

High Speed Rail (Crewe – Manchester)

Supplementary Environmental Statement 1 and Additional Provision 1 Environmental Statement

Volume 5: Appendix AG-001-00000

Agriculture, forestry and soils

Agriculture, forestry and soils assessment

MA01: Hough to Walley's Green

MA02: Wimboldsley to Lostock Gralam

MA03: Pickmere to Agden and Hulseheath

MA04: Broomedge to Glazebrook

MA05: Risley to Bamfurlong

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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:

ARUP+ ERM | FOSTER + PARTNERS | JACOBS
RAMBOLL | TYPISA | COSTAIN

MWJV

Mott MacDonald | WSP

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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 1 (SES1) and Additional Provision 1 Environmental Statement (AP1 ES).
- 1.1.2 This report covers the following community areas:
- Hough to Walley's Green (MA01);
 - Wimboldsley to Lostock Gralam (MA02);
 - Pickmere to Agden and Hulseheath (MA03);
 - Broomedge to Glazebrook (MA04); and
 - Risley to Bamfurlong (MA05).
- 1.1.3 This appendix provides details of changes to the agriculture, forestry and soils assessment since the production of the High Speed Rail (Crewe – Manchester) Environmental Statement (ES) published in 2022¹ (the main ES).
- 1.1.4 This report should be read in conjunction with the Agriculture, forestry and soils assessments set out in the main ES (see Volume 5, Appendix: AG-001-0MA01 to AG-001-0MA05, that accompanied the main ES).
- 1.1.5 This report comprises information on:
- assessment of effects on agricultural land and soils; and
 - the assessment of effects on farm holdings.
- 1.1.6 This report is structured into two parts: Part 1 – SES1 and Part 2 – AP1 ES. These parts are subdivided into community areas, and then into the relevant SES1 design changes and AP1 amendments which are of relevance to the agriculture, forestry and soils assessment.
- 1.1.7 Maps relevant to this appendix are contained in the SES1 and AP1 ES Volume 5, Agriculture, forestry and soils Map Book: Map Series AG-01 and AG-04. It should be noted that AG-01 only covers MA01 and MA02.
- 1.1.8 In order to differentiate between the original scheme and the subsequent changes, the following terms are used:

¹ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase2b-crewe-manchester-environmental-statement>.

- ‘the original scheme’ – the Bill scheme submitted to Parliament in January 2022, which was assessed in the main ES;
- ‘the SES1 scheme’ – the original scheme with the changes described in SES1 that are within the existing powers of the Bill; and
- ‘the AP1 revised scheme’ – the original scheme as amended by the SES1 changes and AP1 amendments.

1.2 Scope of the assessment

- 1.2.1 The scope of the assessment in this report is limited to SES1 design changes and AP1 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. Assessment is also undertaken where new holdings are affected.

1.3 Methodology, assumptions and limitations

- 1.3.1 This report provides additional baseline soil and agricultural land classification information where the AP1 amendment is likely to involve soils and agricultural land not already reported in the main ES.
- 1.3.2 The assessment scope, key assumptions and limitations are as set out in the main ES Environmental Impact Assessment Scope and Methodology Report² (SMR) (see Volume 5, Appendix: CT-001-00001 in the main ES).

Soils and agricultural land classification

- 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 have included:
- National Soil Map;
 - the regional soils bulletin;
 - solid and superficial deposits from the Geology of Britain viewer;
 - grid point meteorological data for Agricultural Land Classification of England and Wales;
 - provisional Agricultural Land Classification of England and Wales (1:250,000);
 - adjacent field survey data; and
 - aerial photography.

² High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, Environmental Impact Assessment Scope and Methodology Report*, Volume 5, Appendix: CT-001-00001. Available online at: <https://www.gov.uk/government/collections/hs2-phase2b-crewe-manchester-environmental-statement>.

- 1.3.4 Publicly available detailed Agricultural Land Classification (ALC) information is generally at a mapped scale of 1:10,000 based on field surveys of soils and agricultural land quality carried out by the Ministry of Agriculture, Fisheries and Farming (MAFF) and the Soil Survey of England and Wales (SSEW). A desk-based assessment of soils and agricultural land quality was based on this publicly available data.

Farm holdings

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

Part 1: Supplementary Environmental Statement 1

2 Introduction

- 2.1.1 The environmental baseline relevant to the agriculture, forestry and soils assessment of SES1 design changes is described below. Any new or different likely significant environmental effects as a result of the SES1 design changes are then identified and compared to those reported in the main ES.

3 Wimboldsley to Lostock Gralam (MA02)

3.1 Removal of MA02 Borrow Pit D, north of Moss Lane (SES1-002-002)

3.1.1 The baseline agriculture, forestry and soils information for the SES1 design change is as described in Volume 2, Community Area report: Wimboldsley to Lostock Gralam, (MA02), of the main ES and Volume 5, Appendix: AG-001-0MA02 of the main ES.

Soils and agricultural land classification

3.1.2 The area of agricultural land that would have been required for the borrow pit has soil in the Blackwood association. This group of soils is commonly seasonally waterlogged (Wetness Class (WC) IV) and limited by soil wetness to Subgrade 3b. Where the land is under-drained, and the soil profiles are in WC I or WC II, the quality of the agricultural land may be increased to Grade 2 or Subgrade 3a, depending on how droughty the soils are during the growing season. In this location the agricultural land is best and most versatile (BMV) in Subgrade 3a. The removal of Borrow Pit D will reduce the area of Subgrade 3a required by 53.8ha.

Assessment of impacts and effects on holdings

3.1.3 Table 1 sets out the farm holdings that will be affected by the removal of MA02 Borrow Pit D (SES1-002-002). It further details the temporary and permanent impacts and effects on agricultural and related interests as reported in the main ES and any changes as a result of the implementation of the SES1 design change.

Table 1: Summary assessment of impacts and effects on farm holdings arising from the removal of MA02 Borrow Pit D, north of Moss Lane (SES1-002-002)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/2 Lea Hall Farm Owner-occupied and forms part of a wider 453ha holding including 190ha rented on a Farm Business Tenancy (FBT). Part of the land managed under the requirements of the Mid-tier Countryside Stewardship Scheme. Managed with 1,150 dairy cows across two dairy sites with Lea Hall Farm used for rearing dairy replacement heifers (all indoors). Land at Byley used for forage production.	This holding is also affected by the construction of the original scheme at Wimboldsley. The removal of the borrow pit will reduce the total area of land required by 11.5ha but will not remove all impacts and effects. The residual effects will be: Land required: Medium 67.1ha; 15% of holding required for construction. Severance: Medium Disruption: Low	As Borrow Pit D was only required for a temporary period, the permanent effects will remain as reported in the main ES. Land required: Low 37.6ha; 8% of holding required. Severance: Medium Infrastructure: Negligible Overall permanent assessment: Moderate adverse due to severance.

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Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
Medium sensitivity to change as the affected land is off lying from the main holdings and no dairy cow grazing is affected.	Overall temporary assessment: Moderate adverse due to the proportion of land required.	
MA02/14 Shanks Farm, Byley 144ha mainly owned holding managed with arable crops, beef cattle, pigs and vegetables. Medium sensitivity to change.	The removal of Borrow Pit D will remove the minor adverse effect reported in the main ES for this holding.	There were no permanent effects associated with the use of land as a borrow pit: this remains unchanged.
MA02/15 Allumbrook Farm 120ha dairy holding. 74ha owned and 46ha rented annually. Medium sensitivity to change.	The removal of Borrow Pit D will remove the minor adverse effect reported in the main ES for this holding.	There were no permanent effects associated with the use of land as a borrow pit: this remains unchanged.
MA02/16 Pear Tree Farm, Cranage 75ha beef cattle and sheep holding. Medium sensitivity to change.	The removal of Borrow Pit D will remove the moderate adverse effect reported in the main ES for this holding.	There were no permanent effects associated with the use of land as a borrow pit: this remains unchanged.
MA02/17 Wash Lane Farm* 28ha arable and grassland holding. Medium sensitivity to change.	The removal of Borrow Pit D will remove the major/moderate adverse effect reported in the main ES for this holding.	There were no permanent effects associated with the use of land as a borrow pit: this remains unchanged.
MA02/18 Stublach Farm* 126ha arable and grassland holding. Medium sensitivity to change.	The removal of Borrow Pit D will remove the minor adverse effect reported in the main ES for this holding.	There were no permanent effects associated with the use of land as a borrow pit: this remains unchanged.

