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Environmental Statement

Interim Environmental Report (IER), Volume 1, Chapter 7: Soils and Agriculture

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7 Soils and agriculture

7.1 Introduction

7.1.1 This chapter of the Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) of effects on the environment with respect to soils and agriculture as a result of the Scheme.

7.1.2 This chapter identifies and proposes measures to address the potential impacts and likely significant effects on the environment with respect to soils and agriculture during the construction, operation and maintenance, and decommissioning phases.

7.1.3 The information presented within this chapter has been informed by the Scheme information and description provided in Volume 1, Chapter 2 Scheme description.

7.2 Scope of the assessment

7.2.1 Chapter 8 of the EIA Scoping Report[1] identifies the likely significant effects that could arise as a result of the Scheme, on soils and agriculture receptors, for the construction, operational, and decommissioning phases and consequently whether a standalone topic chapter was required in the ES.

7.2.2 Through the adoption of the Scoping Opinion[2] the Secretary of State has confirmed that the soils and agricultural assessment must assess the scope set out in Table 7-1.

Table 7-1 Soils and agriculture receptors scoped in/ out of assessment within the ES

Topic	Scoped in / out			Justification
	Construction phase and panel/battery replacement	Operational phase (routine maintenance)	Decommissioning phase	
Soil Resources	Scoped in	Scoped in	Scoped in	More than 20 ha of low-medium sensitivity soils will be affected by the construction of the Scheme. Impacts are expected to be temporary (2 years) and reversible, as all soils will be reinstated following construction and decommissioning and will remain secure and functional during the operational phase. Therefore, impacts are considered unlikely to be significant and were proposed to be scoped out of the ES. However, following receipt of the Scoping Opinion, the Planning Inspectorate (PINS) requested that construction, operational and decommissioning phase impacts be included and assessed as part of the ES. This is now included as part of the ES.
Soil functions and ecosystem services	Scoped out	Scoped out	Scoped out	The agricultural soils underlying the Scheme do not support protected features within a UK designated site. Therefore, impacts on soil functions and ecosystems are considered unlikely to be significant and were scoped out of the assessment for all phases. In the Scoping Opinion, PINS agreed with this approach and so this matter remains scoped out for all phases in the ES.
Soil Carbon	Scoped out	Scoped out	Scoped out	Soils and minerals are not expected to contain high or sensitive levels of carbon or organic matter. Therefore, construction impacts on soil carbon are considered unlikely to be significant and were scoped out of the assessment for all phases. In the Scoping Opinion, PINS agreed with this approach and so this matter remains scoped out for all phases in the ES.

[1] Arrow Valley Solar Limited (2026) Arrow Valley Solar. EIA Scoping Report. Volume I: Main Report (Document Reference AVS-ATR-GEN-AA-DOC-ENV-000001, Rev. A). Planning Inspectorate Reference EN0110033.
Available at: https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN0110033-000002-20260327%20Arrow%20Valley%20EIA%20Scoping%20Report%20Volume%201%20Main%20Report%20Rev.%20A.pdf.

[2] Planning Inspectorate (2026) Scoping Opinion: Proposed Arrow Valley Solar (Case Reference EN0110033). Adopted on behalf of the Secretary of State pursuant to Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, 7 May 2026.
Available at: https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN0110033-000010-Arrow%20Valley%20Solar%20Scoping%20Opinion.pdf

Topic	Scoped in / out			Justification
	Construction phase and panel/battery replacement	Operational phase (routine maintenance)	Decommissioning phase	
Agricultural land	Scoped in	Scoped in	Scoped in	More than 20 ha of best and most versatile (BMV) land will be affected by the Scheme, however, agricultural land was proposed to be scoped out of the ES at Scoping Report stage on the basis that the impacts are expected to be temporary, as the land will be restored to its previous Agricultural Land Classification (ALC) grade following construction on the cable route corridors (CRC), and decommissioning for the Sites. Furthermore, an appropriate Soil Management Plan will be developed to inform the construction of the Scheme and protect the soil quality for reinstatement. The design of the solar array will also allow for grazing of livestock and there is the possibility to maintain the land in reduced agricultural production during the operational phase of the Scheme. However, in the Scoping Opinion, PINS requested construction, operational and decommissioning phase impacts be included as part of the ES. This is now included as part of the ES.
Agricultural land holdings	Scoped in	Scoped out	Scoped out	Agricultural land holdings are likely to experience temporary effects during the construction of the Scheme due to the removal of land from agricultural production and disruption to farm activities. However, further information on the agricultural land holding is required to inform the assessment. Therefore, the effects of construction on agricultural land holdings were scoped into the ES at Scoping Report stage. During the operational phase of the Scheme, there would be no further development of built infrastructure and therefore no further impacts on the agricultural land holdings and after the decommissioning of the solar infrastructure, agricultural land holdings are expected to return to their farming activities and there would be no significant effects on agricultural land holdings. Therefore, operational and decommissioning effects agricultural land holdings were scoped out of the ES at scoping stage. In the Scoping Opinion, PINS agreed with this approach, so the scope remains unchanged.

