East Pye Solar

Outline Soil Resource and Management Plan

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1 Introduction

This Document

1.1.1 This Outline Soil Resource and Management Plan (Outline SRMP) has been prepared on behalf of East Pye Solar Limited ('the Applicant') to set out the principles for handling soil in relation to the Development Consent Order (DCO) application for the construction, operation, maintenance, and decommissioning of East Pye Solar (hereafter referred to as the 'Scheme').

1.1.2 This Outline SRMP sets out the measures that will be developed in more detail in the detailed Soil Resource Management Plan (SMP); the production of which is secured through a Requirement in the **draft DCO [EN0110014/APP/3.1]**. This Outline SRMP also sets out the monitoring and recording activities to ensure that these measures are carried out.

1.1.3 The detailed SMP will be produced for the Scheme following the appointment of the contractor and prior to the commencement of construction. This Outline SRMP provides the structure of the detailed SMP and the types of controls that are anticipated to be included to deliver the Scheme.

1.1.4 This Outline SRMP provides the soil information for the majority of the Scheme. However, refinement of the Cable Route Corridor (CRC) to a narrower corridor post-dated the Agricultural Land Classification (ALC) field surveys. This Outline SRMP sets out a section on the CRC which includes the requirement for field survey of soils and land quality pre-construction.

1.2 The Scheme

1.2.1 The Scheme comprises the construction, operation and maintenance, and decommissioning of a Solar photovoltaic (PV) electricity generating station with a total capacity exceeding 100 megawatts (MW) and associated development including a Battery Energy Storage System (BESS), up to three 132kV Project Substations and up to three 400kV Project Substations, Grid Connection Infrastructure and a new National Grid Substation. A description of the Scheme can be found in **Environmental Statement (ES) Volume 1, Chapter 4 – The Scheme [EN0110014/APP/6.1.4]**.

1.2.2 The Scheme would be located within the Order Limits shown on the **Location Plan [EN0110014/APP/2.1]** and **Works Plan [EN0110014/APP/2.3]** submitted as part of the DCO Application and secured by the DCO (see **draft DCO [EN0110014/APP/3.1]**). The Order Limits contain all elements of the Scheme comprising the Solar PV Arrays, 132kV and 400kV Project Substations, the National Grid Substation, the BESS, Grid Connection Infrastructure, interconnecting cables within the CRC, Mitigation and Enhancement Areas and Highway Works.

1.2.3 The land required for the Scheme is mostly in agricultural use, with a mixture of mostly arable crops and some grassland. There are no areas used intensively for pig rearing or poultry, no polytunnels or other more sensitive to disturbance agricultural enterprises.

1.3 Project Team Roles and Responsibilities

1.3.1 Specific roles and responsibilities in managing the soil resource will be set out in the detailed SMP, but is likely to include the following staff:

- An Agricultural Liaison Officer (ALO) who will act as a liaison between the landowners and the contractor; and
- A suitably qualified soil practitioner who will undertake such tasks as the assessments of soil suitability for handling, or who will otherwise be able to instruct the contractor on how to undertake the necessary tests.

1.4 Structure of the Outline Soil Resource and Management Plan

1.4.1 This Outline SRMP includes:

- Details of relevant guidance relating to soil resources and their management;
- Relevant background information, including climate, geology, altitude, topography, soil type and land use, and descriptions of the soil resources identified in the survey work undertaken across the Scheme;
- Appropriate soils handling methods for stripping, stockpiling and reinstatement of soils; and
- Monitoring procedures.

1.5 Relevant Policy and Guidance

1.5.1 This section lists available guidance on soil handling and movement, and its relevance. It then sets the scope of the advice adopted in this Outline SRMP.

1.5.2 The following documents are relevant, for the reasons given:

- Defra ‘Construction Code of Practice for the Sustainable Use of Soils on Construction Sites’ (Ref 1). This document provides information about handling soils and provides information about the construction of soil storage bunds short-term and long-term;
- Institute of Quarrying ‘Good Practice for Handling Soils in Mineral Workings’ (Ref 2). This document now contains work notes on soil assessment and handling. This document is particularly relevant because

it sets out tests for determining if different soil types are suitable for being moved or trafficked;

- Natural England 'Guide to assessing development proposals on agricultural land' (Ref 3). Natural England's guide provides generic advice on soil management;
- British Society of Soil Science (BSSS) 'Working with Soil Guidance Note Document 3: Benefitting from Soil Management in Development and Construction' (Ref 4). The BSSS Guide sets out basic guidance on what should be included in a SMP;
- Institute of Sustainability and Environmental Professionals (ISEP, formerly IEMA) Guide 'A New Perspective on Land and Soil in Environmental Assessment' (Ref 5). The ISEP Guide is directed principally at environmental assessment but does contain a comprehensive description of soils and soil functions, and the many varied roles that soil plays in the environment; and
- ISEP 'Solar PV on Agricultural Land: Essential components of Environmental Statements and Reports 2025 (Ref 6).

1.6 Scope of the Outline Soil Resource and Management Plan

1.6.1 The detailed SMP will apply to the management of soils during the construction phase of the Scheme. Although most soil resources that will be affected are in agricultural use, the detailed SMP will apply to all soil resources in all land uses.

1.6.2 Although principally designed for the construction phase, the soil protection measures contained within the detailed SMP will also be applied to any monitoring, maintenance, repair or replacement works that need to occur during the operation of the Scheme and that affect soil resources. The measures will also be relevant to works during the decommissioning phase, subject to relevant good practice measures in place at that time.