* It has not been possible to arrange farm impact assessment interviews with these holdings. Publicly available sources have been used to obtain the information presented.

4 Pickmere to Agden and Hulseheath (MA03)

4.1 Removal of the HS2 West Coast Main Line connection (SES1-004-001)

4.1.1 The baseline agriculture, forestry and soils information for the SES1 design change is as described in Volume 2, Community Area report: Pickmere to Agden and Hulseheath, (MA03), of the main ES and Volume 5, Appendix: AG-001-0MA03 of the main ES.

Soils and agricultural land classification

4.1.2 The removal of the HS2 West Coast Main Line (WCML) connection (SES1-004-001) will result in a reduction in the area of agricultural land required during the construction phase, as set out in Table 2.

Table 2: Agricultural land required for the original scheme as amended by the removal of the HS2 West Coast Main Line connection (SES1-004-001)

ALC grade	Area of land required for the original scheme (ha)	Area of land required for the SES1 and AP1 revised scheme	Change in area required (ha)
Grade 1	0	0	0
Grade 2	55.4	30.4	-25.0
Grade 3a	217.3	188	-29.3
BMV subtotal	272.7	218.4	-54.3
Grade 3b	129.1	125.1	-4
Grade 4	0	0	0
Grade 5	0	0	0
Total agricultural land	401.8	343.5	-58.3

Assessment of impacts and effects on holdings

4.1.3 Table 3 sets out the farm holdings that will be affected by the removal of the HS2 WCML connection (SES1-004-001). 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 SES1 design change.

Table 3: Summary assessment of impacts and effects on farm holding arising from the removal of the HS2 West Coast Main Line connection (SES1-004-001)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA03/35 Middle Moss Farm	Land required: High 1.2ha; 26% of holding required for utility diversions.	Land required: Negligible 0ha; 0% of holding required.

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Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
<p>4.6ha grassland. Low sensitivity to change.</p>	<p>Severance: Low Access to land during utility diversion work may be compromised. Disruption: Negligible Overall temporary assessment: Moderate adverse due to the proportion of land required.</p>	<p>Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/36 Little Moss Farm 0.6ha grassland. Low sensitivity to change.</p>	<p>Land required: Negligible <0.1ha; (1%) of holding required for the construction of Peacock Lane realignment. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>	<p>Land required: Negligible <0.1ha (1%) of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/37 Woolstencroft Farm Part owned (52ha), part rented from National Trust (87ha), other land rented locally. 139ha dairy (300 cows) holding utilising 75ha grazing with off-site arable cropping. Medium sensitivity to change as the affected land is off lying from the main holdings and no dairy cow grazing is affected.</p>	<p>Land required: Negligible 2.5ha; 2% of dairy grazing land required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>	<p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/38 Abbey Leys Farm Owner occupied. 40ha organic holding with farm shop, free range poultry and arable crops. Medium sensitivity to change.</p>	<p>Land required: Negligible 1.4ha; 4% of holding required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>	<p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/39 Scandia House, Moss Lane Owner occupied. 3.6ha residential with grassland paddock. Low sensitivity to change.</p>	<p>Land required: Medium 0.6ha; 16% of holding required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Minor adverse</p>	<p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/40 Agden Brook Farm Mainly owner occupied (431ha) and includes Little Heatley Farm, Wet Gate Lane. Also includes Warburton</p>	<p>Land required: Negligible 20.1ha; 2% of holding required for utility diversions. Severance: Low</p>	<p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Disruption: Negligible</p>

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Agriculture, forestry and soils assessment

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
<p>Park (113ha) which is rented on an FBT; other land rented on various annual agreements (333ha). 877ha dairy (460 cows), beef cattle (300 sold per annum), arable (440ha), potatoes on contract. High sensitivity to change. Agden Brook Farm has land in both MA03 and MA04, with the overall assessment reported here and in MA03 SES1 Volume 2 report.</p>	<p>Access to land during utility diversion work may be compromised. Disruption: Negligible Overall temporary assessment: Moderate adverse due to severance</p>	<p>Overall temporary assessment: Negligible</p>
<p>MA03/41 Booth Bank Farm* 8.6ha grassland holding with children's activity farm. Medium sensitivity to change.</p>	<p>Land required: High 5.9ha; 68% of holding required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Major/moderate adverse due to the proportion of land required.</p>	<p>Land required: Negligible <0.1ha (1%) of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/42 Thowler Lane Farm* 1.5ha equestrian (non-commercial). Low sensitivity to change.</p>	<p>Land required: High 1.1ha; 76% of holding required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Moderate adverse due to the proportion of land required.</p>	<p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/43 Lane at Agden Lane* 0.4ha grassland holding. Low sensitivity to change.</p>	<p>Land required: Negligible <0.1ha; 4% of holding required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>	<p>Land required: Negligible <0.1ha (1%) of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>
<p>MA03/44 Land at Booth Bank Cottage* 1.5ha grassland holding. Low sensitivity to change.</p>	<p>Land required: High 0.9ha; 60% of holding required for utility diversions. Severance: Negligible Disruption: Negligible Overall temporary assessment: Moderate adverse due to the proportion of land required.</p>	<p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>

* It has not been possible to arrange farm impact assessment interviews with these holdings. Publicly available sources have been used to obtain the information presented.

4.2 Change to the diversion of a Scottish Power 132kV underground route, near Belt Wood (SES1-003-001)

4.2.1 The baseline agriculture, forestry and soils information for the SES1 design change is as described in Volume 2, Community Area report: Pickmere to Agden and Hulseheath, (MA03), of the main ES and Volume 5, Appendix: AG-001-0MA03 of the main ES.

Soils and agricultural land classification

4.2.2 The soils of the agricultural land associated with this SES1 design change are in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to mainly Subgrade 3a or Subgrade 3b. In total, 8.7ha of agricultural land classified as a mix of Grade 2 (0.1ha), Subgrade 3a (2.8ha) and Subgrade 3b (5.8ha) will no longer be required as a result of this SES1 design change.

Assessment of impacts and effects on holdings

4.2.3 Table 4 sets out the farm holdings that will be affected by the change to a utility diversion (SES1-003-001). 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 SES1 design change.

Table 4: Summary assessment of impacts and effects on farm holdings arising from the change to the diversion of a Scottish Power 132kV underground route, near Belt Wood (SES1-003-001)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA03/19 Knowlspit Farm with Bentleyhurst Farm 130ha dairy unit rented from the Mere Estate on an FBT. 340 dairy cows. High sensitivity to change.	The SES1 design change (which relates to the removal of a utility diversion) will reduce the area of land temporarily required by 8.7ha. The residual impacts and effects will be: Land required: Medium 17.7ha; 14% of holding required for construction. Severance: Low Disruption: Negligible Overall temporary assessment: Major/moderate adverse due to the	The SES1 design change only affects land required for a temporary period during construction; the permanent impacts and effects remains as reported in the main ES. Land required: Negligible 1.3ha; 1% of holding required. Severance: Low Infrastructure effects: Negligible Overall permanent assessment: Moderate adverse due to severance.

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
<p>MA03/25 Hulme Barn Farm Owner occupied. 81ha mainly arable with grassland (haylage). Medium sensitivity to change.</p>	<p>proportion of land required (reduced from Major adverse).</p> <p>The SES1 design change (which relates to the removal of a utility diversion) will reduce the area of land temporarily required by 1.9ha. The residual impacts and effects will be:</p> <p>Land required: High 47.8ha; 59% of holding required for construction. Severance: Low Disruption: Negligible Overall temporary assessment: Major/moderate adverse due to the proportion of land required.</p>	<p>The SES1 design change will reduce the area of land permanently required by 0.1ha; the permanent impacts and effects remains as reported in the main ES.</p> <p>Land required: Medium 14.6ha; 18% of holding required. Severance: Negligible Infrastructure effects: Negligible Overall permanent assessment: Moderate adverse due to the proportion of land required.</p>

5 Broomedge to Glazebrook (MA04)

5.1 Removal of the HS2 West Coast Main Line connection (SES1-004-001)

- 5.1.1 The removal of the HS2 WCML connection (SES1-004-001) will remove all agriculture, forestry and soil impacts and effects.

6 Risley to Bamfurlong (MA05)

6.1 Removal of the HS2 West Coast Main Line connection (SES1-004-001)

- 6.1.1 The removal of the HS2 WCML connection (SES1-004-001) will remove all agriculture, forestry and soil impacts and effects.