7.3 Consultation

Consultation to date

7.3.1 Agricultural land holding interviews were undertaken in May 2026 for the Sites, to obtain more detailed information on the layout and composition of agricultural land holdings to inform the assessment. Information has also been requested from landowners along the CRCs.

7.4 Legislation, policy, and guidance

Legislation

7.4.1 EIA regulations have been outlined in Volume 1, Chapter 1 Introduction of this ES. There is no other legislation relevant to this chapter.

Policy

7.4.2 The policy listed below has been considered in the soils and agriculture assessment. Volume 3, Appendix 7.1 Legislation and policy relevant to the soils and agriculture assessment, provides further detail on how policy of relevance has informed the soils and agriculture assessment.

- Overarching National Policy Statement (NPS) for Energy (EN-1)[3];
- NPS for Renewable Energy Infrastructure (EN-3)[4];
- NPS for Electricity Networks Infrastructure (EN-5)[5];
- National Planning Policy Framework (NPPF) 2026[6];
- South Worcestershire Development Plan Review (SWDPR) 2026[7];
- Stratford-On-Avon District Core Strategy (SoADC) Core Strategy 2011-2031[8];
- South Warwickshire Local Plan (SWLP) 2025 (emerging policy)[9];
- Redditch Borough Council (ReBC) Local Plan No.4 (Jan 2017)[10];
- Bidford-on-Avon Neighbourhood Plan (2017)[11]; and
- Salford Seven Neighbourhood Development Plan (2015-2031)[12].

Guidance documents

7.4.3 The soils and agricultural land assessment has been undertaken in accordance with the following guidance:

- Institute of Sustainability and Environmental Professionals (ISEP) Land and Soil in EIA guidance[13];
- Natural England Guide to Assessing Development Proposals on Agricultural Land[14];
- Defra Agricultural Land Classification (ALC) framework[15];
- Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites[16];
- Institute of Quarrying Good Practice Guide for Handling Soils[17];
- ISEP, Solar PV on Agricultural Land: Essential Components of Environmental Assessments and Reports[18];
- British Society of Soil Science (BSSS). Guidance Document 3, Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction[19];

[3] Department for Energy Security and Net Zero (2026) Overarching National Policy Statement for Energy (EN-1). Available at: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1-2025
[4] Department for Energy Security and Net Zero (2026) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3-2025
[5] Department for Energy Security and Net Zero (2026) National Policy Statement for Electricity Networks Infrastructure (EN-5). Available at: https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5-2025
[6] Ministry of Housing, Communities & Local Government (2026) National Planning Policy Framework. Available at: https://www.gov.uk/guidance/national-planning-policy-framework
[7] South Worcestershire Development Plan Review (2026) South Worcestershire Development Plan Review 2021-2041. Available at: https://www.worcester.gov.uk/planning/planning-policy/south-worcestershire-development-plan
[8] Stratford-on-Avon District Council (2016) Stratford-on-Avon District Core Strategy 2011- 2031. Available at: https://tysoe.org.uk/wp-content/uploads/SDC-CORE-STRATEGY-2011-2031-July-2016.pdf
[9] South Warwickshire Local Plan (emerging plan). Available at: https://www.southwarwickshire.org.uk/swlp/
[10] Redditch Borough Council (2017). Borough of Redditch Local Plan No. 4 (2011–2030). Available at: https://www.redditchbc.gov.uk/media/tbodcekr/adopted-borough-of-redditch-local-plan-no4-2011-2030.pdf
[11] Bidford-on-Avon Parish Council (2017) Bidford-on-Avon Neighbourhood Development Plan. Available at: https://www.stratford.gov.uk/planning-building/bidford-on-avon-neighbourhood-plan.cfm
[12] Salford Priors Parish Council (2017) Salford Seven Neighbourhood Development Plan 2015-2031. Available at: https://www.stratford.gov.uk/doc/208631/name/Made%20Version%20July%202017.pdf
[13] ISEP (2021) Land and Soil in EIA. Available at: https://www.isepglobal.org/articles/land-and-soil-in-environmental-impact-assessment
[14] Natural England (2026), Guide to assessing development proposals on agricultural land at: https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land
[15] Defra (2025) Agricultural Land Classification of England and Wales: Guidelines for grading the quality of agricultural land. Available: https://publications.naturalengland.org.uk/publication/6257050620264448.
[16] Defra (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. Available at: https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites
[17] Institute of Quarrying (2021) Good Practice Guide for Handling Soils in Mineral Workings. Available at: https://www.quarrying.org/hubfs/Soils%20Guidance/IQ%20Soil%20Guidance%20full%20document%20including%20all%20practitioner%20advice%20updated%20May%202022.pdf
[18] ISEP (2025), Solar PV on Agricultural Land: Essential Components of Environmental Assessments and Reports. Available at: https://www.isepglobal.org/.
[19] British Society of Soil Science (BSSS) (2022). Guidance Document 3, Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction. Available at: https://cdn-bsss-new.b-cdn.net/wp-content/uploads/2022/02/WWS3-Benefitting-from-Soil-Management-in-Development-and-Construction-Jan-2022.pdf

- Natural England, Technical Information Note TIN049, Agricultural Land Classification: Protecting the Best and Most Versatile Agricultural Land[20];
- HS2 assessment methodology for agricultural land [21]; and
- Planning Practice Guidance (PPG) – Natural Environment[22].