1.6.3 Soil management methodologies to be included within the detailed SMP, include:

- Any requirements for pre-construction soil survey or soil information collection;
- Soil handling methods (stripping, stockpiling and reinstatement) for any soils that will be disturbed by the construction of the Scheme;
- Monitoring procedures required for all soils (disturbed or those left in situ) during the construction of the Scheme, including details of roles and responsibilities;

- Restoration methods for land that is disturbed temporarily during construction and subsequently returned to agricultural use for the operation of the Scheme;
- Any measures required to ameliorate soils to ensure the original land quality is achieved upon reinstatement; and
- Monitoring required during the operation of the Scheme.

1.6.4 An outline of these methodologies is provided for in this Outline SRMP.

1.6.5 An outline of the works for decommissioning is included herein, but a further SMP will be required for the decommissioning phase.

1.7 Objective of the Outline SRMP

1.7.1 The objectives of the Outline SRMP are to set out the principles for soil handling and management to minimise disturbance to soils.

1.7.2 As set out in the **ES Volume 1, Chapter 15 – Soils and Agricultural Land [EN0110014/APP/6.3.15]** the Applicant commits to restoration of the temporary construction compound areas and the areas for the tracks and Conversion Units.

1.7.3 The BESS and Project Substations are likely to be capable of restoration, and this is covered in the Outline SRMP. However, as set out in the **ES Chapter 15 – Soils and Agricultural Land [EN0110014/APP/6.3.15]**, if some or all of these areas require deep foundations, restoration back to comparable ALC grade may not be possible.

1.7.4 The land in the National Grid Substation will not be restored.

1.7.5 Woodland areas will not involve disturbance to the land but will be permanent.

1.7.6 To the extent described in paragraphs 1.7.2 to 1.7.5 above, the Applicant commits to, ensuring that the works and restoration of any disturbed land does not result in any downgrading of agricultural land quality. All land affected will be kept at, or restored to, a comparable ALC grade either as part of construction or as part of decommissioning.

2 Soils Resources of the Site

2.1 Sources of Information

2.1.1 An ALC survey by Amet Property Ltd (**ES Volume 3, Appendix 15.1 - Agricultural Land Classification Report [EN0110014/APP/6.3.15.1]**) has been completed across the Sites within the Order Limits. This has involved sampling the soil at 100m intervals on a grid pattern, using a hand-held soil auger, and sampling down to 1.2m, where practicable. The ALC Guidelines were updated in December 2025 (Ref 7) but this has not altered the ALC grading.

2.1.2 The auger sampling was supplemented by the digging of 25 trial pits to better describe soil profiles and to help with measuring stone size and content.

2.2 Climate

2.2.1 The climate for the area reflects its location in eastern England. The climate data for ALC has been used, as set out in the ALC survey report, with average annual rainfall varying across the different sites between 588mm and 633mm per annum.

2.2.2 The ALC data set provides the number of days when soils are at Field Capacity (i.e. replete with water). Across the Sites this varies between 115 and 124 Field Capacity Days (FCD) per annum, which will mostly be over the winter period.

2.3 Soils Identified

2.3.1 The soils mapped by the Soil Survey (Ref 8) across the Sites are mostly of the Beccles 1 Association, described as slowly permeable, seasonally waterlogged fine loamy over clayey soils. In places the soils are mapped as Burlingham 1 Association, which are deep, coarse and fine loamy soils with slowly permeable subsoils, and slight seasonal waterlogging.

2.3.2 The ALC survey identified soils as follows. The maps are provided in the **ES Volume 3, Appendix 15.1 - Agricultural Land Classification Report [EN0110014/APP/6.3.15.1]**), with reduced-size inserts below for ease of reference.

