

XLINKS' MOROCCO-UK POWER PROJECT

Appendix D - Outline Soil Management Plan

Document Number: 7.7

Document Reference: EN010164/APP/7.7

APFP Regulations: 5(2)(q)

November 2024

For Issue

XLINKS' MOROCCO – UK POWER PROJECT

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
For Issue	Application	RPS	Xlinks 1 Ltd	Xlinks 1 Ltd	November 2024

Prepared by:

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Prepared for:

Xlinks 1 Limited

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Glossary

Term	Meaning
Applicant	Xlinks 1 Limited.
Converter Site	The Converter Site is proposed to be located to the immediate west of the existing Alverdiscott Substation site in north Devon. The Converter Site would contain two converter stations (known as Bipole 1 and Bipole 2) and associated infrastructure, buildings and landscaping.
Converter station	Part of an electrical transmission and distribution system. Converter stations convert electricity from Direct Current to Alternating Current, or vice versa.
Development Consent Order	An order made under the Planning Act 2008, as amended, granting development consent.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
HVAC Cables	The High Voltage Alternating Current cables which would bring electricity from the converter stations to the new Alverdiscott Substation Connection Development.
HVAC Cable Corridors	The proposed corridors (for each Bipole) within which the onshore High Voltage Alternating Current cables would be routed between the Converter Site and the Alverdiscott Substation Site.
HVDC Cables	The High Voltage Direct Current cables which would bring electricity to the UK converter stations from the Moroccan converter stations.
Landfall	The proposed area in which the offshore cables make landfall in the United Kingdom (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Cornborough Range, Devon, between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, and landfall compound(s).
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils. The relevant Local Authorities for the Proposed Development are Devon County Council and Torridge District Council.
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.
Onshore HVDC Cable Corridor	The proposed corridor within which the onshore High Voltage Direct Current cables would be located.
Onshore Infrastructure Area	The proposed infrastructure area within the Order Limits landward of Mean High Water Springs. The Onshore Infrastructure Area comprises the transition joint bays, onshore HVDC Cables, converter stations, HVAC Cables, highways improvements, utility diversions and associated temporary and permanent infrastructure including temporary compound areas and permanent accesses.
Proposed Development	The element of Xlinks' Morocco-UK Power Project within the UK. The Proposed Development covers all works required to construct and operate the offshore cables (from the UK Exclusive Economic Zone to Landfall), Landfall, onshore Direct Current and Alternating Current cables, converter stations, and highways improvements.
The national grid	The network of power transmission lines which connect substations and power stations across Great Britain to points of demand. The network ensures that electricity can be transmitted across the country to meet power demands.

Term	Meaning
Xlinks' Morocco UK Power Project	The overall scheme from Morocco to the national grid, including all onshore and offshore elements of the transmission network and the generation site in Morocco (referred to as the 'Project').

Acronyms

Acronym	Meaning
ALC	Agricultural Land Classification
ALO	Agricultural Liaison Officer
DCO	Development Consent Order
Defra	Department for Environment, Food & Rural Affairs
ES	Environmental Statement
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
INNS	Invasive and Non-native Species
IoQ	Institute of Quarrying
MHWS	Mean High Water Springs
On-CEMP	Onshore Construction Environmental Management Plan
UK	United Kingdom