7.5 Method of assessment

Introduction

7.5.1 The assessment of soil resources and agricultural land has been undertaken in line with the ISEP Land and Soil in EIA guidance[13]. The assessment of soil resources considers the susceptibility of soils to damage based on their characteristics. The assessment of agricultural land considers the quality of the land based on the ALC framework.

7.5.2 The assessment for agricultural land holdings has been informed by the HS2 assessment methodology21 and developed with reference to ISEP's Land and Soil in EIA guidance[13]. As recognised in ISEP's Solar PV guidance for agricultural land[18], the HS2 methodology provides an established assessment approach for infrastructure projects.

7.5.3 The assessment considers the potential effects of the Scheme on agricultural land holdings including the loss of land, severance of land access, loss of farm buildings and infrastructure and disruption of land use. An agricultural land holding is defined as an area of land that consists of one or more land parcels or group of fields that are managed for agricultural purposes.

Establishing the baseline

Study Area

7.5.4 The Study Area for the soils and agricultural land assessment encompasses all land within the Order Limits (as shown in Volume 2, Figure 1.1 Scheme location) and has been defined to reflect the spatial extent of the likely effects arising from the Scheme.

7.5.5 The Study Area is focused on the Order Limits, as direct effects on soils and agricultural land quality, including the loss of agricultural land and disturbance to soil resources, are expected to occur only within the Order Limits.

7.5.6 In the case of agricultural land holdings, in addition to likely effects within the Order Limits, the ES has also considered potential effects on adjoining agricultural land where land holdings extend beyond the Order limits.

7.5.7 Potential effects on adjoining agricultural land have also been considered as part of the agricultural land holdings assessment, where land holdings extend beyond the Order Limits. This takes into account potential indirect effects of the Scheme on the wider agricultural land holding, including land take, severance, changes to access arrangements, alteration to farm infrastructure and disruption of land use.

7.5.8 The Study Area is therefore considered appropriate for the anticipated spatial extent of the Scheme's likely effects on soils and agriculture as it extends beyond the Order Limits to include adjoining agricultural land, where relevant.

Desk study

7.5.9 The following sources of information have been reviewed to inform the soils and agricultural land assessment:

- National Soil Association mapping[23];
- Predictive ALC mapping[24]; and
- Climatological Data for Agricultural Land Classification[25].

Surveys

7.5.10 The following survey data has been undertaken to inform the soils and agriculture assessment:

- ALC survey Volume 3, Appendix 7.2 ALC survey report; and
- Agricultural land holding interviews were undertaken in May 2026 for the Sites, to obtain more detailed information on the layout and composition of agricultural land holdings to inform the assessment. Information has also been requested from landowners along the CRCs.

[20] Natural England (2012) Technical Information Note TIN049, Agricultural Land Classification: Protecting the Best and Most Versatile Agricultural Land. Available at: https://publications.naturalengland.org.uk/publication/35012
[21] Department for Transport (2013) HS2 Phase One environmental statement volume 5: land quality. Available at: https://www.gov.uk/government/publications/hs2-phase-one-environmental-statement-volume-5-land-quality/hs2-phase-one-environmental-statement-volume-5-land-quality
[22] Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities (2019) Use of planning conditions. Available at: https://www.gov.uk/guidance/use-of-planning-conditions
[23] Cranfield University (2026) "Land Information System LandIS, National Soil Map,". Available: https://portal.landis.org.uk/
[24] DEFRA (2026) Data Services Platform, Predictive Agricultural Land Classification Map for England. Available at: https://environment.data.gov.uk/dataset/a817d96f-271d-487b-89ad-48d271f931aa.
[25] Natural England (1989) Climatological Data for Agricultural Land Classification. Available at: https://publications.naturalengland.org.uk/publication/6493605842649088

Impact assessment

Determining value

7.5.11 Table 7-2 provides the criteria for determining the sensitivity of soil and agricultural receptors and follows the ISEP guidance for soils and agricultural land[13] and the HS2 method[21] for agricultural land holdings.

7.5.12 It is noted that the sensitivity criteria for agricultural land holdings and soil resources do not include a very high or negligible sensitivity categories, reflecting the approach adopted in the ISEP guidance and the HS2 methodology.