2.3.3 Sites 1 and 2 contain soils and land quality as follows as shown on **Figure 2.1** below.

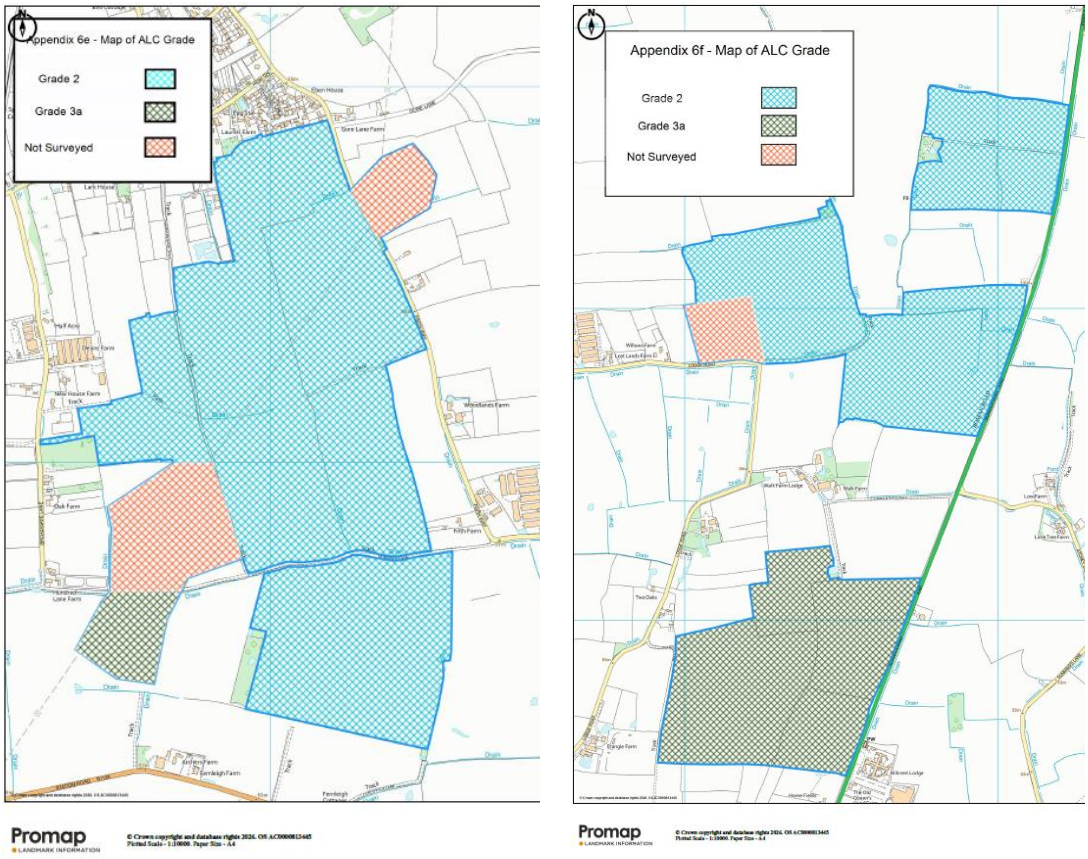

Figure 2.1: ALC Maps of Site 1, BESS Site and Site 2

2.3.4 The soils in these areas are clay or clay loam topsoils, often calcareous (which helps prevent clay particles from binding together and improves drainage) with topsoil colours varying between very dark greyish brown, to light greyish brown and occasionally yellowish brown. Subsoils are almost all poorly structured with massive, weak, coarse subangular structures. Some soils west of Hempnall are loamy mediums and over medium sandy loam.

2.3.5 Photographs of the topsoil, identifying the colour change to the upper subsoil, are provided below from Sub-Site 1B, in the location of the proposed National Grid Substation.

Figure 2.2: Soils from Sub-Site 1B

2.3.6 Sites 3 and 4 contain land quality mapped as shown on **Figure 2.3** below.

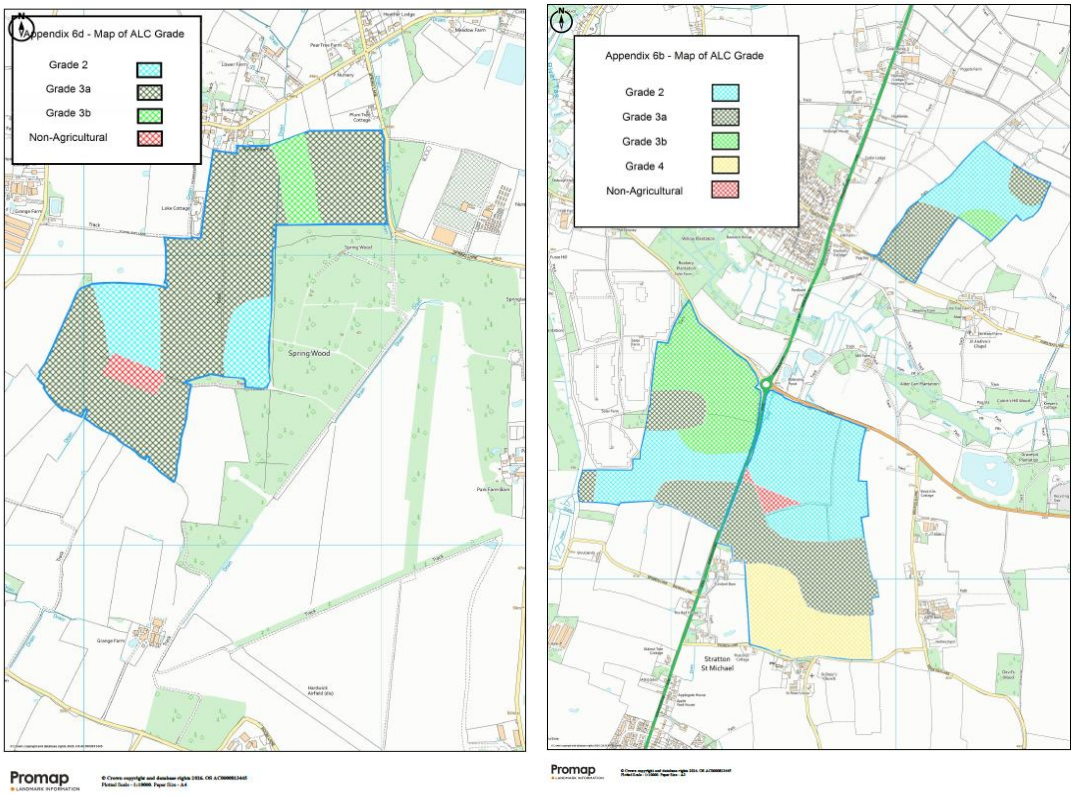

Figure 2.3: ALC Maps of Sites 3 and 4

2.3.7 The soils in Site 3 are described in the ALC report as clay loam topsoil (often calcareous) over poorly structured clay or clay loam subsoils. Site 4 soils are, however, medium sandy loam and sandy clay loam (sometimes calcareous) over medium sandy loam.

2.3.8 For Sites 5, 6, 7, 8 and 9, the ALC results are shown in **Figure 2.4** below. The majority of the soil in these areas is clay or clay loam over clay or clay loam subsoils.