Units

Units	Meaning
m	Metres
mm	Millimetres

1 OUTLINE SOIL MANAGEMENT PLAN

1.1 Introduction

Background

- 1.1.1 This document forms the Outline Soil Management Plan, which has been prepared for the United Kingdom (UK) elements of Xlinks' Morocco-UK Power Project (the 'Project'). For ease of reference, the UK elements of the Project are referred to as the 'Proposed Development'.
- 1.1.2 The Outline Soil Management Plan forms Appendix D to the Outline Onshore Construction Environmental Management Plan (On-CEMP) (document reference 7.7), which seeks to manage the environmental impacts of the construction process.
- 1.1.3 This Outline Soil Management Plan focuses on the onshore elements of the Proposed Development, which occur landward of Mean High-Water Springs (MHWS). In summary, the onshore elements of the Proposed Development will comprise the following.
- Converter stations: two independent converter stations, known as Bipole 1 and Bipole 2, to convert electricity from Direct Current (DC) to Alternating Current (AC) before transmission to the national grid.
 - Onshore High Voltage Alternating Current (HVAC) Cables: these cables would connect the converter stations to the national grid.
 - Onshore High Voltage Direct Current (HVDC) Cables: these cables would link the converter stations to the Landfall.
 - Highways improvements: improvements to the existing road network to facilitate access during construction, operation and maintenance, and decommissioning, including road widening, and new or improved junctions.
 - Temporary and permanent utility connections: temporary and permanent utility connections to the construction compounds and the Converter Site.
 - Permanent utility diversions: permanent diversion of existing utility services within the Onshore Infrastructure Area.
 - Landfall: the site at Cornborough Range where the offshore cables are jointed to the onshore cables. This term applies to the entire landfall area between Mean Low Water Springs and the transition joint bays. This includes all construction works, including the offshore and onshore cable routes, and compound(s) at Landfall.
- 1.1.4 In addition to these elements, the Outline Soil Management Plan also considers the temporary construction compounds, storage areas, temporary haul roads and accesses required to support the construction of the Proposed Development.
- 1.1.5 The onshore elements of the Proposed Development listed above coincide with the local authority area of Torridge District Council and Devon County Council (at the county level).

1.2 Purpose of the Outline Soil Management Plan

- 1.2.1 The purpose of this Outline Soil Management Plan is to set out the approach to managing impacts on soil resources during the construction of the Proposed Development, as far as possible.
- 1.2.2 This is an outline document that sets out measures that have been identified as part of the Environmental Impact Assessment process. These measures are to ensure that any potential environmental effects reported in the Environmental Statement (ES) will either be avoided and/or mitigated.
- 1.2.3 In the event that the Development Consent Order (DCO) is granted, a full and final On-CEMP(s), including the Soil Management Plan(s) will be developed in general accordance with the Outline Soil Management Plan. The final On-CEMP(s) and Soil Management Plan(s) will be secured as a requirement of the DCO for the Proposed Development.
- 1.2.4 The detailed Soil Management Plan(s) would be developed in accordance with the Outline Soil Management Plan and submitted prior to construction for approval by the relevant Local Planning Authority.
- 1.2.5 The Outline Soil Management Plan should be read in conjunction with the Outline On-CEMP (document reference 7.7) and its supporting appendices. In addition, the following documents provide further information regarding agricultural land and soils:
- Volume 2, Chapter 8: Land Use and Recreation of the ES (document reference 6.2.8).
 - Volume 2, Appendix 8.1: Agricultural Land Classification of the ES (document reference 6.2.8.1).

1.3 Scope of the Outline Soil Management Plan

- 1.3.1 The scope of this onshore Outline Soil Management Plan applies to both the preliminary and construction stages of the Proposed Development, located landward of MHWS. The plan does not apply to activities associated with offshore works (i.e. seaward of MHWS).
- 1.3.2 Onshore preliminary activities will be undertaken prior to the commencement of construction. These works comprise the following:
- archaeological investigations;
 - early planting or landscaping works, where appropriate;
 - ecological and archaeological mitigation;
 - environmental surveys and monitoring;
 - site clearance (including vegetation clearance and site levelling);
 - investigations for the purpose of assessing ground conditions such as:
 - pre-entry soil surveys; and
 - drainage surveys.
 - erection of fencing and installation of temporary construction drainage;

- remedial work in respect of any contamination or other adverse ground conditions;
- the diversion of existing services and the laying of temporary services;
- the diversion or undergrounding of overhead cabling;
- road improvements;
- site security works;
- establishing compounds and the erection of temporary hardstanding, buildings (e.g. welfare facilities), structures or enclosures;
- creation of site accesses;
- temporary display of site notices and site advertisements; and
- receipt and erection of construction plant and equipment.

1.3.3 The onshore preliminary activities listed above will be carried out in accordance with the measures set out in this Outline Soil Management Plan as part of the Outline On-CEMP(s). This and other management plans in their outline form will be taken as approved at the grant of Development Consent and valid for the preliminary activities whereas the final Soil Management Plan(s) as approved will apply to the main construction stage.