Table 7-2 Receptor sensitivity criteria for soils and agriculture

Sensitivity	Soil resources (resilience to structural damage)	Agricultural land	Agricultural land holdings
Very High	Not applicable.	ALC Grades 1 and 2.	Not applicable.
High	Soils with high clay and silt fractions (clays, silty clays, sandy clays, heavy silty clay loams and heavy clay loams) and organo-mineral and peaty soils where the field capacity days (FCD) are 150 or greater. Medium-textured soils (silt loams, medium silty clay loams, medium clay loams and sandy clay loams) where the FCDs are 225 or greater. All soils in wetness class (WCV or WCVI).	ALC Grade 3a.	Farm types in which the operation of the business is dependent on the spatial relationship between land and key infrastructure, and where there is a requirement for frequent and regular access between the two, or dependent on the existence of the infrastructure itself: Dairying, in which milking cows must travel between fields and the parlour at least twice a day. Irrigated arable cropping and field-scale horticulture, which are dependent on irrigation water supplies. Intensive livestock or horticultural production that is undertaken primarily within buildings, often in controlled environments.
Medium	Clays, silty clays, sandy clays, heavy silty clay loams, heavy clay loams, silty loams and organo-mineral and peaty soils where the FCDs are fewer than 150. Medium-textured soils (silt loams, medium silty clay loams, medium clay loams and sandy clay loams) where FCDs are fewer than 225. Sands, loamy sands, sandy loams and sandy silt loams where the FCDs are 225 or greater or are in wetness classes WCIII and WCIV.	ALC Grade 3b.	Farm types in which there is a degree of flexibility in the normal course of operations: Combinable arable farms. Grazing livestock (other than dairying).
Low	Soils with a high sand fraction (sands, loamy sands, sandy loams and sandy silt loams) where the FCDs are fewer than 225 and are in wetness classes WCI to WCII.	ALC Grades 4 & 5 or Urban soils.	Farm types and land uses undertaken on a non-commercial basis e.g. small holdings where the main source of income is not derived from the agricultural business.
Negligible	As for low sensitivity, but with only indirect, tenuous, and unproven links between sources of impact and soil functions.	Not applicable.	Not applicable.

Determining impact magnitude

7.5.13 The criteria defining the magnitudes of impact on soil resources and agricultural land are based on the ISEP guidance[10] and are set out in Table 7-3.

Table 7-3 Criteria used for assessing the impact magnitude on soil resources and agricultural land

Impact magnitude	Description
Major	Permanent, irreversible loss of one or more soil functions or soil volumes (including permanent sealing or land quality downgrading) over an area of more than 20 ha (including effects from 'temporary developments); or Potential for permanent improvement in one or more soil functions or soil volumes due to remediation or restoration over an area of more than 20 ha (including effects from temporary developments).
Moderate	Permanent, irreversible loss of one or more soil functions or soil volumes, over an area of between 5 and 20 ha (including effects from temporary developments); or Potential for improvement in one or more soil functions or soil volumes due to remediation or restoration over an area of between 5 and 20 ha (including effects from temporary developments).
Minor	Permanent, irreversible loss over less than 5 ha or a temporary, reversible loss of one or more soil functions or soil volumes; or Potential for permanent or temporary improvement in one or more soil functions or soil volumes due to remediation or restoration over an area of less than 5 ha on site or off site improvement.
Negligible	No discernible loss or reduction or improvement of soil functions or soil volumes that restrict current or proposed land use.

7.5.14

7.5.15 **Table 7-4** provides the criteria defining the magnitude of impacts to agricultural land holdings. The criteria are based on the HS2 guidance[15], but have been adapted with reference to the ISEP Land and Soil guidance[10] to reflect the nature of the Scheme and the extent to which existing agricultural land uses will be disrupted.

Table 7-4 Criteria for assessing the magnitude of impacts on agricultural land holdings

Impact magnitude	Land required	Severance	Infrastructure	Disruptive effects
Major	Permanent, irreversible loss of >20% of all land farmed.	No access available to severed land.	Loss of farm dwelling or building and infrastructure.	Disruption permanently discontinues land use.
Moderate	Permanent, irreversible loss of 5-20% of all land farmed.	Access available to severed land via the public highway.	Loss or damage to infrastructure affecting land use.	Disruption necessitates permanent change to scale or nature of land use.
Minor	Permanent, irreversible loss of <5% of all land farmed; or Temporary, reversible loss of land.	Access available to severed land via private way.	Infrastructure loss/damage does not affect land use.	Disruption does not affect long term land use.
Negligible	No discernible loss of land that restricts current or proposed land use.	No severance.	No impact on farm infrastructure.	No disruption on land use.

7.5.16 The overall impact magnitude for the agricultural land holding is assigned from the highest magnitude identified among the four criteria (land required, severance, infrastructure, disruptive effects). For example, an agricultural land holding experiencing a high impact from land severance but medium impact for other criteria would experience an overall high impact magnitude.

7.5.17 Where the agricultural land holding forms part of a larger area (that extends beyond the extent of the Scheme boundary), the percentage of land take has been calculated according to the area of the entire land holding.