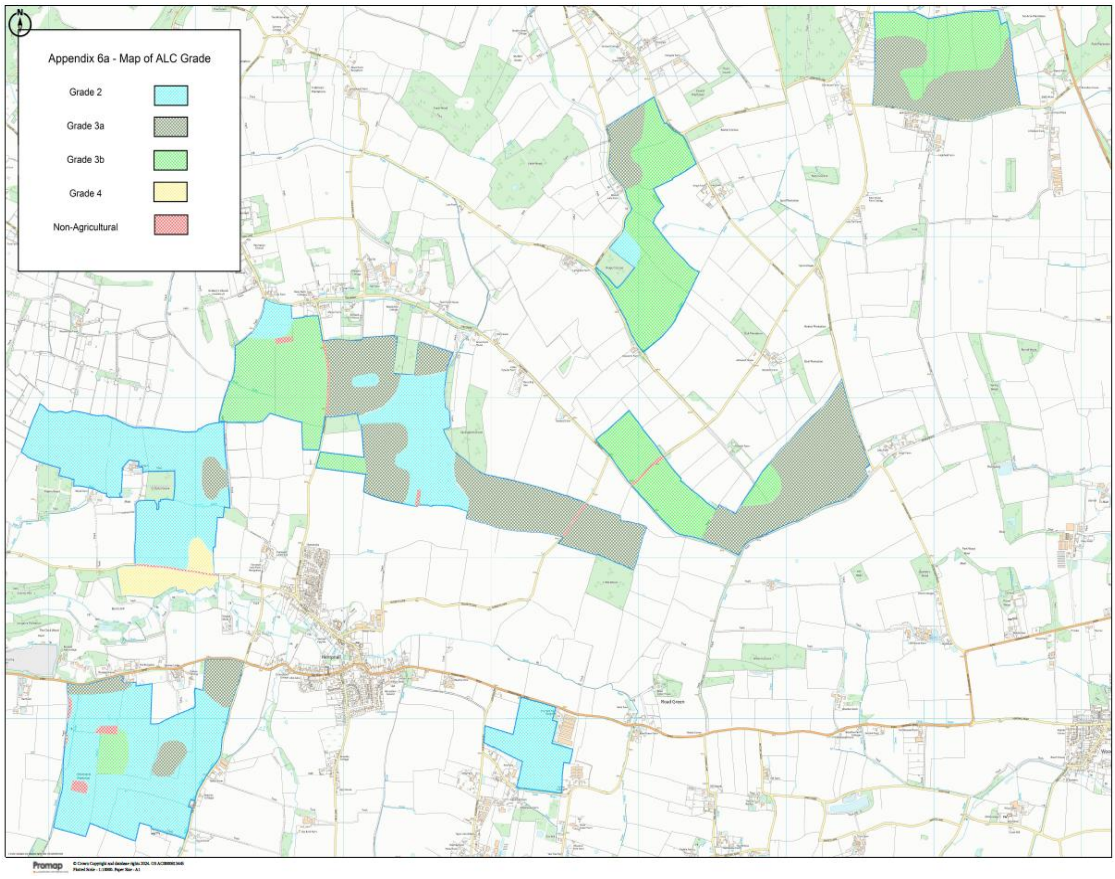

Figure 2.4: ALC Map of Sites 5, 6, 7, 8 and 9

2.3.9 Site 10 has similarly clayey soils.

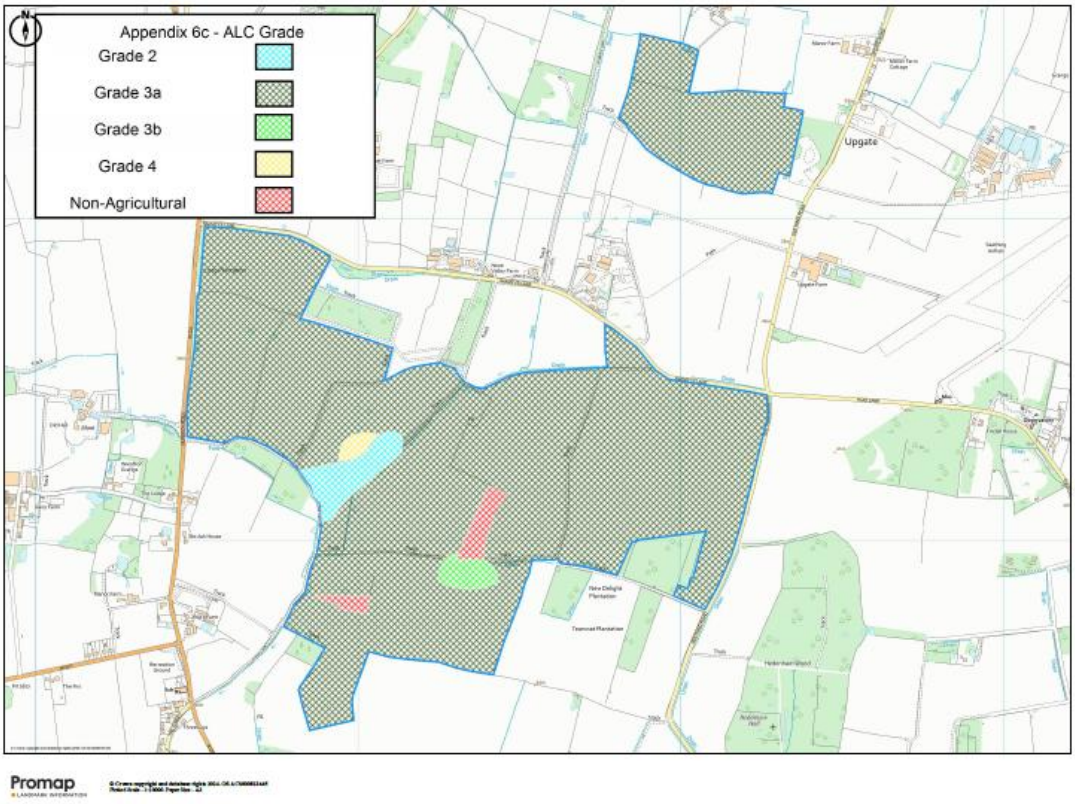

Figure 2.5: ALC Map of Site 10

2.3.10 Examples of small topsoil pits are shown below from Sites 5 to 10.

Figure 2.6: Examples of Topsoil Pits from Sites 5 - 10

2.4 Characteristics of Soil Types

2.4.1 The sensitivity of soils to handling, stockpiling and reuse is determined by their texture, wetness class (WC), and local agro-climatic conditions, particularly the number of days when soils are at field capacity and can accept no further rainfall.