1.3.4 The final Soil Management Plan(s) will be in general accordance with the principles established in this Outline Soil Management Plan and will be agreed with the relevant authority prior to commencing the relevant construction stage of the onshore works (above MHWS) for the Proposed Development (i.e. any updates to the plan during construction would be approved by the relevant authority).

1.4 Roles and Responsibilities

1.4.1 Although the construction team has not been appointed at the time of writing this plan, the key roles and associated responsibilities with regard to this Outline Soil Management Plan are set out below. The Construction (Design and Management) Regulations 2015 also identify the legal duties, responsibilities and obligations of all the major roles within the construction team.

1.4.2 The responsibilities of each role will be refined in the detailed Soil Management Plan(s).

Applicant

1.4.3 The Applicant will be responsible for the following.

- Ensuring that the Soil Management Plan(s) is implemented effectively.
- Reviewing, revising and refining the Soil Management Plan(s), if required, in conjunction with the Principal Contractor(s).

Principal Contractor(s)

1.4.4 The Principal Contractor(s) will be appointed by the Applicant and has the overall responsibility for.

- Updating and delivering the detailed Soil Management Plan(s) on behalf of the Applicant.
- Ensuring all procedures in the Soil Management Plan(s) are followed.
- Ensuring all contractors are suitably qualified and experienced in implementing the measures within the Soil Management Plan(s).
- Maintain records relevant to the Soil Management Plan(s).

Agricultural Liaison Officer

- 1.4.5 The area of the Proposed Development comprises predominantly agricultural land and an Agricultural Liaison Officer (ALO) will be appointed to supervise and ensure the effective implementation of the Soil Management Plan(s) during construction of the Proposed Development.
- 1.4.6 The ALO will be the dedicated contact for liaising with relevant stakeholders and relevant parties and will be responsible for implementing the Soil Management Plan(s), including overseeing the aftercare period. The ALO will also be the first point of contact for any enquiries from relevant stakeholders and relevant parties.

Contractors/subcontractors

- 1.4.7 Contractors and subcontractors will be required to understand their responsibilities and implement the measures within the Soil Management Plan(s).

Training

- 1.4.8 The Applicant will ensure that all relevant construction staff are made aware of the Soil Management Plan(s) and their responsibilities. Training will be provided to ensure that all relevant members of the onshore construction teams, receive focused Soil Management Plan(s) training to ensure their competence in carrying out their duties.

1.5 Regulatory Framework and Guidance

- 1.5.1 This Outline Soil Management Plan has been prepared in accordance with recognised best practice guidance provided in the Department for Environment, Food & Rural Affairs (Defra) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009) and Institute of Quarrying (IoQ) Good Practice Guide for Handling Soils in Mineral Workings (IoQ, 2021). It is noted that although the IoQ guide is titled for use in mineral workings, it is applicable to all infrastructure projects, including long linear developments (e.g. onshore cable routes) particularly those where large volumes of soil are to be stripped, stored, and reinstated.
- 1.5.2 The detailed Soil Management Plan(s) will incorporate the latest available guidance prior to approval the relevant LPA.

1.6 Soil Management Measures - Structure of the Document

- 1.6.1 This Outline Soil Management Plan has been divided into the following sections, with each section addressing a specific aspect of soil management.
- **Section 1.7:** proposals for the management and supervision of the soil handling process.
 - **Section 1.8:** summary of relevant published background and site survey information relevant to the identification of available soil resources within the onshore elements of the Proposed Development.
 - **Section 1.9:** soil resource availability and suitability within the onshore elements of the Proposed Development.
 - **Section 1.10:** description of the soil stripping procedures which would be used within the onshore elements of the Proposed Development.
 - **Section 1.11:** description of the soil storage procedures to be followed, including the location, construction, and management of storage mounds.
 - **Section 1.12:** description of the procedures which would be used to replace soils within the onshore elements of Proposed Development.
 - **Section 1.13:** a description of the control measures and tests which would be used to determine when soil handling can take place.
 - **Section 1.14:** a description of the aftercare management to be used for affected agricultural soils within the onshore elements of the Proposed Development.