Determining effect significance

The significance of effects for all aspects has been determined according to Table 7-5. Significance is characterised as adverse, beneficial or neutral. Effects considered to be 'significant' are Very large, Large, or Moderate as shaded in Table 7-5.

Table 7-5 Significance matrix for soil resources and agricultural land

		Impact Magnitude				
		No Change	Negligible	Minor	Moderate	Major
Receptor sensitivity	Very High	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or moderate
	Negligible	Neutral	Slight	Neutral or Slight	Neutral or Slight	Slight

7.5.18 Where Table 7-5 identifies more than one level of significance, (e.g. Moderate or Large), professional judgement has been used to determine the suitable significance of effect based on the evidentiary baseline and knowledge of the likely activities or types of changes that would cause the impact.

7.6 Baseline conditions

Land use and topography

7.6.1 A summary of the current land use and topography within the Order Limits is provided in Table 7-6. The locations of the Order Limits are shown in Volume 2, Figure 2.1 Location of development sites and cable route corridors.

7.6.2 The areas reported for the CRC include the entire corridor width, which is larger than the expected final working width of the CRC, which will be on average 25 m to 35 m wide.

Table 7-6 Current land use within the Order Limits

Site	Current land use	Topography	Area (ha) or length (km)
Site 1	Comprises mixed arable and pasture fields.	The land is gently undulating and ranges from 50 to 120 m above ordnance datum (AOD).	447.6 ha
Site 2	Comprises arable fields.	The land is flat to gently sloping and ranges between 30 and 80 m AOD.	319.8 ha
Site 3	Comprises mixed arable and pasture fields.	The land is predominantly flat to gently sloping and between 35 and 60 m AOD.	287.7 ha
Site 4	Comprises arable fields.	The land is gently undulating between 33 and 39 m AOD.	37.2 ha
CRC1	Crosses mixed arable, grassland and pasture fields, watercourses and roads.	The land is predominantly flat to gently sloping and between 60 and 120 m AOD.	163.7 ha CRC1 (7.9 km) Eastern Option (1.6 km)
CRC2	Crosses arable fields and roads.	The land is flat to gently sloping and ranges between 55 and 70 m AOD.	16.0 ha Option 1 (1.36 km) Southern Option (0.6 km)
CRC3	Crosses arable fields, a small woodland, watercourses and a road.	The land is flat to gently sloping and ranges between 29 and 55 m AOD.	50.5 ha Option 1 (3.0 km) Southern Option (0.47 km)
CRC4	Crosses arable fields.	The land is very gently sloping from 50 m AOD in the north of CRC to 55 m AOD at the southern end.	Option 1 2.3 ha (0.31 km)
			Option 2 1.9 ha (0.37 km)
CRC5	Crosses arable fields, watercourses and roads.	The land is gently undulating between 35 and 55 m AOD.	36.4 ha (2.69 km)

Geology

7.6.3 A description of the mapped geology across the Order Limits is provided in Volume 1, Chapter 6 Ground conditions and contamination.

Flood risk

7.6.4 The risk of flooding is a contributing factor to ALC grade as flooding can have a detrimental effect on yield and affect soil management. The Flood Risk Assessment provides a description of the flood risk baseline conditions across the Order limits.

Climate

7.6.5 Climate data from the Met Office 1989 climatological dataset[18] for the nearest Ordnance Survey national grid reference (NGR) to the Order Limits are displayed in Table 7-7.

7.6.6 Climate data is used to characterise the baseline agricultural environment and inform the ALC assessment. Climatic parameters such as rainfall, temperature and accumulated temperature influence crop growth potential and form part of the ALC framework used to assess land quality.

Table 7-7 Climatological data for the Order Limits

NGR	Nearest Site	AAR (mm)	FCD (days)	MDW (mm)	MDP (mm)
SP 050 600	CRC1 (including Eastern Option).	690	153	95	82
SP 050 550	Site 1, CRC1, CRC2 (Option 1 and Southern Option).	662	144	100	90
SP 100 550	Site 2.	641	138	104	95
SP 100 500	Site 3, CRC3 (Option 1 and Southern Option), CRC4 (Option 1 and Option 2).	630	136	109	101
SP 100 450	Site 4, CRC5.	648	139	109	102
NGR: National Grid Reference, AAR: Average Annual Rainfall, FCD: Field Capacity Days, MDW: Moisture Deficit for Wheat, MDP: Moisture Deficit for Potatoes.					

7.6.7 The average annual rainfall (AAR) within the Order Limits ranges from 630 to 690 mm. The number of field capacity days (FCD), which are the number of days that the soil is at field capacity with a moisture deficit (MD) of zero, ranges from 136 to 153 days across the Order Limits.

7.6.8 The MD, which represents the amount of water a soil needs to return to field capacity when evapotranspiration exceeds rainfall over the crop growing season, is reported as 95 to 109 mm for winter wheat and 82 to 102 mm for potatoes.

7.6.9 These data suggest overall that Site 1 and CRC1 are the wettest areas within the Order Limits with regard to rainfall and soil moisture, while Site 3 is marginally drier.