2.4.2 Soils, when in a wet condition, generally have a lower strength and less resistance to compression and smearing than when dry. Lower strength when soils are wet also affects the bearing capacity of soils and their ability to support the safe and efficient operation of machines than when in a dry state.

2.4.3 In terms of resilience and susceptibility to soil wetness, the clay content of the soil largely determines the change from a solid to a plastic state (the water content at which this occurs is the plastic limit). This is the point at which increasing soil wetness reduces the cohesion and strength of the soil and its resistance to compression and smearing.

2.4.4 Whilst coarse textured sandy soils are not inherently plastic when wet, they are still prone to compaction when in a wet condition. Hence, handling all soils when wet will have adverse effects on plant root growth and soil profile permeability.

2.4.5 ISEP has characterised the sensitivity of topsoil and subsoil resources based on its resilience to structural damage, as shown in **Table 2.1**.

Table 2.1: Sensitivity of Soil Types (from ISEP (Ref 5))

Sensitivity of topsoil and subsoil	Soil texture, Field Capacity Days and Wetness Class
High sensitivity • **(low resilience to structural damage)**	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 WC V or VI.
Medium sensitivity • **(medium resilience to structural damage)**	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 WC III and IV.
Low sensitivity • **(high resilience to structural damage)**	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 WC I and II.

2.4.6 The number of FCDs across the Sites is below 150, which is typical for lowland England. Therefore, no soils are within the high sensitivity category due to their texture in this climatic area.

2.4.7 All soils across the Sites fall into WC I, II or III. There are no soils in WC V or VI within the Order Limits; therefore, no soils are categorised as high sensitivity solely on their wetness class.

2.4.8 The soils vary between calcareous clay, calcareous heavy clay loam, heavy clay loam (non-calcareous) and clay (non-calcareous) across much of the Order Limits. These soils are of medium sensitivity (i.e. medium resilience to structural change) in **Table 2.1**.

2.4.9 In the southern parts of Sub-Site 7C, Site 5, Sub-Site 7A and the southern part of Sub-Site 4B soils are sandy loam or loam medium sand, and soils are of low sensitivity (high resilience to structural damage).

3 Soil Survey Required

3.1.1 No soil survey has been undertaken for the CRC.

3.1.2 Prior to work commencing on the CRC a survey to record soil physical characteristics such as horizon depth and texture will be completed. The land quality (ALC grade) will be identified, but the primary purpose of the survey is to enable effective segregation between topsoil and subsoil, and to determine when soils are suitable for being handled.

3.1.3 The ISEP 'Solar PV on Agricultural Land' (December 2025) advises on the collection of data on soil nutrient status, soil organic matter and soil organic carbon content across the site pre-construction. Much of this data has been collected from the landowners, but a comprehensive record will be compiled, including additional soil sampling if needed, pre-construction. This will meet NPS EN-3 2.10.119, which states *'The Defra Construction code of practice for the sustainable use of soils on construction sites provides guidance on ensuring that damage to soil during construction is mitigated and minimised. Mitigation measures focus on minimising damage to soil that remains in place, and minimising damage to soil being excavated and stockpiled. The measures aim to preserve soil health and soil structure to minimise soil carbon loss and maintain water infiltration and soil biodiversity. Mitigation measures for agricultural soils include use of green cover, multispecies cover crops - especially during the winter - minimising compaction and adding soil organic matter. Mitigation of impacts to peat soils should include water table management and minimising soil disturbance'.*

4 Soil Disturbance and Handling

4.1 Soils Disturbance

4.1.1 Topsoil stripping would be required from areas proposed for Access Tracks, temporary construction compound locations, the BESS, Conversion Units/33kV Sub-Distribution Switch Rooms, the Project Substations and National Grid Substation. There is a potential requirement for localised site levelling, which would also involve stripping of topsoil prior to regrading. This disturbance to the topsoil would be temporary, mostly long-term, spanning the lifespan of the Scheme. The specific areas and volumes of topsoil and subsoil of each soil type to be excavated from these areas will be confirmed in the detailed SMP. The temporary construction compounds would be a short-term disturbance only.

4.1.2 The detailed SMP will also describe where and for how long these soils would be stockpiled; how soil within the stockpiles would be managed, having regard to different soil types and neighbouring land uses; and how and when any of the soils would be restored.

4.1.3 The proposed method of the cable installation across the agricultural land is primarily open cut excavation (other than where trenchless crossings impact on agricultural land). Open cut excavation would involve stripping the topsoil and subsoil and placing it next to the cable route within the same land holding where practicable, installing the cables, then backfilling the exposed trench with the original soils in the correct sequence. This disturbance is temporary and short-term.