1.7 Management and Supervision of the Soil Handling Process

Agricultural Liaison Officer

- 1.7.1 The ALO will be responsible for supervising and monitoring the implementation of the procedures set out below ('the soil handling supervisor'). This is in accordance with requirements set out in Toolbox Talk 2, Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009).
- 1.7.2 The ALO would have access to soil management advice from a suitably qualified and experienced soil scientist or practitioner. The qualified soil handling supervisor would be an individual with the necessary "Foundation Skills", having achieved the Soil Professional Competence Standards set out by the British Society of Soil Science.
- 1.7.3 During construction of the Proposed Development, the ALO will have regular site meetings with the Principal Contractor(s) and during soil handling operations to monitor and control the soil handling works and ensure that the works are undertaken in accordance with the Soil Management Plan(s).
- 1.7.4 Prior to the commencement of construction, the ALO will provide a point of contact for each affected landowner/occupier to enable contact if they have

questions regarding the ongoing works or if they have any questions regarding how the works may be affecting their day-to-day farming operations.

Plant and Animal Health Measures

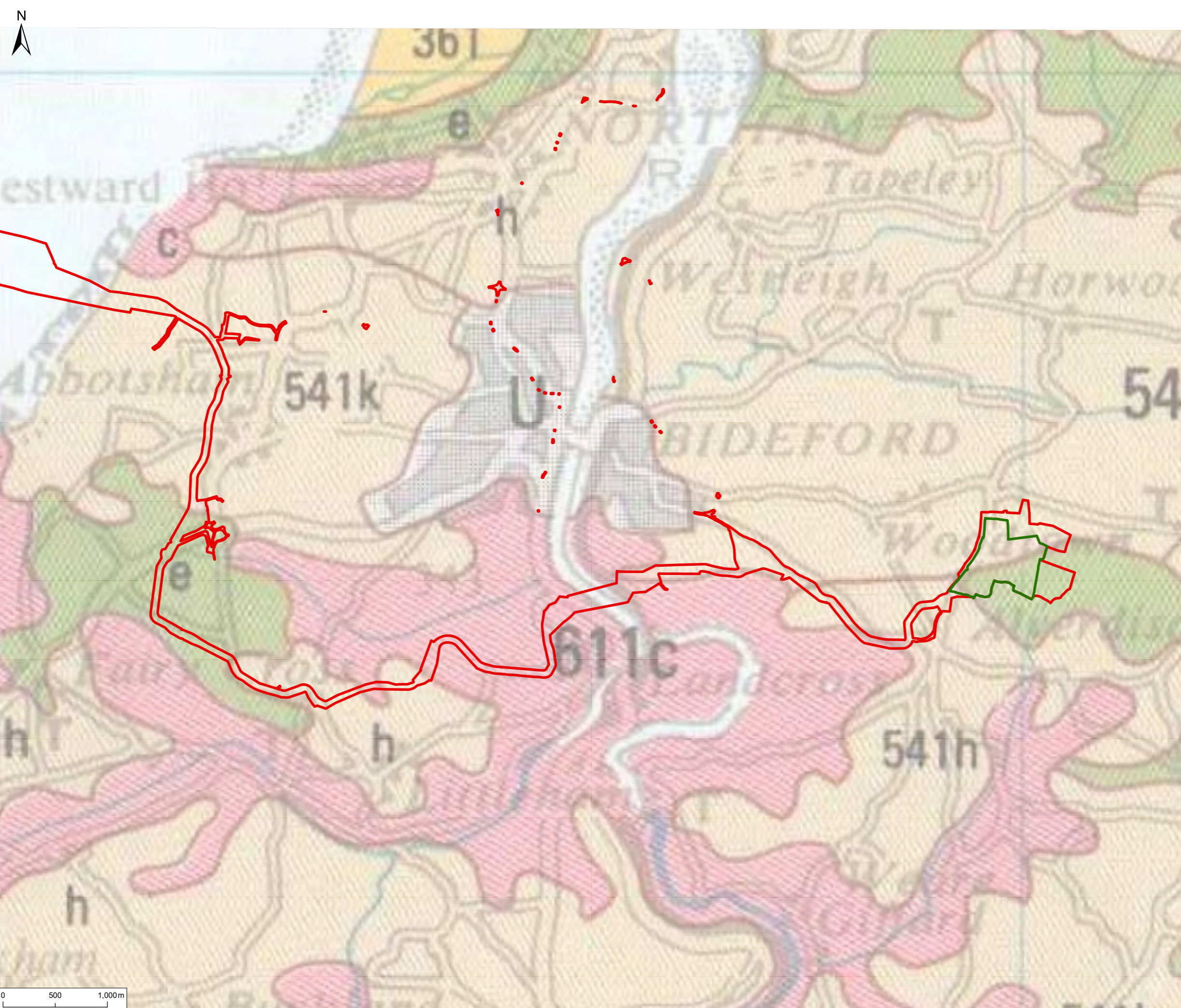
- 1.7.5 As detailed within the Outline On-CEMP (document reference 7.7), management measures to control the spread of plant and animal disease will be set out in the Biosecurity Protocol(s), which would be developed and agreed with relevant statutory consultees prior to the commencement of construction.
- 1.7.6 Pre-construction surveys would be undertaken by appropriately qualified ecologists that are competent in the identification of Invasive Non-Native Species (INNS). These surveys would ensure that there is available up-to-date information on the location, distribution and extent of INNS within and adjacent to the Onshore Infrastructure Area.
- 1.7.7 Where the presence of INNS have been identified, the Principal Contractor(s) would produce specific method statements for the INNS species identified (and the locations within which they are present) with specific measures to be implemented during construction works and/or vegetation and soil removal to ensure that there is no spread of INNS. These measures would be implemented as part of a detailed Biosecurity Protocol. Further details are provided within the Outline On-CEMP (document reference 7.7).