Soil resources

7.6.10 National Soil Association mapping identifies 12 different soil associations across the Order Limits, as shown in Volume 2, Figure 7.1 National soil association.

7.6.11 Most soil associations found across the Order Limits are characterised by slowly permeable clayey textures and are prone to waterlogging. Further details are provided in Table 7-8.

7.6.12 Although dominated by Salwick, Whimple 3 and Worcester associations, the soils are variable in the north of the Order Limits within Sites 1 and 2 compared with the southern Sites 3 and 4, where Evesham 2 is dominant.

7.6.13 Across the CRCs, the Evesham 2 soil association is prevalent in the southern areas of the Order Limits , notably under CRC3 (Option 1), CRC4 (Option 1 and Option 2) and CRC5. Soils within the CRCs are more variable in the northern half of the Order Limits and include Brockhurst 2, Fladbury 1, Whimple 3, Rivington 1, Worcester, Salwick and Arrow.

Table 7-8 National Soil Associations underlying the Order Limits

National Soil Association	Characteristic	Site	Area, ha
Arrow (total 62.8 ha)	Deep permeable coarse loamy soils affected by groundwater.	CRC2 (Option 1 and Southern Option).	4.8
		CRC3 (Option 1 and Southern Option).	25.2
		Site 2.	32.8
Brockhurst 2 (total 41.1 ha)	Slowly permeable seasonally waterlogged reddish fine loamy over clayey and clayey soils.	CRC1 (including Eastern Option).	41.1
Compton (total 34.2 ha)	Stoneless mostly reddish clayey soils affected by groundwater.	CRC3 (Option 1 and Southern Option).	2.9
		Site 2.	30.9
Denchworth (total 67.3 ha)	Slowly permeable calcareous clayey soils.	Site 1.	67.3
		CRC3.	2.5
Evesham 1 (total 12.6 ha)	Slowly permeable calcareous clayey soils associated with shallow well drained brashy calcareous soils over limestone.	Site 3.	10.1
		CRC3.	10.6
		CRC4 (Option 1 and Option 2).	4.2

National Soil Association	Characteristic	Site	Area, ha
Evesham 2 (total 369.2 ha)	Slowly permeable calcareous clayey soils. Some slowly permeable seasonally waterlogged non-calcareous clayey and fine loamy or fine silty over clayey soils.	CRC5.	36.6
		Site 1.	2.7
		Site 3.	277.9
		Site 4.	37.2
		CRC1 (including Eastern Option).	23.8
Fladbury 1 (total 33.3 ha)	Stoneless clayey soils, in places calcareous variably affected by groundwater.	CRC3.	9.5
		CRC1 (including Eastern Option).	34.7
Rivington 1 (total 34.7 ha)	Well drained coarse loamy soils over sandstone.	Site 1.	49.1
Salop (total 49.1 ha)	Slowly permeable non-calcareous and calcareous reddish clayey soils over mudstone, shallow on steeper slopes.	CRC2.	0.4
Salwick (total 242.2 ha)	Deep permeable coarse loamy soils affected by groundwater.	Site 1.	66.6
		Site 2.	172.5
		CRC1 (including Eastern Option).	55.8
Whimple 3 (total 254.4 ha)	Reddish fine loamy or fine silty over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.	CRC2 (Option 1 and Southern Option).	11.1
		Site 1.	104.1
		Site 2.	83.4
		CRC1.	8.5
Worcester (total 165.5 ha)	Slowly permeable seasonally waterlogged clayey soils with similar fine loamy over clayey soils.	Site 1.	157

Predictive ALC

7.6.14 The quality of agricultural land is assessed using Agricultural Land Classification (ALC) system[15]. The framework divides agricultural land into five grades, with Grade 3 subdivided into Subgrades 3a and 3b. Grade 1 to Subgrade 3a are classified as best and most versatile (BMV) land under the NPPF 2026 policy[6] which states that local planning policies and decisions should try to use areas of poorer quality land instead of higher quality land. BMV agricultural land.

7.6.15 Volume 2, Figure 7.2 Predictive agricultural land classification, presents the predictive ALC grades across the Order Limits. No post-1988 survey data is available for the Scheme. The predictive ALC mapping was published in April 2026 and has superseded the previous provisional ALC data (which was used to inform site selection and the Scoping Report), which did not subdivide Grade 3 land into Subgrade 3a and 3b.

7.6.16 According to predictive ALC mapping[24], approximately 39.3 ha of Grade 1, 292.4 ha of Grade 2 land, 457.1 ha of Subgrade 3a land, 568.4 ha of Subgrade 3b, 2.1 ha of Grade 4 land, 1.1 ha of Grade 5 land, 5.5 ha of non-agricultural land and 0.4 ha of urban land are anticipated to be present across the Order Limits as summarised in Table 7-9.