Part 2: Additional Provision 1 Environmental Statement

7 Introduction

- 7.1.1 The environmental baseline relevant to the agriculture, forestry and soils assessment of AP1 amendments is described below. Any new or different likely significant environmental effects as a result of the AP1 amendments are then identified and compared to those reported in the main ES as amended by the SES1.

8 Hough to Walley's Green (MA01)

8.1 Additional land permanently required for the realignment and extension of Crewe tunnel (AP1-001-001)

8.1.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Hough to Walley's Green, (MA01), of the main ES and Volume 5, Appendix: AG-001-0MA01 of the main ES.

Soils and agricultural land classification

8.1.2 The agricultural land associated with this AP1 amendment has soil in the Crewe association. As described in the main ES, soils of the Crewe association comprise fine loamy over clay soils, developed in reddish, stoneless, glacial till and lake deposits overlying the Sidmouth Mudstone Formation. These soils are seasonally waterlogged for long periods during the winter (WC IV) and the land is limited by soil wetness to Subgrade 3b. The effect of this AP1 amendment is to remove 5.4ha of lower quality agricultural land in Subgrade 3b.

Assessment of impacts and effects on holdings

8.1.3 Table 5 sets out the farm holdings that will be affected by tunnel realignment and extension (AP1-001-001). 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 AP1 amendment.

Table 5: Summary assessment of impacts and effects on farm holdings arising from the additional land permanently required for the realignment and extension of Crewe tunnel (AP1-001-001)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA01/4 Oakhanger Hall Owner-occupied with land also rented on FBT agreements. 304ha dairy and arable farm. 430-cow milking herd (housed) plus replacements. Land at Gonsley Green and Sutch Farm used to graze young stock and dry cows. Medium sensitivity to change as the land is not used to graze milking cows. Also significantly affected by HS2 Phase 2a.	Land required: Negligible This AP1 amendment will increase the area of land required for a temporary period from 4.0ha to 5.1ha. Land required: Negligible 5.1ha; 1% of holding required for construction. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible	This AP1 amendment does not change the permanent effects. Land required: Negligible 0.7ha; <1% of holding permanently required. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
<p>MA01/6 Church Farm* 187ha grassland holding. Medium sensitivity to change.</p>	<p>This AP1 amendment will reduce the area of land required for a temporary period from 2.5ha to less than 0.1ha.</p> <p>Land required: Negligible <0.1ha (<1%) of the holding required for construction. The AP1 amendment will reduce the area of land required from 2.5ha to less than 0.1ha.</p> <p>Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>	<p>This AP1 amendment removes all permanent effects.</p> <p>Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible</p>
<p>MA01/7 Chaise Farm* 24ha grassland enterprise. Medium sensitivity to change.</p>	<p>This AP1 amendment will reduce the area of land required for a temporary period from 6.1ha to 4.7ha.</p> <p>Land required: Medium 4.7ha; <20% of holding required for construction.</p> <p>Severance: Negligible Disruption: Negligible Overall temporary assessment: Moderate adverse due to the proportion of land required.</p>	<p>This AP1 amendment will increase the area of land permanently required from 0.8ha to 4.7ha.</p> <p>Land required: Medium 4.7ha; <20% of holding required for landscape mitigation planting. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Moderate adverse due to the proportion of land required.</p>
<p>MA01/8 Bridge Farm Owner-occupied. 1.3ha grassland holding. Low sensitivity to change.</p>	<p>This AP1 amendment will reduce the area of land required for a temporary period from 1.3ha to less than 0.1ha.</p> <p>Land required: Negligible <0.1ha (<1%) of the holding required for construction.</p> <p>Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible</p>	<p>This AP1 amendment will reduce the area of land required permanently from 0.9ha to less than 0.1ha and removes the proposed property demolition.</p> <p>Land required: Negligible <0.1ha (<1%) of holding required for landscape mitigation planting. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible</p>
<p>MA01/9 Moss Bridge Farm (Winton Equestrian Centre (WEC)) Owner-occupied. 7.2ha holding with riding school and stables.</p>	<p>This AP1 amendment will not alter the area of land required for a temporary period.</p> <p>Land required: High</p>	<p>This AP1 amendment will reduce the area of land required permanently from 7.2ha to 4.3ha but will still require the demolition of the residential property and stables.</p>

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
Diversified activities include a commercial phone mast. Medium sensitivity to change.	7.2ha; 100% of holding required for construction. Severance: Negligible Disruption: Medium Overall temporary assessment: Major/moderate adverse due to the proportion of land required.	Land required: High 4.3ha; 60% of holding required. Severance: Negligible Infrastructure: High Demolition of residential property and stables. Overall permanent assessment: this AP1 amendment will not alter the overall assessment of effect which remains Major/moderate adverse due to the proportion of land required and property demolition.
MA01/30* Land at Parkers Road New holding affected, details obtained during telephone discussions in 2020. 3ha parcel let to local grazier. Low sensitivity to change.	Land required: High 3.0ha (100%) of the holding required for the Crewe Tunnel north portal construction compound. Severance: Negligible Disruption: Negligible Overall temporary assessment: Moderate adverse due to the proportion of land required.	Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible

* It has not been possible to arrange farm impact assessment interviews with these holdings. Publicly available sources have been used to obtain the information presented.

8.2 Additional land temporarily required for modifications to Warmingham Road and Groby Road junction (AP1-001-004)

8.2.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Hough to Walley's Green, (MA01), of the main ES and Volume 5, Appendix: AG-001-0MA01 of the main ES.

Soils and agricultural land classification

8.2.2 The agricultural land associated with these AP1 amendments has soil in the Crewe association. As described in the main ES, soils of the Crewe association comprise fine loamy over clay soils, developed in reddish, stoneless, glacial till and lake deposits overlying the Sidmouth Mudstone Formation. These soils are seasonally waterlogged for long periods during the winter (WC IV) and the land is limited by soil wetness to Subgrade 3b. This AP1 amendment will require a further 0.2ha of lower quality agricultural land in Subgrade 3b.

Assessment of effects on holdings

8.2.3 Table 6 sets out the farm holdings that will be affected by the junction modifications (AP1-001-004). 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 AP1 amendment.

Table 6: Summary assessment of effect on farm holdings arising from the additional land temporarily required for modifications to Warmingham Road and Groby Road junction (AP1-001-004)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA01/17 Lane Ends Farm Part owner-occupied, part rented on grazing licence. 93ha dairy and grassland. Part of the land managed as part of the Mid-tier Countryside Stewardship Scheme. Buildings let. Medium sensitivity to change (land affected lies too far from dairy buildings to be utilised by grazing dairy cows).	Land required: Negligible This AP1 amendment will increase the area of land required for a temporary period from 1.3ha to 1.4ha. There will be no change in significance of effect. Land required: Negligible 1.4ha; 2% of holding required the construction of the approach to the Warmingham Moss southbound viaduct, Coppenhall Moss embankment and soil stores. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible	This AP1 amendment does not change the permanent effects. Land required: Negligible 0.5ha; <1% of holding required for the approach to the Warmingham Moss southbound viaduct and Coppenhall Moss embankment. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible
MA01/28 Land at Groby Road 0.5ha grassland holding. Low sensitivity to change. New holding affected.	Land required: Medium <0.1ha (14%) required for this AP1 amendment. Severance: Negligible Disruption: Negligible Overall temporary assessment: Minor adverse	Land required: Low <0.1ha (8%) required for this AP1 amendment. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible
MA01/29 Brook Farm, Moston 53ha grassland holding. Medium sensitivity to change. New holding affected.	Land required: Negligible <0.1ha (<1%) required for this AP1 amendment. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible	Land required: Negligible 0ha (0%) required Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible

8.3 Additional land permanently required for the provision of landscape earthworks adjacent to Footpath Minshull Vernon 8/1 accommodation overbridge (AP1-001-006)

8.3.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Hough to Walley's Green, (MA01), of the main ES and Volume 5, Appendix: AG-001-0MA01 of the main ES.