4.2 Soil Handling Methods

Soil Stripping Methods and Suitability Criteria

4.2.1 Soil stripping, handling, storage and reinstatement procedures will conform with the relevant guidance set out above (or any replacement guidance) of this Outline SRMP, particularly the ‘Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and the Good Practice Guide for Handling Soils in Mineral Workings’ (Ref 1 and 2). Although the Good Practice Guide for Handling Soils is designed specifically for mineral workings, it is the replacement of the earlier Ministry of Agriculture, Fisheries and Food Good Practice Guidance for Handling Soils (2000) and has wider applicability to developments other than mineral workings.

4.2.2 The main impacts on soils during the construction phase would occur as a result of trafficking by vehicles and plant, and excavating and handling soils in inappropriate conditions, largely when the ground conditions and soils are too wet. Travelling over wet soils, or moving them when they are wet, and replacing them when wet, can result in damage to the soil structure, and with clay soils especially a smearing of the surface. This can be difficult to ameliorate.

4.2.3 The following general good practice measures would be adopted and employed by the contractor to avoid damage to soil structure, and would be included in the detailed SMP:

- Suitably qualified soil scientists will be appointed by the contractor to oversee and define all soil management good practice measures set out in this Outline SRMP;
- Soil resources will be clearly identified (usually by texture and/or colour) to avoid mixing of topsoils with subsoils when excavating and filling the trenches;
- No trafficking of vehicles/plant or materials storage will occur on reinstated soil, wherever practicable;
- Disturbance to soils will be minimised at all stages; for example, avoiding unnecessary repeat movements over the same ground;
- Minimising or avoiding vehicle movement over soils (trafficking) when soils are in a plastic, wet state;
- Only moving soils, which is only necessary for limited areas such as to build Access Tracks, the BESS and Project Substations, when soils are dry;
- For the mostly small volumes of soils that need to be stored for subsequent restoration, placing them into storage bunds when they are dry, and managing and maintaining the bunds;
- Minimising trench widths as far as practicable, replacing soils in the reverse order and preventing adverse long-term effects on land quality;
- The movement of vehicles and plant will be restricted to designated access and haul routes;
- Multiple handling of soils will be avoided;
- Soil handling, including tracking over the soil with machinery to take place in suitable soil moisture and weather conditions;
- Soils will only be stored in designated stockpiles;

- Long-term (over 6 months) stockpiles will be seeded to prevent wind and water erosion; and
- Records of soil handling operations and stockpiles will be kept.

Soil Moisture Conditions for Handling

4.2.4 Handling soils in appropriate moisture conditions will avoid damage to soil structure, particularly from compaction and smearing. Whilst no high sensitivity and low resilience soil textures have been found within the Sites, adherence to the moisture conditions for handling is extremely important.

4.2.5 The Good Practice Guide for Handling Soils provides indicative regional summaries of the optimal times for soil handling based on soil moisture deficits, field capacity days and soil textures. Within this model, the Scheme is within Climatic Zone 2. The indicative months when soils might be in a sufficiently dry condition to move are shown on **Figure 4.1**. The Site lies on the border of Climatic Zones 2 and 3.

	Climatic Zones		
Soil Clay Content	**1**	**2**	**3**
Soil Depth <30cm			
<10%	Mid Apr - Early Oct	Late Mar – Early Nov	Late Mar – Early Dec
10 -27%	Late May - Early Oct	Early May – Early Nov	Early Apr – Early Dec
Soil Depth 30-60cm			
<10%	Late Apr - Early Oct	Mid Apr – Early Nov	Early Apr – Early Dec
10-27%	Late May - Early Oct	Early May – Early Nov	Early Apr – Early Dec
>27%	Late June – Early Oct	Early June – Early Nov	Late May – Early Dec
Soil Depth >60cm			
<10%	Late Apr - Early Oct	Mid Apr – Early Nov	Early Apr – Early Dec
10-18%	Late May - Early Oct	Early May – Early Nov	Early Apr – Early Dec
18-27%	Late June – Early Oct	Early June – Early Nov	Late May – Early Dec
>27	Mid July – Mid Sept	Early July – Mid Oct	Late June – Mid Oct

Table 4.1: Indicative on-average months when vegetated mineral soils might be in a sufficiently dry condition according to geographic location, depth of soil and clay content

Figure 4.1: Insert 1 from Good Practice Guide for Handling Soils

4.2.6 The guide is intended to assist with planning soil handling and movement operations at an early stage and broad scale for projects. It will also assist in communicating the likely requirements for access with landowners. It will not be relied on in practice when deciding operationally whether to proceed with soil handling on the ground, given the actual variation in weather events and soil moisture conditions from year to year and within years.

4.2.7 Nevertheless, in planning soil handling operations for the Scheme, it is evident that there is generally likely to be a smaller window when the heavier textured subsoils are suitable for handling. For most of the Solar PV Array areas, the subsoils will not be disturbed and the soils will only be trafficked in suitable soil moisture and weather conditions. For the installation of cabling, it is important that subsoils are reinstated in a suitably dry condition as

otherwise the reinstatement could lead to compaction and poor drainage at depth which would be difficult to remedy. If soils are wet when due for reinstatement, they should be moved into smaller windrows prior to reinstatement to enable them to dry to a suitable moisture condition.

4.2.8 It is important to note that soil handling operations will be completed in time to enable a new vegetation cover to become established on reinstated land (or on the surface of a stockpile) prior to the onset of winter to keep the soils in as dry as a condition as practicable and prevent erosion over winter.

4.2.9 The above gives a broad indication of when soils are likely to be suitable to be moved but the contractor must set out the procedures for assessing whether soils are in a suitably dry condition for handling in the detailed SMP.