7.6.17 Based on the predictive ALC mapping, approximately 788.8 ha of land within the Order Limits (out of a total Scheme area of 1,762 ha) is predicted to be BMV land associated with the Grade 1, Grade 2 and Subgrade 3a agricultural land.

Table 7-9 Distribution of predictive ALC grades across the Order Limits

ALC Grade	Site	Approximate Area, ha
Grade 1 (total 39.3 ha)	Site 1	16.9
	Site 2	21.3
	CRC2 (Option 1 and Southern Option)	1.1
Grade 2 (total 292.4 ha)	Site 1	85.9
	Site 2	161.0
	Site 3	1.7
	CRC1	16.2
	CRC2 (Option 1 and Southern Option)	7.3
	CRC3 (Option 1 and Southern Option)	17.5
Subgrade 3a (total 457.2 ha)	Site 1	62
	Site 2	12.9
	Site 3	254.2
	Site 4	32.6
	CRC1 (including Eastern Option)	40.1
	CRC2 (Option 1 and Southern Option)	4.6
	CRC3 (Option 1)	11.3
	CRC4 (Option 1)	2.3
	CRC4 (Option 2)	1.9
	CRC5	35.3
	Site 1	281.3

ALC Grade	Site	Approximate Area, ha
Subgrade 3b (total 568.4 ha)	Site 2	124.5
	Site 3	31
	Site 4	4.7
	CRC1 (including Eastern Option)	102.5
	CRC2 (Option 1 and Southern Option)	2.8
	CRC3 (Option 1 and Southern Option)	20.2
	CRC5	1.1
Grade 4 (total 2.1 ha)	Site 1	0.3
	CRC3 (Option 1)	0.5
	CRC1 (including Eastern Option)	1.3
Grade 5 (total 1.1 ha)	CRC1	0.5
	CRC3 (Option 1)	0.6
Non-agricultural (total 5.5 ha)	CRC1 (including Eastern Option)	3.1
	CRC2 (Option 1 and Southern Option)	0.2
	Site 1	1.2
	Site 2	0.2
	Site 3	0.8
Urban (total 0.4 ha)	CRC3 (Option 1)	0.4

Soil survey

7.6.18 An ALC survey was undertaken within the Sites in 2026, see Volume 3, Appendix 7.2. ALC survey report. A total area of 1,074.9 ha within the Order Limits was surveyed, focusing on the Sites.

7.6.19 Soils were examined via a combination of auger borings and soil inspection pits to a maximum depth of 1.2 m below ground level. Soil augers were undertaken at a density of one auger per ha, and a total of 30 soil inspection pits were dug. Soils were examined using hand texturing to determine the soil type.

7.6.20 Surveys have not been undertaken along the CRCs. Given that impacts along the CRCs would be short term, localised and confined to the construction period, the predictive ALC data is considered an appropriate and proportionate evidence source for informing the assessment of agricultural land effects.

Soil characteristics

7.6.21 A summary of the soil types encountered during the survey is provided in Table 7-10. For further information, see Volume 3, Appendix 7.2. ALC survey report.

Table 7-10 Summary of soil type encountered within the Sites

Soil Type	Summary	Description	Typical Depth (cm)	Site
1	Clay soils with moderately structured upper subsoils and gleyed slowly permeable lower subsoils. Predominantly WCII.	Topsoil: brown calcareous clay extending to approximately depth.	30–35	Site 4
		Upper subsoils: moderately structured brown clay, with limited mottling and little evidence of gleying.	30-60	
		Lower subsoils: grey clay, with poor structure, common mottling and widespread gleying associated with a slowly permeable horizon.	60-120	
2	Clay soils with slowly permeable, gleyed, poorly structured subsoils. Predominantly WCIV.	Topsoil: brown, dark greyish brown or dark grey calcareous clay.	20-35	Site 3
		Upper and lower subsoils: clay, varied in colour, with poor structure, commonly showing mottling and gleying from shallow depths and slowly permeable.	30-60	
			50-120	
3	Clay and clay loam soils with slowly permeable, gleyed, poorly structured subsoils. Typically WCIII and WCIV.	Topsoil: very dark greyish brown non-calcareous clay or clay loam.	0-35	Site 2 (Sub-site 2b and 2e)
		Upper and lower subsoils: poorly structured brown clay or clay loam. Gleyed and slowly permeable from a shallow depth.	35-60	
			60-120	

