: High</p> <p>12.8ha; 26% of holding required for construction. 0.1ha of SCC tenanted land is required for the AP2 amendment</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Medium</p> <p>5.7ha; 11% of holding required. No change to land required resulting from the AP2 amendment</p> <p>Severance: Low, No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure resulting from the AP2 amendment</p>

* No Farm Impact Assessment interview conducted; data estimated

3.4 Stone and Swynnerton (CA3)

A change to Bill powers to provide permanent accommodation access for Walton Heath Farm (AP2-003-005)

Soils and agricultural land classification

- 3.4.1 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA3, Section 4 and Volume 5, Appendix AG-001-003 of the main ES.

Farm holdings and forestry

- 3.4.2 Table 17 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 17: Summary of assessment of effect on farm holding - A change to Bill powers to provide permanent accommodation access for Walton Heath Farm (AP2-003-005)

Holding reference, name and description	Temporary effects	Permanent effects
CA3/7 Walton Heath Farm Owner-occupied 67ha dairy holding augmented with 10ha rented annually. Main holding 50ha augmented with 16ha at Norton Bridge. 160 dairy cows managed as a flying herd (all replacement heifers bought in). All land entered into ELS	Land required: High 19.0ha of owner-occupied land; 28% of holding required for construction Agricultural land required for construction of the original scheme in cutting, the Stone Infrastructure Maintenance Base-Rail (IMB-R) reception tracks and temporary stockpiles Severance: Low The AP2 amendment provides access to severed land in the original scheme via the upgrade of a section of the Stone Rural Footpath 32 realignment Disruptive effects: Negligible	Land required: High 14.9ha of owner-occupied land; 22% of holding required Agricultural land required for the original scheme, the Stone IMB-R reception tracks and areas for mitigation planting and ponds Severance: Low The AP2 amendment provides access to severed land in the original scheme via the upgrade of a section of the Stone Rural Footpath 32 realignment Infrastructure: High. Although no buildings will be demolished the infrastructure (milking parlour, cow accommodation and slurry stores) will become redundant as dairy production will cease upon commencement of construction

Additional land required for realignment of B5026 Eccleshall Road and associated field access (AP2-003-006)

Soils and agricultural land classification

- 3.4.3 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA3, Section 4 and Volume 5, Appendix AG-001-003 of the main ES.

Farm holdings and forestry

- 3.4.4 Table 18 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 18: Summary of assessment of effect on farm holding - Additional land required for realignment of B5026 Eccleshall Road and associated field access (AP2-003-006)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA3/11</p> <p>Micklow House Farm</p> <p>Owner-occupied</p> <p>332ha arable, beef cattle and sheep holding. Micklow House Farm extends to 67ha augmented with 90ha at Lea Farm, Eccleshall with a further 173ha owned locally. Calves bought-in and reared to finished weights; 500 sold per annum. 3,500 store lambs finished per annum</p> <p>Diversified activities include private feedmill that was let to North-Western Farmers but the company ceased renting the mill</p>	<p>Land required: Medium</p> <p>31.1ha; 9% of holding required for construction. The AP2 amendment reduces land required from holding by 3.2ha from 34.3ha required in the original scheme due to the reduced length of the highway realignment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Medium. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Low</p> <p>Land required: 23.2ha; 7% of holding required. The AP2 amendment reduces land required from holding by 3.2ha from 26.4ha required in the original scheme due to the reduced length of the highway alignment</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>

3.5 Whitmore Heath to Madeley (CA4)

Additional land required and changes to Bill powers for changes to the vertical and horizontal alignment between Hatton South cutting and Madeley Bridleway 1 accommodation green overbridge (AP2-004-002)

Soils and agricultural land classification

- 3.5.1 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA4, Section 4 and Volume 5, Appendix AG-001-004 of the main ES.

Farm holdings and forestry

- 3.5.2 Table 19 sets out the farm holdings that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

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Table 19: Summary of assessment of effect on farm holdings - Additional land required and changes to Bill powers for changes to the vertical and horizontal alignment between Hatton South cutting and Madeley Bridleway 1 accommodation green overbridge (AP2-004-002)