4.2.10 The initial testing will be carried out by professional soil surveyors, but suitably trained operatives can carry out and record the testing during operations, with periodic reviews undertaken by the professional soil surveyors.

4.2.11 The tests will be undertaken in the field, with samples taken from at least five locations in the soil handling area and at each soil horizon to the full depth of the horizon to be stripped. The tests comprise visual examination of the soil and physical assessment of the soil consistency. The criteria are taken from the Good Practice Guide for Handling Soils and set out below in **Table 4.1** and **Table 4.2**.

Table 4.1: Visual Examination Test for Suitably Dry Soils (from Good Practice Guide for Handling Soils)

Visual examination	Action
If the soil is wet, films of water are visible on the surface of soil particles or aggregates (e.g. clods or peds)	No soil handling to take place
If a clod or ped is squeezed in the hand and readily deforms into a cohesive 'ball'	No soil handling to take place
If the sample is moist (i.e. there is a slight dampness when squeezed in the hand) but it does not significantly change colour (darken) on further wetting, and clods break up/crumble readily when squeezed in the hand rather than forming into a ball	Soil handling can take place
If the sample is dry, it looks dry and changes colour (darkens) if water is added, and it is brittle	Soil handling can take place

Table 4.2: Consistency Test for Suitably Dry Soils (from Good Practice Guide for Handling Soils)

Consistency tests (not applicable to sands and coarse loams)	Action
First test: Attempt to mould soil sample into a ball by hand	
Impossible because soil is too dry and hard	Soil handling can take place
Impossible because soil is too loose and dry	Soil handling can take place
Impossible because the soil is too loose and wet	No soil handling to take place
Possible - Go to second test	
Second test: Attempt to roll ball into a 3mm diameter thread by hand	
Impossible because soil crumbles or collapses	Soil handling can take place
Possible	No soil handling to take place

4.2.12 The contractor must also include a rainfall protocol in the detailed SMP for stopping and restarting soil handling operations. The following guidelines are commonly used and are taken from the Good Practice Guide for Handling Soils, assuming that the soils are in a suitably dry condition (following the above tests) before the rainfall event:

- In light drizzle, soil handling may continue for up to four hours unless the soils are already at/near to their moisture limit;
- In light rain, soil handling must cease after 15 minutes; and
- In heavy rain and intense showers, soil handling shall cease immediately.

4.2.13 Once the rainfall event has passed, the visual examination and consistency tests should be applied to determine if soil handling operations can restart, provided that the ground is free from ponding and ground conditions are safe to do so.

4.2.14 These are general guidelines, and decisions to proceed or stop should be made at the local site level and based on the actual wetness state of the soils being handled.

Preparation Works

4.2.15 Before commencing any work that involves vehicles running over ground, the contractor will ensure that the following areas are marked and signposted:

- Construction exclusion zones around trees;
- Areas from which soils will be stripped;
- Locations of topsoil and subsoil stockpiles; and
- Access routes.

Topsoil Stripping Methods

4.2.16 Areas required temporarily for compounds, machinery storage etc., will normally be stripped of topsoil. Topsoil will be stripped in accordance with good practice as set out in the Good Practice Guide for Handling Soils or any subsequent revision, and which will be described further in the detailed SMP.

4.2.17 Likely plant required will include excavators, tracked dozers and dump trucks.

4.2.18 The locations and depths of topsoil to be stripped will be confirmed in the detailed SMP.

Subsoil Stripping Methods

4.2.19 Subsoils will be stripped in accordance with good practice as set out in the Good Practice Guide for Handling Soils or any subsequent revision, and which will be described further in the detailed SMP.

4.2.20 Likely plant required will include excavators, tracked dozers and dump trucks.

4.2.21 The locations and depths of subsoils to be stripped will be confirmed in the detailed SMP.

Stockpiling

Location of Stockpiles

4.2.22 The locations of topsoil and subsoil stockpiles will be determined in the detailed SMP as the information becomes available.

Building Stockpiles

4.2.23 Stockpiles will be built according to the good practice methodologies as set out in the Good Practice Guide for Handling Soils or any subsequent revision, and which will be described further in the detailed SMP.

4.2.24 Stockpiled soils may need to be sampled and the nutrient status ascertained in order to inform potential suitability for re-use.

Maintenance of Stockpiles

4.2.25 For each stockpile, a plan must be kept and maintained, detailing;

- Material type (topsoil or subsoil);
- Date/time when soil was stockpiled and weather conditions;
- Volume of material;
- Stockpile location;
- Source location of material; and
- Management of stockpile, particularly in respect of weed control and other biosecurity considerations.

Reinstatement

4.2.26 Reinstatement of soils from any compound areas and access tracks that have been stockpiled should involve excavating and replacing the soil according to good practice guidance set out in the Good Practice Guide for Handling Soils or any subsequent revision, and which will be described further in the detailed SMP.

4.2.27 Reinstatement of soils disturbed by cable installation should occur as soon as reasonably practicable after installation of the cable such that the soil handling conditions are likely to be similar at the point of excavation and reinstatement.

4.2.28 Liaison will take place between the ALO and contractor to agree the timing and management of the reinstatement of soil over the cable.

4.2.29 The soils must be reinstated in order, i.e. subsoil first then topsoil. Normally, any surplus material from the cable void that would need to be removed from site would be subsoil, retaining the full topsoil resource on site. These matters would be set out in the detailed SMP.

Monitoring Procedures During Construction

4.2.30 This section of the detailed SMP will set out the mitigation and management measures to be included as a minimum during construction.