1.8 Published Soils Information

- 1.8.1 Published Soils information and Agricultural Land Classification (ALC) information for the Onshore Infrastructure Area is provided in Volume 2, Chapter 8: Land Use and Recreation of the ES (document reference 6.2.8). The source of published information on the soils is the relevant sheet of the 1:250,000 scale National Soil Map (Sheet 5 South West England). This shows geographic groupings of soils called Soil Associations, usually related to specific parent materials and named after the particular soil series which most typifies it, even though this may be found only in parts of the association.
- 1.8.2 **Figure 1.1** shows the distribution of the main soil types within the land use and recreation study area.
- 1.8.3 The Association 541k Denbigh 2 occurs in areas underlain by the Bideford and Crackington Formations, i.e., the areas underlain mainly by mudstones and siltstones, and Association 611c Manod where the bedrock is the Bude Formation i.e., mainly but not entirely consisting of sandstones.
- 1.8.4 The Denbigh 2 Association is described as a collection of mainly 'well drained fine loamy soils over slaty mudstone and siltstone. Some fine loamy soils variably affected by groundwater'. In this description 'fine loamy' means medium to heavy textures such as clay loam or silty clay loam.
- 1.8.5 The Manod Association similarly has mainly 'well drained fine loamy or fine silty soils over rock (usually slate mudstone or siltstone)'.
- 1.8.6 Also shown within the study area are soils of the Association 514h Neath. This is described as a collection of mainly 'well drained fine loamy soils often over rock (Carboniferous sandstone and shale). Small patches of similar soils with slowly permeable subsoils and slight seasonal waterlogging'. It comprises soils essentially similar to those of the Denbigh and Manod Associations but with the

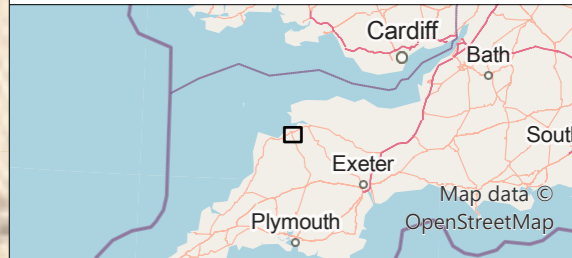
possibility of some less well drained soil profiles because of slowly permeable subsoils, usually caused by heavier, more clayey textures at depth.

- 1.8.7 There are also two areas of Association 712e Hallsworth 2 shown within the study area which is described as a collection of mainly 'slowly permeable seasonally waterlogged clayey, fine loamy and fine silty soils' developed in drift from Carboniferous sandstone and shale.