Soil Type	Summary	Description	Typical Depth (cm)	Site
4	Variable Restored Soils Associated with Former Mineral Workings. Ranges from WCII to WCIV.	Topsoil: ranges from variable brown clay to sandy loam with variable stone content. Stoneless areas and areas with substantial quantities of stone (often man made of brick and concrete). Soils previously worked for mineral extraction.	0-30 (substantial local variation)	Site 2 (Sub-site 2d)
		Upper and lower subsoils: some naturally occurring soils. Areas of non-naturally occurring soils that are firm, slowly permeable and poorly structured.	30-50	Site 2 (Sub-site 2d)
			50-120	Site 2 (Sub-site 2d)
5	Clay or clay loam topsoils with slowly permeable subsoils. Typically WCIII and WCIV.	Topsoil: brown to dark brown clay or clay loam, occasionally medium sandy loam.	0-35 (locally 25-40)	Site 1 (Sub-site 1a to 1f) Site 2 (Sub-site 2a to 2e)
		Upper and lower subsoils: generally reddish but sometimes greyish or brown clay or clay loam. Gleyed and generally slowly permeable. Some areas of lighter medium sandy loam or loamy sand.	35-60	
			60-120	
6	Well drained loamy soils, often stony and sometimes shallow over stone. Predominantly WCI and WCII.	Topsoil: brown, generally medium sandy loam with some areas of loamy medium sand, sandy clay loam or medium clay loam. Variation in stone quantity.	0-35 (locally 30-45)	Site 1 (Sub-site 1c to 1e) Site 2 (Sub-site 2a, 2c and 2d)
		Upper and lower subsoils: generally moderately structured sandy loams. Occasional areas of medium sand. Variation in stone quantity.	35-70	
			70-120	

Survey ALC grading

7.6.22 Across the Sites the land was predominantly graded as Grade 3b followed by areas of Grade 3a, Grade 2, Grade 1 and Grade 4 agricultural land.

7.6.23 A summary of the survey ALC grading results within the Site 1 to Site 4 is provided in Table 7-11. Surveyed ALC grades within the Solar PV Sites are shown on Volume 2, Figure 7.3 Agricultural Land Classification survey.

Table 7-11 Distribution of ALC survey grades

ALC Grade	Area (ha)	Area (%)	Site
Grade 1	56.3	5.2	Site 1, Site 2
Grade 2	75.7	7	Site 1, Site 2
Subgrade 3a	150.1	14	Site 1, Site 2, Site 3, Site 4
Subgrade 3b	784.5	73	Site 1, Site 2, Site 3, Site 4
Grade 4	4.1	0.4	Site 2
Non-agricultural	4.2	0.4	Site 1, Site 2

7.6.24 It is noted that the figures provided in Table 7-11 are based on the current Order Limits. The survey data included in the ALC survey report (Volume 3, Appendix 7.2 ALC survey report) includes land that has been removed from the Order Limits as part of the iterative design process prior to consultation. The ALC survey report will be updated to include the data within the final Order Limits for submission of the DCO Application.

7.6.25 In addition, the data in Table 7-11 relates to the Sites only. Surveys have not been undertaken along the CRCs. Given that impacts along the CRCs would be short term, localised and confined to the construction period, the predictive ALC data is considered an appropriate and proportionate evidence source for informing the assessment of agricultural land effects.

Agricultural land holdings

7.6.26 Land holding interviews have been undertaken for the Sites and information has been requested from landowners within the CRCs. The available information relating to agricultural land holdings is summarised in Table 7-12. This will be updated for submission of the DCO Application, to incorporate any additional data received.

7.6.27 The locations of the agricultural land holdings are shown in Volume 2, Figure 7.4 Landowners and tenant farmers. At this stage, only the extent of the holdings within the Order Limits is presented. The figure will be updated prior to submission of the DCO Application, where appropriate, to reflect the wider extent of land holdings as additional information becomes available.

Table 7-12 Summary of agricultural land holdings

Holding No.	Site	Details	Land holding area (ha) within Order Limits
1	Sub-Site 1(a), 1(b)	Mixed livestock and arable holding including lowland grazing, beef cattle (suckler cows), sheep and cereals	104.50
2	Sub-Site 1(f)	Mixed grassland and arable holding producing cereal crops, sheep grazing in autumn and winter. Two fields within the south rented to a tenant (Tenant 1)	24.50
3	Sub-Sites 1(c), 1(d, 1(e) and Site 2	Arable Fields rented to tenant in Sub-Site 1(c) and 1(e) (Tenant 2)	627.13
4	Sub-Site 3(a), 3(b) and Site 4	Arable holding producing cereal crops	98.91
5	Sub-Site 3(c), 3(d), 3(e), 3(f), 3(g)	Arable, grassland / pasture	221.28

Embedded mitigation

7.6.28 The development of the soils and agriculture assessment for the Scheme has taken into consideration the embedded mitigation as defined in Volume 1, Chapter 2 Scheme description, Section 2.7, of this ES and design evolution outlined in Volume 1, Chapter 4 Consideration of alternatives of this ES. For soils and agriculture this includes:

- E-GEN.1 - Implementation of Outline Construction Environmental Plan (oCEMP);
- E-GEN.2 - Implementation of Landscape and Ecological Management Plan (LEMP);
- E-GEN.3 - Implementation of Outline Operational Environmental Management Plan (oOEMP);
- E-GEN.4 - Implementation of Outline Decommissioning Environmental Management Plan (oDEMP);
- E-SAg.1 - Avoidance or minimisation of land parcel severance or the creation of isolated land parcels; and
- E-HE.2 - Limit areas of excavation.

Arrow Valley Solar