4.2.31 Monitoring procedures during construction will apply to all soils that are to be reinstated.

4.2.32 Guidelines for monitoring the soil resource during construction will be included in the detailed SMP. Continuous, live monitoring by the contractor of soil handling/weather conditions, as well as visual monitoring of ground conditions, will be required.

4.2.33 Compaction will be monitored during construction by inspecting the soil following installation of piles but prior to fixing the Solar PV Panels. If compaction is identified, remedial action must be taken while the ground remains accessible to the machinery required to relieve compaction and before the panels are fixed.

4.2.34 Monitoring the soil resource during construction will primarily involve the contractor who is responsible for ensuring the detailed SMP is adhered to. Periodic monitoring by a suitably qualified soil practitioner may also be required.

4.2.35 All reinstated soils will be assessed by or on behalf of the contractor and signed off by the contractor to record that the soils and land are in a suitable condition. Any defects identified and agreed between the contractor and ALO will be ameliorated by the contractor prior to handing back the land.

5 Operation

5.1.1 During the operational phase, the requirement to travel over land with vehicles will be limited. Normal management will require:

- Vehicles to stay on Access Tracks as far as practicable;
- Avoidance of travelling on unsurfaced land when the soils are wet and vehicles are causing rutting; and
- Soil is not moved (e.g. for repairs) when wet unless this cannot be avoided.

5.1.2 Regular maintenance, such as Solar PV Panel cleaning, will be programmed to take place in summer months when ground conditions are suitable.

5.1.3 Any localised repairs that involve movement of soils should follow the guidance in Section 4, and any unavoidable soil disturbance should be repaired when ground conditions are suitable.

5.1.4 It is assumed that the operational life of Solar PV Panels is 40 years and that all Solar PV Panels will be replaced once during the operational phase and this will take a maximum of 24 months. So far as is reasonably practicable, Solar PV Panel replacement will be programmed to take place during the drier months between April and October.

5.1.5 Any unplanned ad-hoc Solar PV Panel replacement will avoid trafficking wet soils so far as possible. If any rutting is caused this will be rectified in the first available dry period after the repair works.

5.1.6 The detailed SMP will include a protocol for dealing with any debris that falls on the ground (e.g. due to wind damage).

5.1.7 The soil organic matter and soil organic carbon levels at a representative number of locations, to be agreed in the detailed SMP, will be measured at years 10 and 20 to enable the anticipated benefits to be recorded.

6 Decommissioning

6.1.1 During the decommissioning phase, soils and land will be disturbed due to the removal of all infrastructure except for the National Grid Substation and Grid Connection Infrastructure. Soil mitigation measures during the construction stage outlined in this outline SMP would still apply during the decommissioning phase in principle.

6.1.2 The approach to decommissioning for the Interconnecting Cables and Grid Connection Cables would be dependent upon Government policy and good practice at that time. Currently, the most environmentally acceptable option is considered to be leaving the cables in-situ, as this avoids disturbance to overlying land, habitats and to neighbouring communities. Alternatively, the cables can be removed by opening up the ground at regular intervals and pulling the cable through to the extraction point, leaving the ducting and jointing bays in place, avoiding the need to open up the entire length of the Grid Connection Cables.

6.1.3 A detailed SMP will be needed to be in place to reflect weather, soil and land conditions to ensure the Order Limits is returned to its original use and condition as far as practicable. The detailed SMP for the decommissioning phase will primarily include the following but not limited;

- Site preparation;
- Soil stripping;
- Soil stockpiling;
- Soil reinstatement:
  - Soil profiles to be reinstated will be designed to ensure soils/land to be restored to previous condition;
  - Treatment of overburden and placement by subsoiler/ripper especially for BESS where the ground has been sealed;
  - Restore field drainage where required to avoid waterlogging;
  - Soil placement; and
  - Soil aftercare and any remediation required.

References

Ref 1 Department for Environment, Food and Rural Affairs, “Construction Code of Practice for the Sustainable Use of Soils on Construction Sites,” 2009.

Ref 2 Institute of Quarrying, “Good Practice Guide for Handling Soils in Mineral Workings,” 2021.

Ref 3 Natural England, “Guide to assessing development proposals on agricultural land”, 2021.

Ref 4 British Society of Soil Science, “WWS3 - Benefitting from Soil Management on Development and Construction”, 2022.

Ref 5 Institute of Sustainability and Environmental Professionals (ISEP) Guide “A New Perspective on Land and Soil in Environmental Assessment,” 2022.

Ref 6 Institute of Sustainability and Environmental Professionals (ISEP, formerly IEMA) Solar PV on Agricultural Land: essential components of Environmental Statements and Reports, December 2025.

Ref 7 Ministry of Agriculture, Fisheries and Food, “Agricultural Land Classification of England and Wales. Revised guidelines and criteria for grading the quality of agricultural land”.

Ref 8 Defra, “Agricultural Land Classification of England and Wales: Guidelines for grading the quality of agricultural land”, updated 2025.

Ref 9 Soil Survey of England and Wales, “Soils or England and Wales: Sheet 4 Eastern England 1:250,000”, 1983

Glossary

Term	Acronym	Definition
Agricultural Liaison Officer	ALO	A liaison between the landowners and the contractor
Field Capacity Days	FCD	The number of days when the soil moisture deficit is zero
Wetness Class	WC	Indication of the depth and duration of waterlogging in the soil profile.

Abbreviations

Abbreviation/Term	Definition
ALC	Agricultural Land Classification
BESS	Battery Energy Storage System
CRC	Cable Route Corridor
ISEP	Institute of Sustainability and Environmental Professionals
SMP	Soil Resource and Management Plan