A66 Northern Trans-Pennine Project TR010062

2.7 Environmental Management Plan Annex B9 Soil Management Plan (Rev 2) (Tracked

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2.7 ENVIRONMENTAL MANAGEMENT PLAN ANNEX B9 SOIL MANAGEMENT PLAN

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B9 Soil Management Plan

B9.1 Introduction

Purpose

B9.1.1 This document forms Annex B9 of the draft Environmental Management Plan (EMP) (Application Document 2.7) and represents the expanded essay plan for the Soils Management Plan (SMP) for the A66 Northern Trans-Pennine Project (the Project). The SMP will be developed in full by the Principal Contractor(s) (PC) and will describe how soil resources will be managed in compliance with best practice requirements.

B9.1.2 The purpose of the SMP is to outline the handling, storage and reinstatement procedures to be followed to manage the disturbance to all soil resources, both permanent and temporary, during the construction of the Project. This includes following guidance set out in the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Department for Environment, Food and Rural Affair, 2011)[1] when handling agricultural soils and, in particular, any land to be reprofiled.

B9.1.3 The PC and the roles identified in Table 1: SMP roles and responsibilities, will use this expanded essay plan SMP to produce a detailed SMP as detailed design is progressed. The detailed SMP will identify:

- The nature and types of soils that will be affected, and
- The methods that will be employed for stripping soil and the restoration of agricultural land.

Structure of the Soils Management Plan

B9.1.4 This SMP includes:

- Section 1: introduces and describes the purpose of this document and provides the roles and responsibilities required for its implementation.
- Section 2: sets out the requirements of the soil resource plan.
- Section 3: sets out the requirements of soil handling strategy.

B9.1.5 Together the Soil Resource Plan and Soil Handling Strategy form the SMP.

Project team roles and responsibilities

B9.1.6 This document will be used as the basis from which to develop further iterations of the SMP. Exact roles and responsibilities regarding soil resource and handling procedures will be confirmed by the PC as detailed design is progressed. However, likely key roles and responsibilities are summaries in Table 1: SMP roles and responsibilities

[1] Department for Environment, Food and Rural Affair (2011), Construction Code of Practice for the Sustainable Use of Soils on Construction Sites

Table 1: SMP roles and responsibilities

Role	Responsibility
PC Project Manager	• Sign off of the SMP for the relevant phase of works. • Ensure that all controls specified within the SMP are implemented by employees and sub-contractors.
PC Environmental Manager	• Undertake inspections to monitor adherence with the environmental licenses and consents for the works and compliance with measures in the SMP • Ensure the Project complies with all relevant environmental legislation, consents, objectives, targets and commitments, including those arising from the ES. • Seek specialist input, such as an appropriately experienced soil specialist, where required to ensure soil management complies with industry guidance
PC Agricultural Liaison Officer (ALO)	• Ensure the specifications of the SMP and any location specific construction method statements are implemented • Coordinate detailed pre-construction soil surveys with land owners • Full responsibilities of the ALO are listed in the EMP (Application Document 2.7)

Design decisions

B9.1.7 Decisions made as the detailed design of the Project is evolved will influence the level of disturbance to soil resources during construction.

B9.1.8 This section will outline the principles and measures where technically, financially and environmentally practicable, to be implemented during design and construction to minimise disturbance to, and loss of, the soil resource.

Review and evolution of the SMP

B9.1.9 This SMP has been produced to act as a live document and will be populated and used as a framework for further use by the roles outlined in Table 1: SMP roles and responsibilities. Prior to construction, site and soil-specific measures will be set out in a full SMP, based upon this expanded essay SMP as a minimum, and supplemented by additional survey data where required.

B9.1.10 To secure effective delivery of the SMP, the PC will implement it through location-specific, detailed construction Method Statements for protecting the soil resource in each location. ‘Locations’ will be determined by the PC or their soils specialist depending upon factors such as, but not limited to, the works to be undertaken, the machinery to be used, soil types and results of any additional survey works, sensitive receptors and site constraints. The Method Statements will also take consideration of the end use of the land and the soils removed (e.g. whether it is to be returned to agriculture, utilised for environmental mitigation planting or remain as hard standing).

B9.2 Soil resource plan

Overview

B9.2.1 The PC shall prepare a detailed Soil Resource Plan for all required locations within the Project where the soil resource will be disturbed for temporary or permanent works.

B9.2.2 This section will detail and record the existing soil resource, including volumes and soil attributes, for each relevant location and will set out an overall soil balance to identify the amount of each soil resource available for reuse.

Purpose and requirements

B9.2.3 The purpose of the Soil Resource Plan is:

- To create a record of the existing soil resource within each location that is to be used in the construction of the Project. This will inform preconstruction soil statements with the intention to provide for soil restoration post construction
- Identify volumes and types of soil available for re-use in the detailed design of the Project for locations impacted by the works that will not be returned to agricultural use.