Holding reference, name and description	Temporary effects	Permanent effects
<p>CA4/1</p> <p>Whitmore Hall Farm</p> <p>Part of the Whitmore Hall Estate, with the farmland tenanted by the family</p> <p>365ha dairy unit with substantial diversification including fishery in 12 pools, commercial shoot in Whitmore Wood, Veolia composting site, 50-horse livery, and telecommunications tower in woodland</p> <p>Main operational dairy unit at Hillside Farm</p> <p>Land in HLS and ELS, including wetland for wintering waders near West Coast Main Line</p>	<p>Land required: Medium</p> <p>96.8ha; 27% of holding required for construction. The AP2 amendment requires an additional 14.7ha for soil storage and construction compound, but also removes the requirement for 3.2ha of land which was to be used for Whitmore Heath (south) tunnelling facility/ logistics area and Whitmore footpath 4 temporary diversion. The net increase in land required as a result of the AP2 amendment is 11.5ha</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Low. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Medium</p> <p>65.6ha; 18% of holding required. The AP2 amendment reduces land required from holding by 1ha. Land no longer required for a balancing pond and the A53 Newcastle Road reinstatement</p> <p>Severance: Low. No change to severance resulting from the AP2 amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the AP2 amendment</p>
<p>CA4/2*</p> <p>Baldwin's Gate Farm</p> <p>254ha dairy unit</p>	<p>Land required: Negligible</p> <p>5ha; 2% of holding required for construction. The AP2 amendment reduces land required from holding by 2ha. Land no longer required for construction work for realigned A53 Newcastle Road</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required. The AP2 amendment reduces land required from holding by 3.6ha. Land no longer required for southern porous portal of Whitmore Heath tunnel and landscape mitigation planting</p> <p>Severance: Negligible. No change to severance resulting from the amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the amendment</p>
<p>CA4/3*</p> <p>Rose Cottage</p> <p>1ha rough pasture</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required for construction. The AP2 amendment reduces land required from holding by 1ha.</p> <p>Severance: Negligible. No change to severance resulting from the AP2 amendment</p> <p>Disruptive effects: Negligible. No change to disruptive effects resulting from the AP2 amendment</p>	<p>Land required: Negligible</p> <p>0ha; 0% of holding required. The AP2 amendment reduces land required from holding by 1ha.</p> <p>Severance: Negligible. No change to severance resulting from the amendment</p> <p>Infrastructure: Negligible. No change to infrastructure impacts resulting from the amendment</p>

* No Farm Impact Assessment interview conducted; data estimated

Additional land required and a change to Bill powers for modifications to the A51 Stone Road/Nantwich Road/A53 Newcastle Road junction (AP2-004-003)

Soils and agricultural land classification

- 3.5.3 This section describes the findings of a desktop study that has identified existing soil and agricultural land resources within the land required for the modifications to the A51/A53 junction. The location and extent of soil types displaying different characteristics and of agricultural land in the ALC grades are influenced by topography, drainage, geology and soil parent material.

Topography and Drainage

- 3.5.4 The land required for the modifications to the A51/A53 junction is located within the valley to the south of Maer Hills. The highest altitude is 120m AOD adjacent to the A53 Newcastle Road. The lowest altitude is 115m AOD to the south-west, near improved drainage channels which drain from Maer Pool towards the River Tern.

Geology and Soil Parent Materials

- 3.5.5 The principal bedrock geology mapped by the BGS is sandstone and conglomerate of the Chester Formation.
- 3.5.6 Superficial peat deposits are associated with the drainage channels south of the site which flow from Maer Pool in the east.

Description and Distribution of Soil Types

- 3.5.7 The characteristics of the soils are described by the Soil Survey of England and Wales bulletin that accompanies the National Soil Map. The soils are grouped into soil associations of a range of soil types (soil series) and are summarised in Table 20 and their distribution is shown in the SES2 and AP2 ES Volume 5, Map Series AG-02.

Table 20: Soil associations relevant to the additional land required and a change to Bill powers for modifications to the A51 Stone Road/Nantwich Road/A53 Newcastle Road junction (AP2-004-003)

Soil association: code shown on Map AG-02-104	Soil association: name	Description	Wetness class ¹⁸
861b	Isleham 2	Deep, permeable sandy and peaty soils affected by groundwater over drift or peat	I-VI
1022a	Altcar 1	Deep peat soils with earthy topsoil affected by groundwater	I-IV
551a	Bridgnorth	Well drained sandy and coarse loamy soils over soft sandstone	I

- 3.5.8 The National Soil Map shows that most of the land required for the modifications to the A51/A53 junction has soils of the Bridgnorth association, which are typically well drained sandy and coarse loamy soils over soft sandstone.

¹⁸ The Wetness Class (WC) of a soil is classified according to the depth and duration of waterlogging in the soil profile and has 6 categories from WC I which is well drained to WC VI which is very poorly drained

- 3.5.9 The adjacent woodland to the south has soils of the Isleham 2 association, which are deep, permeable sandy and peaty soils developed over drift or peat; and the Altcar 1 association which are deep earthy peat soils. Both soil associations are affected by groundwater.