Notes
 1. This plan is scaled at paper size A3. If received electronically it is the recipient's responsibility to print to the correct scale. Only written dimensions should be used.

- Legend**
- Order Limits
 - Converter site
 - 541k - Denbigh 2
 - 541h - Neath
 - 611c - Manod
 - 712e - Hallsworth 2
 - Urban



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Rev	Description	By	CB	Date

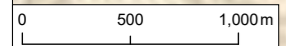


Client Xlinks 1 Limited
 Project Xlinks' Morocco-UK Power Project
 Title Soil Associations

Status FINAL Scale @ A3 1:35,000 Date Created Nov 2024
 Figure Number 1.1 Rev P01

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1.9 Soil Resources

- 1.9.1 In terms of depths of soil materials, survey work¹ indicates that there would be an average thickness of approximately 200-250 mm of topsoil within the Onshore Infrastructure Area. Soil profile descriptions for the main soil types identified from soil resource and ALC survey work are provided in Volume 2, Appendix 8.1: Agricultural Land Classification of the ES (document reference 6.2.8.1).
- 1.9.2 The initial survey work undertaken to inform relevant sections of the ES would be supplemented by further survey work pre-construction. This further survey work would be used to identify the depths of different topsoil and subsoil units (if necessary) to be stripped within the working areas and to inform a detailed Soil Management Plan(s), to ensure that soil types are separately stored where required. The Soil Management Plan(s) would be prepared and agreed post-consent as part of the On-CEMP(s).
- 1.9.3 The soils information to be collated together with the specification for soil resources to be stripped and stored in works areas would include the following:
- soil horizon depths, textures and colour for topsoil and subsoil horizons;
 - stone contents, to be estimated from augering and confirmed via soil pit excavation and/or sample analysis;
 - presence and characteristics of mottling, a soil wetness indicator;
 - presence of manganese concretions, a soil wetness indicator;
 - identification of gleyed horizons;
 - identification of slowly permeable layers; and
 - identification of impenetrable rock layers.
- 1.9.4 Soils will be described according to the methods and terminology contained in the Soil Survey Field Handbook. Topsoil samples will also be taken for laboratory analysis of PH, organic matter content and major nutrients (phosphorus, potassium, nitrogen and magnesium).

1.10 Soil Stripping

Soil Stripping Operations

- 1.10.1 The following information would be recorded by the ALO in advance of soil stripping operations (where relevant):
- existing crop regimes;
 - position and condition of field boundaries;
 - condition of existing access arrangements;
 - location of private water supplies;

¹ As detailed within Volume 2, Chapter 8: Land Use and Soils of the ES (document reference 6.2.8), the initial surveys were undertaken in connection with the Atlantic Array offshore wind farm project in 2011. Additional surveys will be undertaken prior to construction.

- type of agriculture taking place;
 - crop yields;
 - quality of grazing land; and
 - existing weed burden.
- 1.10.2 Soil stripping operations within the Onshore Infrastructure Area can be described in relation to the types of works proposed. These include soil stripping operations located within the following areas, where land and soils would be reinstated either during or post construction.
- Converter Site and associated land reprofiling.
 - Temporary construction compounds.
 - Temporary and permanent access roads (including highways improvements).
 - Onshore HVAC and HVDC Cable Corridors.
- 1.10.3 As described in **Section 1.7** the initial stripping would be an operation that would be subject to monitoring to ensure that the soil handling method is implemented correctly by the ALO on behalf of the Principal Contractor(s).

Temporary Construction Compounds and Converter Station Areas

- 1.10.4 Soil stripping operations would be carried out in accordance with the Construction Code of Practice (Defra, 2009) taking into account the relevant methodology from the IoQ Guidance (IQ, 2021) which includes the following potential methods:
- Sheet E – Soil Stripping with excavators and dump trucks – windrow practice.
 - Sheet F – Soil stripping with bulldozers and dump trucks – windrow practice.
- 1.10.5 For each identified works area where soils are to be stripped, stored and restored, the following would be identified:
- The proposed thickness of the topsoil soil strip within the individual soil units that exist in the area.
 - The location of the soil storage areas.
 - The location of main haul routes.
- 1.10.6 Existing vegetation in the area to be stripped and the storage mound locations to be cleared, if considered necessary, would be undertaken using an appropriate procedure depending on site conditions at the time.