B9.2.4 For each relevant location, the Soil Resource Plan shall identify details on soil attributes, which could include, but is not necessarily limited to:

- the texture of each soil horizon present
- the depth of each soil horizon
- the colour of each soil horizon by reference to the Munsell Soil Color Charts
- the stone content of each soil horizon
- the pH, organic matter and major nutrients of the topsoil horizon
- the pH, organic matter and major nutrients of the upper subsoil horizon
- the Agricultural Land Classification grade
- the drainage.

B9.2.5 The PC will be responsible for collating and ensuring the availability of data for the Soil Resource Plan, including, if necessary, details on organic matter content and major nutrients

B9.2.6 Where required, the data on the physical attributes (texture, depth and stone content) shall be collected at an observation density of one observation per hectare (ha). The data on organic matter content and major nutrients shall be collected at a density of one sample per 3ha or, if the land parcel is smaller than 3ha, one sample per land parcel.

B9.2.7 The ALO will coordinate the provision of the detailed pre-construction condition soil surveys with agricultural landowners and occupiers.

B9.2.8 Once complete, the PC shall use the information contained within the Soil Resource Plan to produce Preconstruction Soils Statements for areas of agricultural land within individual land holdings that will be

temporarily occupied during the construction of the Project. These statements shall set out the measures that will be implemented to ensure that Best and Most Versatile land that is disturbed temporarily is restored to the same quality as far as practicable to minimise potential loss.

B9.3 Soil handling strategy

Overview

B9.3.1 As part of the SMP, the PC will prepare a Soil Handling Strategy for each location where there is the potential for the disturbance of soil resources. The obligations and requirements of the Soil Handling Strategy will be developed by the PC and are set out below.

B9.3.2 Soils that are disturbed during the construction of the Project are likely to be associated with various aspects of implementing the development, including, but not limited to:

- areas within the permanent Project footprint
- archaeological investigations
- the installation of underground apparatus
- areas to store landscape fill and excavated materials
- site compounds and working areas
- temporary haul roads
- temporary roads, and
- topsoil stockpiles.

B9.3.3 The PC shall identify aspects of implementing the development that have the potential to disturb the soil resource as the Project is progressed and update the above list accordingly.

Soil resource method statements

B9.3.4 For locations affected by the construction of the Project, the Soil Handling Strategy will set out detailed Method Statements for protecting the soil resource in each location during the construction period, ensuring compliance with the requirements of the EMP and the Historic Environment Mitigation Strategy (Annex B3 to the EMP) in respect of the protection of archaeological assets (including necessary approvals). This will be determined on a scheme-by-scheme and case-by-case basis but, for the avoidance of doubt, will include any excavation or compaction activity (including construction traffic) associated with executing the development.

B9.3.5 The detailed Method Statements associated with soil handling during construction shall identify:

- the construction methods and platforms to be used in relation to soil to achieve in-situ preservation and prevent deformation of the topsoil and subsoil horizons (where required)
- the anticipated loads on the in-situ topsoil from construction activities
- the methods to be used to return agricultural land that is subject to archaeological investigations to good agricultural condition, including

any aftercare requirements, recommended for the landowner to implement, to ensure that a satisfactory standard of agricultural after-use is reached.

- the area in each location in which the topsoil (and upper subsoil if required or present) will be stripped and placed in store during the construction period
- the working methods and plant to be used to strip topsoils (and upper subsoils if required and/or present) and place them in temporary stockpiles
- the methods to be used to construct temporary soil stockpiles
- the locations of temporary soil stockpiles
- the methods to be used to maintain temporary stockpiles according to the length of time the soil is in storage
- the methods to be used to replace soils from the temporary stockpiles within each land parcel
- the origin and placement of topsoil that could contain archaeological artefacts to be mapped and for this information to be lodged with the relevant authority
- how the soil handling process will incorporate the requirements of the Detailed Heritage Mitigation Strategy (Annex B3)
- the methods to be used to maintain the existing drainage characteristics of each location (infiltration, conveyance etc.) and manage the risk of compaction that may affect the drainage characteristics.

Best practice measures

B9.3.6 In all cases the PC shall ensure compliance with good practice guidance on stripping, handling and restoring soils. In cases where the construction platforms are constructed on in-situ topsoil, the PC shall agree the proposed methods for in-situ preservation and remediation of the soil profile with Natural England and, where applicable (i.e. where affecting designated heritage assets), Historic England.

B9.3.7 The PC shall identify and include the relevant good practice guidance on stripping, handling and restoring soils in this section.

B9.3.8 The project-wide principle is that topsoil and subsoils that are permanently displaced for the construction of the Project should be re-used within the Project in mitigation areas, verges and batters as close to their source as feasible.