Soil and Land Use Interactions

Agricultural Land Quality

- 3.5.10 There is no detailed soil survey data available within the land required for the modifications to the A51/A53 junction. The provisional ALC maps of England and Wales, produced by MAFF in the 1960s and 1970s shows the land to be of Grade 3, with Grade 4 quality land associated with the watercourses. These maps were originally published at a scale of 1:63,360 and are available at a scale of 1:250,000 in paper and digital formats. The main limitations of these provisional maps are that they are published at strategic scales only and according to a classification methodology which has been revised twice since the maps were published. Therefore, they cannot be used to definitively classify individual sites.
- 3.5.11 The principal physical factors influencing agricultural production and land quality are climate, site and soil, and the interactions between them.

Agro-climatic limitations

- 3.5.12 The local agro-climatic data have been interpolated from the Meteorological Office's standard 5km grid point data set for a point within the land required for the modifications to the A51/A53 junction (Table 21). The data show the area to be moderately cool and moist. The average number of FCDs is 190 which is greater than the average for lowland England and is slightly unfavourable for providing opportunities for agricultural land working.

Table 21: Local agro-climatic conditions - Additional land required and a change to Bill powers for modifications to the A51 Stone Road/Nantwich Road/A53 Newcastle Road junction (AP2-004-003)

Climatic Parameter	Measurement
Altitude (AOD)	120m
Average Annual Rainfall	797mm
Accumulated Temperature >0°C	1,328 day°
Field Capacity Days	190 days
Average Moisture Deficit, wheat	82mm
Average Moisture Deficit, potatoes	67mm

Site limitations

- 3.5.13 Site limitations considered within the ALC assessment typically relate to how topography affects the use of agricultural machinery. The primary factors assessed are gradient, microrelief and flood risk.

- 3.5.14 There are no site limitations which limit the grade of agricultural land within the land required for the modifications to the A51/A53 junction.

Soil limitations

- 3.5.15 The main soil limitations that affect the cropping potential and management requirements of land are texture, structure, depth, stoniness and chemical fertility. Together they influence the functions of soil and affect water availability for crops, drainage, workability and trafficability.

- 3.5.16 There are two distinct soil characteristics mapped within the land required for the modifications to the A51/A53 junction. These are:

- well drained sandy and coarse loamy soils of the Bridgnorth association; and
- sandy and peaty soils affected by groundwater of the Isleham 2 and Altcar 1 associations to the south.

Interactive limitations

- 3.5.17 The physical limitations that result from interactions between climate, site and soil are soil wetness and droughtiness. Each soil can be allocated a Wetness Class based on soil structure, evidence of waterlogging and the number of FCDs. The topsoil texture then determines the ALC grade according to Table 6 of the MAFF ALC guidelines¹⁹ as shown in Figure 2 for mineral soils, and Table 7 of the guidelines for organic mineral and peaty soils as shown in Figure 3.

¹⁹ MAFF (1988), *Agricultural Land Classification of England and Wales – Revised guidelines and criteria for grading the quality of agricultural land*

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Figure 2: ALC grade according to soil wetness for mineral soils¹⁷

Wetness Class	Texture ¹ of the top 25 cm	Field Capacity Days				
		<126	126-150	151-175	176-225	>225
I	S ² LS ³ SL SZL	1	1	1	1	2
	ZL MZCL MCL SCL	1	1	1	2	3a
	HZCL HCL	2	2	2	3a	3b
	SC ZC C	3a(2)	3a(2)	3a	3b	3b
II	S ² LS ³ SL SZL	1	1	1	2	3a
	ZL MZCL MCL SCL	2	2	2	3a	3b
	HZCL HCL	3a(2)	3a(2)	3a	3a	3b
	SC ZC C	3a(2)	3b(3a)	3b	3b	3b
III	S ² LS SL SZL	2	2	2	3a	3b
	ZL MZCL MCL SCL	3a(2)	3a(2)	3a	3a	3b
	HZCL HCL	3b(3a)	3b(3a)	3b	3b	4
	SC ZC C	3b(3a)	3b(3a)	3b	4	4
IV	S ² LS SL SZL	3a	3a	3a	3b	3b
	ZL MZCL MCL SCL	3b	3b	3b	3b	3b
	HZCL HCL	3b	3b	3b	4	4
	SC ZC C	3b	3b	3b	4	5
V	S LS SL SZL	4	4	4	4	4
	ZL MZCL MCL SCL	4	4	4	4	4
	HZCL HCL	4	4	4	4	4
	SC ZC C	4	4	4	5	5
Soils in Wetness Class VI - Grade 5						