Access Roads

- 1.10.7 For the lengths of temporary access roads, the depths of different topsoil units would be identified within the area, based on the survey of soil resources, as described in **section 1.8** and **1.9** of this Outline Soil Management Plan.
- 1.10.8 The topsoil would then be stripped and removed from the footprint of the road to create bunds alongside the access road alignment.
- 1.10.9 As described in **section 1.7** of this Outline Soil Management Plan, the initial soil stripping of temporary access roads would be subject to monitoring to ensure that

the handling of soils is undertaken correctly and in accordance with the appropriate soil handling method.

Onshore HVAC and HVDC Cable Routes

Topsoil Strip

- 1.10.10 For the length of the onshore cable corridors (HVAC and HVDC) the depths of different topsoil units would be identified, based on the survey of soil resources, as described in **section 1.9** of this Outline Soil Management Plan.
- 1.10.11 The stripping of topsoil would be carried out in accordance with the Construction Code of Practice (Defra, 2009), taking into account the relevant methodology from the Good Practice Guide for Handling soils in Mineral Workings (IQ, 2021) which include the following potential methods:
- Sheet E – Soil Stripping with excavators and dump trucks – windrow practice.
 - Sheet F – Soil stripping with bulldozers and dump trucks – windrow practice.

Subsoil Strip

- 1.10.12 For the lengths of the onshore cable corridors (HVAC and HVDC), the depths of subsoil units would be identified, based on the survey of soil resources, as described in **section 1.9**. There would be a limited volume of stripping of subsoil resources along the length of the onshore cable corridors, associated only with the excavation of the cable trenches by excavator or other trenching equipment.
- 1.10.13 Where more than one subsoil horizon is identified, the horizons would be stripped and stored separately alongside the cable trench.

1.11 Soil Storage

Temporary Construction Compounds and Converter Site

- 1.11.1 Soils would be moved directly from the area being stripped to areas that have been identified as topsoil and subsoil (if required) storage areas. It is essential that the locations of storage areas within the Proposed Development area are planned to ensure that the potential for damage to the soil storage heaps and/or contamination of the heaps with foreign construction materials is limited, as far as possible. All storage bunds intended to remain in situ for more than three months or over the winter period would be seeded and kept free from weeds.
- 1.11.2 Topsoil storage mounds would not exceed 3 m in height and subsoils 5 m in height. Materials from Individual topsoil and subsoil units would be stored separately within the Onshore Infrastructure Area.
- 1.11.3 The method of mound construction and excavation would be in accordance with the Construction Code of Practice (Defra, 2009) taking into account the relevant methodology from Good Practice Guide for Handling Soils the in Mineral Workings (IQ, 2021), which includes the following potential methods.
- Sheet B – Building soil storage mounds with excavators and dump trucks.

- Sheet H – Building soil storage mounds with bulldozers and dump trucks.

Access Roads

- 1.11.4 Topsails would be stripped along the alignment of the access roads and placed directly into bunds alongside the edge of the temporary access roads within the Onshore Infrastructure Area. These topsoil bunds would not exceed 3 m in height. All storage bunds intended to remain in situ for more than three months (or over the winter period) would be seeded and kept free from weeds.

Onshore HVAC and HVDC Cable Routes

- 1.11.5 For the storage of topsoil alongside the edge of the onshore cable corridors, the same principles would be applied as for the temporary construction compounds described in **sections 1.11.1 to 1.11.3** of this Outline Soil Management Plan above, with topsoil heaps located along the outer edge of the cable corridors.
- 1.11.6 With regards to the short-term temporary removal of subsoils during construction, (i.e. cable laying within the cable trenches), the stripped subsoil horizons would be stripped and directly stored separately alongside the trench within the cable corridor and replaced in their pre-excavation sequence.