Soils and agricultural land classification

8.3.2 The agricultural land associated with this AP1 amendment has soil in the Crewe association. As described in the main ES, the soils in the Crewe association comprise fine loamy over clay soils, developed in reddish, stoneless, glacial till and lake deposits overlying the Sidmouth Mudstone Formation. These soils are seasonally waterlogged for long periods during the winter (WC IV) and the land is limited by soil wetness to Subgrade 3b or Grade 4. The effect of this AP1 amendment is to require an additional 0.2ha of lower quality agricultural land in Subgrade 3b. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

8.3.3 Table 7 sets out the farm holdings that will be affected by the provision of landscape earthworks (AP1-001-006). 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 AP1 amendment.

Table 7: Summary assessment of impacts and effects on farm holdings arising from the additional land permanently required for the provision of landscape earthworks adjacent to Footpath Minshull Vernon 8/1 accommodation overbridge (AP1-001-006)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA01/18 Parkfield Farm Owner-occupied. 112ha dairy holding. Part of the land managed under the requirements of the Entry Level (environmental stewardship) Scheme. High sensitivity to change.	This AP1 amendment requires an additional 0.2ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 39.5ha; 35% of holding required for the construction of the main line, Warmingham Moss southbound viaduct, Warmingham Moss southbound spur embankment No2,	This AP1 amendment requires an additional 0.2ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 26.8ha; 24% of holding required for the Warmingham Moss southbound viaduct, the Warmingham Moss southbound spur embankment No.2, the Parkfield access realignment and mitigation planting.

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
	Parkfield access realignment, utility diversions and soil stores. Severance: Low Farm is already severed by existing WCML and by the original scheme; the existing accommodation access will be replaced. Disruption: Low Potential for dust arising from construction to affect housed livestock. Overall temporary assessment: Major adverse due to the proportion of land required.	Severance: Low Farm severed by existing WCML and by the original scheme; existing accommodation access replaced. Infrastructure: Negligible Overall permanent assessment: Major adverse due to the proportion of land required.

8.4 Additional land permanently required for the provision of landscape earthworks adjacent to Coppenhall Moss north embankment (AP1-001-007)

8.4.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Hough to Walley's Green, (MA01), of the main ES and Volume 5, Appendix: AG-001-0MA01 of the main ES.

Soils and agricultural land classification

8.4.2 The agricultural land associated with this AP1 amendment has soil in the Crewe association. As described in the main ES, the soils in the Crewe association comprise fine loamy over clay soils, developed in reddish, stoneless, glacial till and lake deposits overlying the Sidmouth Mudstone Formation. These soils are seasonally waterlogged for long periods during the winter (WC IV) and the land is limited by soil wetness to Subgrade 3b or Grade 4. The effect of this AP1 amendment is to require an additional 0.4ha of lower quality agricultural land in Grade 4 during construction. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

8.4.3 Table 8 sets out the farm holdings that will be affected by the provision of landscape earthworks (AP1-001-007). 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 AP1 amendment.

Table 8: Summary assessment of impacts and effects on farm holdings arising from the additional land permanently required for the provision of landscape earthworks adjacent to Copenhall Moss north embankment (AP1-001-007)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/13 Dairy Farm, Whatcroft with Park (Hall) Farm, Wimboldsley, Occlestone Green Farm, Wimboldsley and Yew Tree Farm, Whatcroft Dairy Farm, Whatcroft rented on a FBT; Yew Tree Farm held on an Agricultural Holdings Act (AHA); remaining holdings are owner-occupied. 331ha dairy enterprise with 800 cows. High sensitivity to change.	This AP1 amendment requires an additional 0.4ha from the holding during construction compared to the original scheme. The assessed effects remain unchanged. Land required: Medium 42.3ha; 13% of holding required for the construction of the AP1 amended scheme. Severance: Low Although the farm will be severed access will be possible using the Dairy Farm accommodation access diversion. Disruption: Low There is the potential for dust arising from construction to affect housed livestock. Overall temporary assessment: Major/moderate adverse due to the proportion of land required.	This AP1 amendment does not result in any permanent increase in the area of land required. The assessed effects remain unchanged. Land required: Low 25.0ha; 8% of holding required for AP1 amended scheme. Severance: Low Although the farm will be severed access will be possible using the Dairy Farm accommodation access diversion. Infrastructure: Negligible Overall permanent assessment: Moderate adverse due to the proportion of land required and severance.

8.5 Overall impacts and effects in MA01 arising from the construction of the AP1 revised scheme

8.5.1 Table 9 sets out the areas and grade of agricultural land that will be required for the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Hough to Walley's Green area (MA01).

Table 9: Agricultural land required for the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Hough to Walley's Green area (MA01)

ALC grade	Area of land required for the original scheme (ha)	Area of land required for the SES1 and AP1 revised scheme	Change in area required (ha)
Grade 1	0	0	0
Grade 2	0	0	0
Grade 3a	5.8	7.7	+1.9

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ALC grade	Area of land required for the original scheme (ha)	Area of land required for the SES1 and AP1 revised scheme	Change in area required (ha)
BMV subtotal	5.8	7.7	+1.9
Grade 3b	109.6	104.2	-5.3
Grade 4	17.3	17.6	+0.3
Grade 5	0	0	0
Total agricultural land	132.7	129.5	-3.1

8.5.2 The overall impacts and effects on the farm holdings in the Hough to Walley's Green area (MA01) that are affected by the original scheme, as amended by the SES1 design changes and AP1 amendments, are set out in Table 10.

Table 10: Summary impacts and effects on farm holdings arising from the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Hough to Walley's Green area (MA01)

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
MA01/1 Heath Farm [^]	0.4ha (<1%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA01/2 Chorlton Bank Farm ^{*^}	2.0ha (17%) High	Negligible	Moderate adverse	0.7ha (10%) Low	Negligible
MA01/3 The Moss ^{*^}	0.1ha (<1%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA01/4 Oakhanger Hall [^]	5.1ha (2%) Negligible	Negligible	Negligible	0.7ha (<1%) Negligible	Negligible
MA01/5 Carters Green Farm	0.3ha (<1%) Negligible	Negligible	Minor adverse	0ha (0%) Negligible	Negligible
MA01/6 Church Farm [*]	<0.1ha (<1%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA01/7 Chaise Farm [*]	4.7ha (20%) Medium	Negligible	Moderate adverse (previously major/moderate adverse)	4.7ha (20%) Medium	Moderate adverse (previously negligible)
MA01/8 Bridge Farm	<0.1ha (<1%) Negligible	Negligible (previously moderate adverse)	Negligible	<0.1ha (<1%) Negligible	Negligible (previously moderate adverse)
MA01/9	7.2ha (100%)	Negligible	Major/moderate adverse	4.3ha (60%)	Major/moderate adverse

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Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
Moss Bridge Farm (Winton Equestrian Centre) (WEC)	High			High	(includes property demolition)
MA01/10 Land north of WEC*	5.8ha (83%) High	Negligible	Moderate adverse	2.8ha (39%) High	Moderate adverse
MA01/11 Moss Farm, Moss Lane, Crewe	6.8ha (33%) High	Negligible	Moderate adverse	6.0ha (28%) High	Moderate adverse
MA01/12 Hollyhurst Farm	5.6ha (35%) High	Negligible	Moderate adverse	5.3ha (33%) High	Moderate adverse
MA01/13 Moss Farm, Moss Lane, Land End	15.8ha (61%) High	Negligible	Moderate adverse	7.0ha (27%) High	Moderate adverse (includes property demolition)
MA01/14 Land at Moss Lane, Crewe (1)*	0.2ha (8%) Low	Negligible	Negligible	<0.1ha (2%) Negligible	Negligible
MA01/15 Land at Moss Lane, Crewe (2)*	0.5ha (24%) High	Negligible	Moderate adverse	0.3ha (13%) Medium	Minor adverse (previously negligible)
MA01/16 Spring Farm	24.2ha (34%) High	Negligible	Major/moderate adverse	9.0ha (13%) Medium	Moderate adverse
MA01/17 Lane Ends Farm	1.4ha (2%) Negligible	Negligible	Negligible	0.5ha (<1%) Negligible	Negligible
MA01/18 Parkfield Farm	39.5ha (35%) High	Low	Major adverse	26.8ha (24%) High	Major adverse
MA01/19 Elm Tree House*	<0.1ha (<1%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA01/20 Bellaport Home Farm*	0.6ha (2%) Negligible	Low	Minor adverse	0ha (0%) Negligible	Negligible
MA01/21 Minshull Hill Farm	2.3ha (2%) Negligible	Negligible	Negligible	2.3ha (2%) Negligible	Negligible
MA01/22 Land north of Minshull Hill Farm*	2.2ha (11%) Medium	Negligible	Moderate adverse	1.3ha (6%) Low	Minor adverse