Figure 3: ALC grade according to soil wetness for organic mineral and peaty soils¹⁷

Wetness Class	Texture of the top 25 cm	Field Capacity Days			
		<126	126 -175	175 - 225	>225
I	PTY	1	1	1	*
	S LS SL SZL	1	1	1	*
	ZL MZCL MCL SCL	1	1	2	*
	HZCL HCL	1	2	3a	*
	SC ZC C	1	2	3b	*
II	PTY	1	1	1	*
	S LS SL SZL	1	1	2	*
	ZL MZCL MCL SCL	1	1	3a	*
	HZCL HCL	2	2	3a	*
	SC ZC C	2	3a	3b	*
III	PTY	2	2	2	*
	S LS SL SZL	2	2	3a	*
	ZL MZCL MCL SCL	2	2	3a	*
	HZCL HCL	3a	3a	3b	*
	SC ZC C	3a	3a	4	*
IV	PTY	3a	3a	3a	*
	S LS SL SZL	3a	3a	3b	*
	ZL MZCL MCL SCL	3b	3b	3b	*
	HZCL HCL	3b	3b	4	*
	SC ZC C	4	4	4	*
V	PTY	4	4	4	5
	S LS SL SZL	4	4	4	4
	ZL MZCL MCL SCL	4	4	4	4
	HZCL HCL	4	4	4	5
	SC ZC C	5	5	5	5
Soils in Wetness Class VI - Grade 5					

3.5.18 Well drained (WC I) sandy Bridgnorth soils developed over sandstone are most affected by droughtiness. With moderate to moderately small crop moisture deficits, the limitation is likely to be mostly slight, to Grade 2, although may occasionally be more severe, to Subgrade 3a, depending upon the depth to sandstone bedrock.

3.5.19 The Isleham 2 and Altcar 1 soils are associated with woodland to the south and are affected by groundwater.

Farm holdings and forestry

3.5.20 Table 22 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

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Table 22: Summary of assessment of effect on farm holding - Additional land required and a change to Bill powers for modifications to the A51 Stone Road/Nantwich Road/A53 Newcastle Road junction (AP2-004-003)

Holding reference, name and description	Temporary effects	Permanent effects
CA4/22 Swan Inn Farm 360ha dairy, beef cattle and arable unit based at Lunts Farm, Aston (dairy unit) and Swan Inn Farm (arable unit). Approximately 240ha of arable land serviced from grain and machinery buildings at Swan Inn Farm	Land required: Negligible 1.2ha; 0.3% of holding required for construction of the AP2 amendment. Land required for modifications to the A51/A53 junction Severance: Negligible but access required throughout for arable machinery at Swan Farm Disruptive effects: Negligible	Land required: Negligible 1.2ha; 0.3% of holding required for construction of the AP2 amendment. Land required for modifications to the A51/A53 junction Severance: Negligible Infrastructure: Negligible

3.6 South Cheshire (CA5)

Additional land and a change to Bill powers for a fuel pipeline diversion and new utility compound at Checkley Lane (AP2-005-002)

Soils and agricultural land classification

- 3.6.1 The baseline agriculture, forestry and soils information for the amendment is as described in Volume 2, CA5, Section 4 and Volume 5, Appendix AG-001-005 of the main ES.

Farm holdings and forestry

- 3.6.2 Table 23 sets out the farm holding that will be affected by the AP2 amendment. It further details the temporary and permanent effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the AP2 amendment.

Table 23: Summary of assessment of effect on farm holding - Additional land and a change to Bill powers for a fuel pipeline diversion and new utility compound at Checkley Lane (AP2-005-002)

Holding reference, name and description	Temporary effects	Permanent effects
CA5/1 Grange Farm Owner-occupied 372ha poultry and arable farm. Approximately 620,000 laying hens in enriched cages. Poultry business a large employer with 40 associated jobs Arable farming on land surrounding Grange Farm and at Ley grounds Agricultural land is used by Checkley Wood Shoot	Land required: Medium 49.7ha; 13% of holding required for construction. 2.9ha is required for the AP2 amendment. Additional land required for construction compound Severance: High. No change to severance resulting from the AP2 amendment Disruptive effects: Medium. Potential for dust arising from utility construction compound in the AP2 amendment to enter poultry buildings.	Land required: Negligible 17.7ha; 5% of holding required. No change to land required resulting from the AP2 amendment Severance: Low. No change to severance resulting from the AP2 amendment Infrastructure: Negligible. No change to infrastructure impacts resulting from the amendment

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High Speed Two (HS2) Limited
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

08081 434 434
HS2Enquiries@hs2.org.uk
www.hs2.org.uk