1.12 Ground Preparation

Loosening Operations

- 1.12.1 Following the removal of all construction materials and construction surfacing and prior to soil replacement, areas that have been stripped or where the subsoils have been subject to potential compaction would be loosened, if necessary, through subsoiling operations.
- 1.12.2 The depth to which the loosening would be required would depend on the nature of soil type and extent of any compaction that may have occurred. It would also need to consider the depth and location of underdrainage. The requirement would need to be assessed on site, prior to the works being undertaken.
- 1.12.3 Techniques for loosening included in the IoQ guidance include Sheets M, soil decompaction by excavator bucket and Sheet N, soil decompaction by bulldozer drawn tines.
- 1.12.4 However, it may be appropriate to utilise other standard agricultural equipment such as tine harrow to assist in loosening and the method will be agreed with the landowner via the ALO. Inspection of the land pre and post subsoiling is common practice and is arranged and managed by the ALO.

1.13 Soil Replacement

Temporary Construction Compounds

- 1.13.1 The topsoil would then be replaced in accordance with the Construction Code of Practice (Defra, 2009) taking into account the relevant methodology from the

Good Practice Guide for Handling Soils in Mineral Workings (IQ, 2021), where potential methods include.

- Sheet D – Soil replacement with excavators and dump trucks.
- Sheet H – Soil replacement with bulldozers and dump trucks – windrow practice.

- 1.13.2 As described in **section 1.7** of this Outline Soil Management Plan, the replacement of the topsoil across these areas would be subject to onsite monitoring by the Principal Contractor(s) together with the ALO to ensure that the appropriate soils handling method is implemented correctly.
- 1.13.3 These methods, if applied appropriately, enable the topsoil to be replaced, without trafficking over the newly loosened subsoil material, as far as possible.

Temporary Access Roads

- 1.13.4 Following the application of loosening operations, where required, the topsoil would be replaced by dozer or excavator, ensuring that whichever form of machine that is used, this does not run across loosened subsoil materials during the reinstatement operation.

Onshore Cable Corridors

- 1.13.5 The methods for the replacement of topsoil materials along the onshore cable corridors would be similar to those described for the temporary construction compounds in **section 1.13.1** to **1.13.3** of this Outline Soil Management Plan above.
- 1.13.6 For the subsoil horizons stored alongside the cable trenches for a short period of time, where more than one subsoil horizon has been stripped, the subsoil materials would be replaced (loose tipped) by excavator in sequence, with lower subsoil horizons replaced first and then overlain by upper subsoils.

1.14 Soil Handling and Consistency Tests

- 1.14.1 The assessment of whether soils are in a suitable condition to be handled will be applied in accordance with Defra 2009 guidance and Supplementary Note 4 - Soil Wetness of the Good Practice Guide for Handling Soils in Mineral Workings (IQ, 2021).
- 1.14.2 The assessment would be based on ground and weather conditions and appropriate soil moisture and consistency tests.
- 1.14.3 The most appropriate methodology for handling and storage of the soils will then be determined and agreed via the final Soil Management Plan(s) based on the plasticity and the moisture content of the soils.

1.15 Aftercare

- 1.15.1 Mitigation measures and management proposals for landscape and ecology are detailed within the Outline Landscape and Ecology Management Plan (see document reference 7.10).

- 1.15.2 For the agricultural areas within the Onshore Infrastructure Area, an aftercare plan would be produced three months prior to the commencement of the aftercare period for areas of the works (as they are completed) and agreed between the ALO and the landowner, which would include the following information:
- cultivations to be undertaken, which would depend on the soil type and site conditions but is likely to include the use of a plough, harrow and roller;
 - seed mixture to be used for initial grass establishment; and
 - soil samples would be taken from the topsoil bunds to be used in the restoration of the area to determine nutrient levels and inform proposals for lime and fertiliser applications.
- 1.15.3 At the end of the first year of aftercare, there would be an on-site review by the Principal Contractor(s) and ALO to monitor the following:
- the physical soil characteristics of the restored land;
 - identify any additional cultivations required;
 - identify any further remedial measures that are required;
 - collect samples to check soil nutrient levels and inform lime and fertiliser requirement; and
 - effectiveness of any reinstated drainage.
- 1.15.4 This review would enable the management requirements to be identified for the following year. The land would be handed back to the landowner as soon as practicable once the restored land is in a suitable condition to be returned to its former use.

1.16 References

Defra (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites

IQ (2021) Good Practice Guide for Handling Soils in Mineral Workings