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
MA01/23 Moat House Farm*	0.6ha (4%) Negligible	Low	Minor adverse	0.3ha (2%) Negligible	Negligible
MA01/24 The Bull Pen*	0.4ha (3%) Negligible	Negligible	Negligible	<0.1ha (<1%) Negligible	Negligible
MA01/25 Newfield Hall Farm	4.7ha (13%) Medium	Negligible	Moderate adverse	2.6ha (7%) Low	Minor adverse
MA01/26 Park House Farm	7.5ha (7%) Low	Low	Minor adverse	7.4ha (7%) Low	Minor adverse
MA01/27 Newfield Farm*	1.1ha (4%) Negligible	Negligible	Negligible	1.0ha (4%) Negligible	Negligible
MA01/28 Land at Groby Road*	<0.1ha (14%) Medium	Negligible	Minor adverse (new holding affected)	<0.1ha (8%) Low	Negligible (new holding affected)
MA01/29 Brook Farm, Moston*	<0.1ha (<1%) Negligible	Negligible	Negligible (new holding affected)	0ha (0%) Negligible	Negligible (new holding affected)
MA01/30* Land at Parkers Road	3.0ha (100%) High	Negligible	Moderate adverse (new holding affected)	0ha (0%) Negligible	Negligible (new holding affected)

* It has not yet been possible to arrange farm impact assessment interviews with these holdings. Publicly available sources have been used to obtain the information presented.

^ Included in HS2 Phase 2a assessment, see High Speed Two Ltd (2017), High Speed Rail (West Midlands - Crewe) Environmental Statement Volume 2: Community Area report CA5, South Cheshire. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2a-environmental-statement>.

9 Wimboldsley to Lostock Gralam (MA02)

9.1 Additional land temporarily required for the provision of surface water drainage at A530 Nantwich Road satellite compound (AP1-002-001)

9.1.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Wimboldsley to Lostock Gralam, (MA02), of the main ES and Volume 5, Appendix: AG-001-0MA02 of the main ES.

Soils and agricultural land classification

9.1.2 The agricultural land associated with this AP1 amendment has soil in the Crewe association. As described in the main ES, the soils in the Crewe association comprise fine loamy over clay soils, developed in reddish, stoneless, glacial till and lake deposits overlying the Sidmouth Mudstone Formation. These soils are seasonally waterlogged for long periods during the winter (WC IV) and the land is limited by soil wetness to Subgrade 3b or Grade 4. The effect of this AP1 amendment is to require an additional 0.3ha of lower quality agricultural land in Grade 4. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

9.1.3 Table 11 provides details of the farm holding that will be affected by the provision of surface water drainage (AP1-002-001). 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 AP1 amendment.

Table 11: Summary assessment of impacts and effects on farm holdings arising from additional land temporarily required for the provision of surface water drainage at A530 Nantwich Road satellite compound (AP1-002-001)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/35 New Farm, Occlestone Green 43ha grassland holding. Medium sensitivity to change. New holding affected.	Land required: Negligible 0.3ha; 1% of holding required for a drainage outlet during construction. Severance: Negligible Disruption: Negligible Overall temporary assessment: Negligible	Land required: Negligible 0ha; 0% of holding required. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible

9.2 Additional land permanently required for the provision of landscape mitigation planting at Wimboldsley (AP1-002-002)

9.2.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Wimboldsley to Lostock Gralam, (MA02), of the main ES and Volume 5, Appendix: AG-001-0MA02 of the main ES.

Soils and agricultural land classification

9.2.2 The agricultural land associated with this AP1 amendment has soil in the Crewe association. As described in the main ES, the soils in the Crewe association comprise fine loamy over clay soils, developed in reddish, stoneless, glacial till and lake deposits overlying the Sidmouth Mudstone Formation. These soils are seasonally waterlogged for long periods during the winter (WC IV) and the land is limited by soil wetness to Subgrade 3b or Grade 4. The effect of this AP1 amendment is to require an additional 0.1ha of lower quality agricultural land in Grade 4. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

9.2.3 Table 12 provides details of the farm holding that will be affected by the provision of landscape mitigation planting (AP1-002-002). It further details the additional 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 AP1 amendment.

Table 12: Summary assessment of impacts and effects on farm holdings arising from additional land permanently required for the provision of landscape mitigation planting at Wimboldsley (AP1-002-002)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/1 Wimboldsley Hall Farm and Wimboldsley Grange Farm Owner-occupied. 291ha owned land with dairy herd of 570 cows. All heifers reared as dairy herd replacements or for sale. High sensitivity to change.	This AP1 amendment requires an additional 0.1ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 129.6ha; 45% of holding required for construction. Severance: Medium To the west of the WCML agricultural land will be severed as the utility diversion works are undertaken but access will remain available, subject	This AP1 amendment requires an additional 0.1ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 80.1ha; 28% required for the Walley's Green embankment, the Crewe north rolling stock depot, balancing ponds, landscape mitigation planting and habitat creation. Severance: Medium

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
	<p>to liaison, as set out in the draft Code of Construction Practice. Disruption: Low Potential for dust arising from construction to affect housed livestock. Overall temporary assessment: Major adverse due to the proportion of land required.</p>	<p>The land to be acquired for the borrow pits will be restored for agricultural production; access to the land will be possible via the Wimboldsley Grange access diversion and the public highway. Infrastructure: Negligible Although the bridge over the WCML that serves Wimboldsley Grange will be demolished, this asset is owned by Network Rail. An alternative means of access for the farm has been provided. Overall permanent assessment: Major adverse due to the proportion of land required.</p>

9.3 Additional land permanently required for the provision of a shared use cycle and pedestrian path at Clive Green Lane (AP1-002-004) and Additional land temporarily required for the provision of surface water drainage at Shropshire Union Canal North satellite compound (AP1-002-005)

- 9.3.1 As these two AP1 amendments affect the same holding in the same location they are assessed together.
- 9.3.2 The baseline agriculture, forestry and soils information for these AP1 amendments is as described in Volume 2, Community Area report: Wimboldsley to Lostock Gralam, (MA02), of the main ES and Volume 5, Appendix: AG-001-0MA02 of the main ES.

Soils and agricultural land classification

- 9.3.3 The agricultural land associated with these AP1 amendments has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e., till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). These AP1 amendments will require

an additional 0.9ha of best and most versatile agricultural land in Subgrade 3a. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

9.3.4 Table 13 provides details of the single farm holding that will be affected by the provision of a shared use cycle and pedestrian path (AP1-002-004) and the provision of surface water drainage (AP1-002-005). It further details the additional 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 AP1 amendments.

Table 13: Summary assessment of impacts and effects on the farm holding affected by the additional land permanently required for the provision of a shared use cycle and pedestrian path at Clive Green Lane (AP1-002-004) and the additional land temporarily required for the provision of surface water drainage at Shropshire Union Canal North satellite compound (AP1-002-005)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/5 Park Farm Mainly owner-occupied, some agricultural land rented from Cheshire West Council; some land contract farmed. 58ha dairy holding. High sensitivity to change.	The AP1 amendments will require an additional 0.1ha and AP1-002-005 will require a further 0.8ha compared to the original scheme. The assessed effects remain unchanged. Overall, land required: High 19.6ha; 34% of holding required. Severance: Negligible Disruption: Negligible Overall temporary assessment: Major adverse due to the proportion of land required.	The AP1 amendments result in a further 0.3ha required permanently compared to the original scheme. The assessed effects remain unchanged. Land required: High 16.3ha; 28% of holding required. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Major adverse due to proportion of land required.

9.4 Additional land permanently required for the underground diversion of a 11kV Scottish Power Energy Network overhead line at Birches Lane (AP1-002-011)

9.4.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Wimboldsley to Lostock Gralam, (MA02), of the main ES and Volume 5, Appendix: AG-001-0MA02 of the main ES.

Soils and agricultural land classification

9.4.2 The agricultural land associated with this AP1 amendment has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). The effect of this AP1 amendment is to require an additional 0.1ha of best and most versatile agricultural land in Subgrade 3a. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

9.4.3 Table 14 provides details of the single farm holding that will be affected by the realignment of a utility diversion (AP1-002-011). It further details the additional 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 AP1 amendment.

Table 14: Summary assessment of impacts and effects on farm holdings of additional land permanently required for the underground diversion of a 11kV Scottish Power Energy Network overhead line at Birches Lane (AP1-002-011)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/28 Springbank Farm* 45ha grassland holding with farm shop. Medium sensitivity to change.	<p>This AP1 amendment requires an additional 0.1ha from the holding compared to the original scheme. All assessed effects remain unchanged.</p> <p>Land required: High 17.2ha; 38% of holding required for construction. Severance: Medium Disruption during installation of utility diversions may preclude cropping over part of the land for a temporary period. Disruption: Low Construction impact (noise and dust) may have an effect on farm shop users and a possible reduction in sales. Overall temporary assessment: Major/moderate adverse due to the proportion of land required.</p>	<p>This AP1 amendment requires an additional 0.1ha from the holding compared to the original scheme. All assessed effects remain unchanged.</p> <p>Land required: High 10.7ha; 24% of holding required. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Major/moderate adverse due to the proportion of land required.</p>

9.5 Additional land permanently required for the provision of a combined HS2 maintenance access track from Linnards Lane and accommodation access for Warrens Lake Cottage (AP1-002-013)

9.5.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Wimboldsley to Lostock Gralam, (MA02), of the main ES and Volume 5, Appendix: AG-001-0MA02 of the main ES.

Soils and agricultural land classification

9.5.2 The agricultural land associated with this AP1 amendment has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). The effect of this AP1 amendment is to require a reduction of 0.1ha of agricultural land classified as best and most versatile in Subgrade 3a. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

9.5.3 Table 15 provides details of the single farm holding that will be affected by the provision of a combined HS2 maintenance track from Linnards Lane and accommodation access for Warren Lake Cottage (AP1-002-013). It further details the additional 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 AP1 amendment.

Table 15: Summary assessment of impacts and effects on farm holdings of additional land permanently required for the provision of a combined HS2 maintenance track from Linnards Lane and accommodation access for Warren Lake Cottage (AP1-002-013)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/34 Hilltop Holding Owner-occupied. 2.6ha grassland holding used for haylage production. Diversified activities include agricultural contracting. Low sensitivity to change.	This AP1 amendment will result in a reduction in the area required of 0.1ha. The total area required is 0.5ha (19%). This reduced impact removes a significant effect. Land required: Medium 0.5ha 19% of holding required for construction.	Land required: Medium 0.3ha; 13% of holding required for habitat creation. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Minor adverse due to the proportion of land required.

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
	Severance: Negligible Disruption: Negligible Overall temporary assessment: Minor adverse	

9.6 Overall impacts and effects in MA02 arising from the construction of the AP1 revised scheme

9.6.1 Table 16 sets out the areas and grade of agricultural land that will be required for the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Wimboldsley to Lostock Gram area (MA02).

Table 16: Agricultural land required for the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Wimboldsley to Lostock Gram area (MA02)

ALC grade	Area of land required for the original scheme (ha)	Area of land required for the SES1 and AP1 revised scheme	Change in area required (ha)
Grade 1	0	0	0
Grade 2	34	34	0
Grade 3a	209.1	156.7	-52.4
BMV Subtotal	243.1	190.7	-52.4
Grade 3b	208.3	208.9	+0.6
Grade 4	187.2	187.5	+0.3
Grade 5	0	0	0
Total agricultural land	638.6	587.1	-51.5

9.6.2 The summary impacts and effects on the farm holdings in the Wimboldsley to Lostock Gram area (MA02) that are affected by the original scheme, as amended by the SES1 design changes and AP1 amendments, are set out in Table 17.

Table 17: Summary impacts and effects on farm holdings arising from the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Wimboldsley to Lostock Gram area (MA02)

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
MA02/1 Wimboldsley	129.6ha (45%) High	Medium	Major adverse	80.1ha (28%) High	Major adverse

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
Hall Farm and Wimboldsley Grange Farm					
MA02/2 Lea Hall Farm	67.1ha (15%) Medium	Medium	Moderate adverse	37.6ha (8%) Low	Moderate adverse
MA02/3 Norcroft Farm*	1.2ha (2%) Negligible	Negligible	Negligible	0.6ha (1%) Negligible	Negligible
MA02/4 Stanthorne Park Mews*	7.7ha (64%) High	Medium	Moderate adverse	7.1ha (60%) High	Moderate adverse
MA02/5 Park Farm	19.6ha (34%) High	Negligible	Major adverse	16.3ha (28%) High	Major adverse
MA02/6 Yew Tree Farm (including Stanthorne Hall Farm)	54.6ha (35%) High	Low	Major adverse	34ha (22%) High	Major adverse (includes property demolition)
MA02/7 Mill Farm	0.2ha (<1%) Negligible	Negligible	Minor adverse	0ha (0%) Negligible	Negligible
MA02/8 Bostock House Farm	3.6ha (14%) Medium	Negligible	Minor adverse	0.9ha (4%) Negligible	Negligible
MA02/9 Greenheyes Farm	13.3ha (33%) High	Medium	Major adverse	4.7ha (12%) Medium	Major adverse (includes property demolition)
MA02/10 Bank Farm	22.3ha (26%) High	Low	Major/moderate adverse	12.0ha (14%) Medium	Moderate adverse
MA02/11 Croxtton Hall Farm	2.9ha (3%) Negligible	Negligible	Negligible	1.5ha (1%) Negligible	Negligible
MA02/12 Bostock Hall Farm	10.5ha (>10%) Medium	Low	Moderate adverse	3.9ha (4%) Negligible	Negligible
MA02/13 Dairy Farm, Whatcroft	42.3ha (13%) Medium	Low	Major/moderate adverse	25ha (8%) Low	Moderate adverse
MA02/14 Shanks Farm, Byley	0ha (0%) Negligible	Negligible	Negligible (previously minor adverse)	0ha (0%) Negligible	Negligible
MA02/15	0ha (0%)	Negligible	Negligible	0ha (0%)	Negligible

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
Allumbrook Farm	Negligible		(previously minor adverse)	Negligible	
MA02/16 Pear Tree Farm, Cranage	0ha (0%) Negligible	Negligible	Negligible (previously moderate adverse)	0ha (0%) Negligible	Negligible
MA02/17 Wash Lane Farm*	0ha (0%) Negligible	Negligible	Negligible (previously major/moderate adverse)	0ha (0%) Negligible	Negligible
MA02/18 Stublach Farm*	0ha (0%) Negligible	Negligible	Negligible (previously minor adverse)	0ha (0%) Negligible	Negligible
MA02/19 Brook Farm	10.7ha (21%) High	Low	Major adverse	7.3ha (15%) Medium	Major/moderate adverse
MA02/20 Fir Tree Farm	12.6ha (57%) High	Negligible	Major/moderate adverse	5.9ha (27%) High	Major/moderate adverse
MA02/21 Higgins Lane Farm	13.6ha (62%) High	Medium	Major/moderate adverse	8.3ha (38%) High	Major/moderate adverse (includes property demolition)
MA02/22 Hulse Heath Farm	6.3ha (3%) Negligible	Negligible	Negligible	2.4ha (1%) Negligible	Negligible
MA02/23 Land at King Street*	7.7ha (45%) High	Negligible	Major/moderate adverse	0.8ha (5%) Negligible	Negligible
MA02/24 High House Farm	27.1ha (35%) High	Negligible	Major/moderate adverse	7.8ha (10%) Low	Major/moderate adverse (includes property demolition)
MA02/25 Port Ford Farm	11.2ha (13%) Medium	Negligible	Moderate adverse	0.9ha (1%) Negligible	Negligible
MA02/26 Melvin Holme Farm	20.1ha (23%) High	Medium	Major/moderate adverse	4.5ha (5%) Low	Minor adverse
MA02/27 Birchall Farm	6.5ha (>5%) Low	Medium	Moderate adverse	0ha (0%) Negligible	Negligible
MA02/28	17.2ha (38%) High	Medium	Major/moderate adverse	10.7ha (24%) High	Major/moderate adverse

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
Springbank Farm*					
MA02/29 Langford Farm*	3.1ha (4%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA02/30 Land at Hangman's Lane*	0.8ha (5%) Negligible	Negligible	Negligible (previously moderate adverse)	0ha (0%) Negligible	Negligible
MA02/31 Park Farm, Lostock Gralam	29.4ha (32%) High	Medium	Major/moderate adverse	0.5ha (<1%) Negligible	Negligible
MA02/32 Fieldhouse Farm	76.4ha (51%) High	Medium	Major/moderate adverse	33.4ha (22%) High	Major/moderate adverse
MA02/33 Tabley Hill Dairy Farm	7.8ha (4%) Negligible	Negligible	Negligible	7.5ha (4%) Negligible	Negligible
MA02/34 Hilltop Holding	0.5ha (19%) Medium	Negligible	Minor adverse (previously moderate adverse)	0.3ha (13%) Medium	Minor adverse

* It has not yet been possible to arrange farm impact assessment interviews with these holdings. Publicly available sources have been used to obtain the information presented.

10 Pickmere to Agden and Hulseheath (MA03)

10.1 Additional land permanently required for the realignment and extension of Smoker Brook viaduct at the A556 Shurlach Road and Winnington Wood (AP1-002-012)

10.1.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Pickmere to Agden and Hulseheath, (MA03), of the main ES and Volume 5, Appendix: AG-001-0MA03 of the main ES.

Soils and agricultural land classification

10.1.2 The agricultural land associated with this AP1 amendment has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). The effect of this AP1 amendment is to require an additional 0.2ha of best and most versatile agricultural land in Subgrade 3a and 0.5ha of lower quality land in Subgrade 3b. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

10.1.3 Table 18 provides details of the farm holdings that will be affected by the realignment and extension of viaduct (AP1-002-012). It further details the additional 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 AP1 amendment.

Table 18: Summary assessment of impacts and effects on farm holdings arising from the additional land permanently required for the realignment and extension of Smoker Brook viaduct at the A556 Shurlach Road and Winnington Wood (AP1-002-012)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA02/31 Park Farm, Lostock Gralam 93ha arable and equestrian (livery) holding. Medium sensitivity to change.	This AP1 amendment requires an additional 0.1ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High	This AP1 amendment permanently requires an additional 0.1ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: Negligible

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
	<p>29.4ha; 32% of holding required for the construction. Severance: Medium Severance during the extensive utility diversions may require alternative access to land. Disruption: Low Disruption during installation of utility diversions may preclude cropping over part of the land for a temporary period. Riding and exercising horses close to construction activities may also need to be limited. Overall temporary assessment: Major/moderate adverse due to the proportion of land required.</p>	<p>0.5ha; <1% of holding required for landscape mitigation. Severance: Negligible Infrastructure: Negligible Overall permanent assessment: Negligible</p>
<p>MA03/1 Roses Farm, including Smoker Hill Farm and Flittogate Farm 291ha arable and beef cattle holding. Medium sensitivity to change.</p>	<p>This AP1 amendment requires an additional 0.5ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: Medium 47.4ha; 16% of holding required for construction. Severance: Low Land severed and access will be possible via Tabley Inferior Footpath 1/1 accommodation underbridge. Disruption: Negligible Overall temporary assessment: Moderate adverse due to the proportion of land required.</p>	<p>This AP1 amendment results in an additional 0.7ha permanently from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: Low 26.0ha; 9% of holding required. Severance: Low Access to severed land will be possible via Tabley Inferior Footpath 1/1 accommodation underbridge. Infrastructure effects: Negligible (It is noted that the residential property and buildings at Flittogate Farm will be demolished but these do not form part of the Roses Farm tenancy). Overall permanent assessment: Minor adverse</p>
<p>MA03/2 Cheshire Showground 121ha leased from the Crown Estate under Farm Business Tenancy (FBT) to 2035. Permanent grassland holding with ancillary grazing. High sensitivity to change.</p>	<p>This AP1 amendment requires an additional 0.1ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 26.2ha; 22% of holding required for construction. Severance: Low Following consultation with the management committee for the</p>	<p>This AP1 amendment results in an additional 0.8ha permanently from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: Low 7.0ha; 6% of holding required. Severance: Low Vehicular access across the showground will not be possible but</p>

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
	<p>showground, vehicular access across the showground will not be provided but an underpass for non-motorised users will be provided.</p> <p>Disruption: Low</p> <p>Dust and general construction activities may reduce uptake of the showground facilities during construction.</p> <p>Overall temporary assessment: Major adverse due to the proportion of land required.</p>	<p>an underpass for non-motorised users will be provided.</p> <p>Infrastructure effects: Negligible</p> <p>Overall permanent assessment: Moderate adverse due to the proportion of land required and severance.</p>

10.2 Additional land permanently required to modify HS2 access near Heyrose Farm (AP1-003-002)

- 10.2.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Pickmere to Agden and Hulseheath, (MA03), of the main ES and Volume 5, Appendix: AG-001-0MA03 of the main ES.

Soils and agricultural land classification

- 10.2.2 The agricultural land associated with this AP1 amendment has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). The AP1 amendment will reduce the area of land required by 0.1ha. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

- 10.2.3 Table 19 provides details of the single farm holding that will be affected by the modifications to the HS2 access (AP1-003-002). It further details the additional 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 AP1 amendment.

Table 19: Summary assessment of impacts and effects on farm holdings arising from the additional land permanently required to modify HS2 access near Heyrose Farm (AP1-003-002)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA03/9 Heyrose Farm Owner occupied. 32ha arable and grassland holding. The holding includes Heyrose Golf Club. Medium sensitivity to change.	This AP1 amendment results in a reduction of 0.1ha required temporarily from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 20.2ha; 63% of holding required for construction. Severance: Medium Access to the residual farmland will be possible via public highways. Disruption: Negligible Overall temporary assessment: Major/moderate adverse due to the proportion of land required.	This AP1 amendment results in an increase of 0.7ha permanently required compared to the original scheme. The assessed effects remain unchanged. Land required: High 9.7ha; 30% of holding required. Severance: Medium Access to the residual farmland will be possible via public highways. Infrastructure effects: High Demolition of residential dwelling and agricultural buildings. Overall permanent assessment: Major/moderate adverse due to the proportion of land required and property demolition.

10.3 Additional land permanently required to lengthen the realignment of the M6 between Jn19 and Jn20 (AP1-003-003)

10.3.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Pickmere to Agden and Hulseheath, (MA03), of the main ES and Volume 5, Appendix: AG-001-0MA03 of the main ES.

Soils and agricultural land classification

10.3.2 The agricultural land associated with this AP1 amendment has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV). They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). The effect of this AP1 amendment is to require an additional 0.7ha of lower quality agricultural land in Subgrade 3b. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

10.3.3 Table 20 provides details of the farm holding that will be affected by changes to highway alignment (AP1-003-003). It further details the additional 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 AP1 amendment.

Table 20: Summary assessment of impacts and effects on farm holdings arising from the additional land permanently required to lengthen the realignment of the M6 between Jn19 and Jn20 (AP1-003-003)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA03/17 Hollowood Farm Owner occupier. 63ha grassland holding laid to grass and used for rearing beef cattle and winter grazing for sheep. Diversified activities include a phone mast. Medium sensitivity to change.	This AP1 amendment requires an additional 0.7ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: High 15.2ha; 24% of holding required for construction. Severance: Low Access to severed farmland will be possible via the Tabley Superior Restricted Byway 4/1 accommodation underbridge. Disruption: Negligible Overall temporary assessment: Major/moderate adverse due to the proportion of land required.	This AP1 amendment requires an additional 0.6ha from the holding compared to the original scheme. The assessed effects remain unchanged. Land required: Low 6.0ha; <10% of holding required. Severance: Low Access to severed farmland will be possible via the Tabley Superior Restricted Byway 4/1 accommodation underbridge. Infrastructure effects: Negligible Overall permanent assessment: Minor adverse.

10.4 Additional land temporarily required for the provision of surface water drainage at Bowden View satellite compound (AP1-003-005)

10.4.1 The baseline agriculture, forestry and soils information for the AP1 amendment is as described in Volume 2, Community Area report: Pickmere to Agden and Hulseheath, (MA03), of the main ES and Volume 5, Appendix: AG-001-0MA03 of the main ES.

Soils and agricultural land classification

10.4.2 The agricultural land associated with this AP1 amendment has soil in the Salop association. This association comprises slowly permeable and seasonally waterlogged soils (WC III to IV).

They are developed in reddish glacial deposits (i.e. till and glaciofluvial sand and gravel deposits). The quality of the agricultural land is limited by soil wetness to a Subgrade 3a or Subgrade 3b (see main ES for details). The effect of this AP1 amendment is to require an additional 0.1ha of best and most versatile agricultural land in Subgrade 3a. This does not change the significance of the effects reported in the main ES.

Assessment of impacts and effects on holdings

10.4.3 Table 21 sets out the farm holdings that will be affected by the provision of surface water drainage (AP1-003-005). 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 AP1 amendment.

Table 21: Summary assessment of impacts and effects on farm holdings arising from the additional land temporarily required for the provision of surface water drainage at Bowden View satellite compound (AP1-003-005)

Holding reference, name and description	Temporary impacts and effects	Permanent impacts and effects
MA03/25 Hulme Barn Farm Owner occupied. 81ha mainly arable with grassland (haylage). Medium sensitivity to change.	This AP1 amendment requires an additional (less than) 0.1ha from the holding compared to the SES1 scheme. All assessed effects remain unchanged. Land required: High 47.8ha; 59% of holding required for construction. Severance: Low Disruption during installation of utility diversions may preclude cropping over part of the land for a temporary period. Disruption: Negligible Overall temporary assessment: Major/moderate adverse due to the proportion of land required.	The assessed effects remain unchanged. Land required: Medium 14.6ha; 18% of holding required. Severance: Negligible Infrastructure effects: Negligible Overall permanent assessment: Moderate adverse due to the proportion of land required.

10.5 Overall impacts and effects in MA03 arising from the construction of the AP1 revised scheme

10.5.1 Table 22 sets out the areas and grade of agricultural land that will be required for the construction of the AP1 revised scheme in the Pickmere to Agden and Hulseheath area (MA03).

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Table 22: Agricultural land required for the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Pickmere to Agden and Hulseheath area (MA03)

ALC grade	Area of land required for the original scheme (ha)	Area of land required for the SES1 and AP1 revised scheme	Change in area required (ha)
Grade 1	0	0	0
Grade 2	55.4	30.4	-25
Grade 3a	217.3	188	-29.3
BMV subtotal	272.7	218.4	-54.3
Grade 3b	129.1	125.1	-4
Grade 4	0	0	0
Grade 5	0	0	0
Total agricultural land	401.8	343.5	-58.3

10.5.2 The summary impacts and effects on the other farm holdings in the Pickmere to Agden and Hulseheath (MA03) area that were affected by the original scheme, as amended by the SES1 design changes and AP1 amendments, are set out in Table 23.

Table 23: Summary impacts and effects on farm holdings arising from the construction of the original scheme as amended by the SES1 design changes and AP1 amendments in the Pickmere to Agden and Hulseheath area (MA03)

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
MA03/1 Roses Farm*	47.4ha (16%) Medium	Low	Moderate adverse	26.0ha (9%) Low	Negligible
MA03/2 Cheshire Showground	26.2ha (22%) High	Low	Major adverse	7.0ha (6%) Low	Moderate adverse
MA03/3 Frog Lane Farm	9.4ha (1%) Negligible	Negligible	Minor adverse	1.5ha (<1%) Negligible	Minor adverse
MA03/4 School Farm	3.2ha (33%) High	Negligible	Major/moderate adverse	2.5ha (25%) High	Major/moderate adverse
MA03/5 Land at School Lane*	0.8ha (2%) Negligible	Negligible	Negligible	<0.1ha (<1%) Negligible	Negligible
MA03/6 Land at Frog Lane*	0.2ha (15%) Medium	Negligible	Minor adverse	0.1ha (9%) Low	Negligible
MA03/7 Tabley Brook Farm*	1.2ha (17%) Medium	Negligible	Moderate adverse	<0.1ha (<1%) Negligible	Negligible

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Agriculture, forestry and soils

MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
MA03/8 Windmill Nurseries	1.8ha (75%) High	Negligible	Major adverse	1.4ha (57%) High	Major adverse (includes property demolition)
MA03/9 Heyrose Farm	20.2ha (63%) High	Medium	Major/moderate adverse	9.7ha (30%) High	Major/moderate adverse (includes property demolition)
MA03/10 Feldy Green Cottage*	2.7ha (18%) Medium	Negligible	Moderate adverse	0ha (0%) Negligible	Negligible
MA03/11 East Feldy Farm (A)*	0.2ha (6%) Low	Negligible	Minor adverse	0ha (0%) Negligible	Negligible
MA03/12 East Feldy Farm (B)*	1.3ha (12%) Medium	Negligible	Moderate adverse	0ha (0%) Negligible	Negligible
MA03/13 Gore Farm	4.3ha (3%) Negligible	Negligible	Negligible	<0.1ha (<1%) Negligible	Negligible
MA03/14 Old Feldy Farm*	0.9ha (4%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA03/15 Gorsefields Farm*	0.3ha (1%) Negligible	Negligible	Negligible	0ha (0%) Negligible	Negligible
MA03/16 Fields Farm*	0.7ha (6%) Low	Negligible	Minor adverse	0ha (0%) Negligible	Negligible
MA03/17 Hollowood Farm	15.2ha (24%) High	Low	Major/moderate adverse	6.0ha (<10%) Low	Minor adverse
MA03/18 Land at Smith Cottage*	1.3ha (>5%) Low	Negligible	Minor adverse	0.3ha (1%) Negligible	Negligible
MA03/19 Knowlspit Farm with Bentleyhurst Farm	17.7ha (14%) Medium	Low	Major/moderate adverse (previously major adverse)	1.3ha (1%) Negligible	Moderate adverse
MA03/20 Winterbottom Farm	75.4ha (94%) High	Negligible	Major/moderate adverse	34.2ha (43%) High	Major/moderate adverse

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Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
MA03/21 Land at Winterbottom Lane*	1.8ha (100%) High	Negligible	Moderate adverse	0ha (0%) Negligible	Negligible
MA03/22 Yew Tree Farm	12.1ha (15%) Medium	Medium	Major/moderate adverse	7.5ha (9%) Low	Moderate adverse
MA03/23 Moss Farm and Park Farm	9.8ha (11%) Medium	Negligible	Moderate adverse	6.8ha (8%) Low	Minor adverse
MA03/24 Brookheyes Farm	10.6ha (96%) High	Negligible	Major/moderate adverse	3.3ha (30%) High	Major/moderate adverse
MA03/25 Hulme Barn Farm	47.8ha (59%) High	Low	Major/moderate adverse	14.6ha (18%) Medium	Moderate adverse
MA03/26 Land at Bowden View Farm*	11.1ha (98%) High	Negligible	Major/moderate adverse	6.4ha (56%) High	Major/moderate adverse (includes property demolition)
MA03/27 Land at Wrenshot House*	1.4ha (>20%) High	Negligible	Moderate adverse	0.6ha (9%) Low	Moderate adverse (includes property demolition)
MA03/28 Land at Mere Hall Farm*	7.8ha (16%) Medium	Negligible	Moderate adverse	0.7ha (1%) Negligible	Negligible
MA03/29 Land at Hulse Heath Lane, Bucklow Hill*	4.1ha (94%) High	Negligible	Major/moderate adverse	0ha (0%) Negligible	Negligible
MA03/30 Hulse Heath Farm	0.4ha (46%) High	Negligible	Moderate adverse	0ha (0%) Negligible	Negligible
MA03/31 Land at Chapel Lane, Bucklow Hill (1)*	1.4ha (90%) High	Negligible	Moderate adverse	0.1ha (8%) Low	Negligible
MA03/32	12.1ha (81%) High	High	Moderate adverse	7.8ha (52%) High	Moderate adverse

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MA01, MA02, MA03, MA04 and MA05

Agriculture, forestry and soils assessment

Holding reference and name	Area required during construction	Construction severance	Scale of temporary effect (with reference to original scheme where relevant)	Area permanently required	Scale of permanent effect (with reference to original scheme where relevant)
Land at Peacock Lane, Millington (1)					
MA03/33 Gorse Cottage Farm	3.6ha (79%) High	Negligible	Moderate adverse	2.5ha (55%) High	Moderate adverse
MA03/34 Land at Peacock Lane, Millington (2)*	1.2ha (60%) High	Negligible	Moderate adverse	<0.1ha (<1%) Negligible	Negligible

* It has not yet been possible to arrange farm impact assessment interviews with these holdings. Publicly available sources have been used to obtain the information presented.

High Speed Two (HS2) Limited

Two Snowhill

Snow Hill Queensway

Birmingham B4 6GA

Freephone: 08081 434 434

Minicom: 08081 456 472

Email: HS2enquiries@hs2.org.uk