THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

The Sizewell C Project

Natural England's Comments on Outline Soil Management Plan

Planning Inspectorate Reference: EN010012

3rd September 2021

Natural England's comments on documents submitted to the Examination

1. Soil

1.1 Documents reviewed include:

- EN010012-005340-D3 - The Sizewell C Project - Other - Volume 2 Main Development Site Chapter 17 Soils and Agriculture Appendix 17C - Outline Soil Management Plan - Revision.pdf [REP3-018]

1.2 The Outline SMP has been updated following the consultation responses from Natural England and the NFU.

1.3 Natural England welcomes that the temporary and permanent agricultural land take area will be provided for Deadline 5, identifying the area of each ALC grade for each element of the development.

1.4 At present, data inconsistencies appear to remain: Table 17.6 'permanent and temporary loss of agricultural land' presents data for the Main Development Site (MDS) only (Volume 2 Chapter 17 Soils & Agriculture Soils and Ag Chapter), and states that 157.7 ha of the MDS is non-agricultural, leaving 213.9 ha of agricultural land (of which 22.2 ha is BMV). Of this agricultural land, 205.2 ha will undergo temporary development and 8.5 ha will undergo permanent development (of which 16.4 and 5.6 ha is BMV, respectively). Table 3.10 'Summary of potential project-wide cumulative effects – loss of agricultural land during the early years of construction' (Volume 10 Chapter 3 Project Wide Effects), states 358.32 ha of agricultural land will be temporarily lost from the MDS. Although Table 3.8 'Summary of potential temporary project wide impacts on BMV' identifies 22.2 ha of BMV in the main development area which is consistent to the value presented in Chapter 17. Therefore, it appears that non-agricultural land has been included into the MSD area.

1.5 It is noted that following Stage 4 Consultation, the extent of land take required for the construction and operation of the Bypass and Link road was reduced by 37.53 ha (15 and 22.53 ha, respectively). However, it is not stated as to whether the refinement of the construction footprint considered BMV agricultural land or not (i.e. minimising BMV land take) within Appendix 8.4A of the Site Selection Report [APP- 591].

1.6 Consideration has also been given to the size of the Northern and Southern Park & Ride to allow on-site topsoil and sub-soil storage to facilitate site restoration, following cessation of use of the park and ride facility.

1.7 Natural England appreciates the link to the Statement of Competence [APP-161] and clarification on the ALC Methodology in the June Comments on Written Representations.

1.8 The clarification on the ALC Methodology should have also been presented in the revision of the outline SMP, including which survey points were soil auger cores and which were soil profile pits; and which topsoil samples were subject to particle size distribution analysis (Appendix A).

1.9 The commitment to undertake detailed ALC surveys across the full site is welcomed, this should include soil profile pits, lab analysis for particle size distribution and nutrient status (where appropriate). It is noted from Section 3 (OSMP), that following the completion of detailed ALC surveys across the full site (1 per hectare, supplemented by soil profile pits), the final collation of all available information will be made available to inform the development of the detailed Soil Management Plan and Soil Resource Plans (SRPs). This record of ALC information should include the clarification on the ALC Methodology and the identification of soil auger cores and soil profile pits; samples subject to soil laboratory analysis and soil nutrient assessment, alongside the pre-condition ALC Map, sample location, borehole characteristics and lab data.

1.10 The Outline SMP update is stated to include clarification of land restoration to the pre-construction ALC grade and the soil specific soil handling requirements. However, soil specific requirements are not specifically referred to, instead reference is made to the detailed SMP and SRPs being prepared pre-construction which will identify the soil specific soil handling requirements and set out the target specification for the proposed end uses. The target specification for the restored soils should be based on pre-construction ALC grade. On land undergoing cut and fill earthworks or temporary roadways involving compacting basal layers and the application of tarmac, paving etc, greater justification is required as to how the soil will be restored back to its original quality post development.

1.11 NE welcomes the requirement for a Contractors Soil Scientist and the Clients Soil Scientist with specified competencies to advise on, and supervise, soil handling activities.

1.12 It is acknowledged that prior to any soil stripping works commencing, the outline SMP will be updated by the Contractor and detailed Soil Resources Plans (SRP) will be

produced for each part of the Sizewell C Project to provide the required detail. The proposed content of the SRPs presented in Section 1.2.6 is deemed appropriate. In addition to the target specification, a monitoring and aftercare plan should be detailed to confirm the target ALC grade is achieved to ensure no loss of BMV land.

1.13 Section 5: degradation of soil can also lead to the inability to restore land to pre-construction ALC Grade, and thus potentially constitute a loss of BMV land.

1.14 Monitoring in section 5.2 'Outline Soil Protection Measures' should acknowledge the importance of identifying when soils are suitably dry to be handled. Section 5.3 'Wet weather working and cessation of works' and Section 6.6 'Soil Storage'. All soils should only be handled in a dry and friable condition, and it is expected that soil handling would be confined to the drier summer period to minimise risk of soil damage (April through September). This would minimise the need to recondition soils, which requires additional space and time. This is particularly important for land to be restored to agricultural use. This approach is suggested in Appendix F '… soil handling operations shall be carried out when soil is non-plastic in consistency.' There needs to be consistency with regards to this approach throughout the Outline SMP.

1.15 Although it is sensible to include the reconditioning methodology and the separate handling and storage methodology of soils which may be plastic, every effort should be made to avoid this scenario.

1.16 Section 6.2 and 6.3 discusses soil handling required for land to be restored to agricultural use; however, these methods (stripping and stockpiling topsoil and subsoil separately (and any different topsoil or subsoil types)) is required for all soils. The 'bulk excavation' of the soil and subsequent stockpiling proposed for soils for non-agricultural purposes should not be undertaken, as this would constitute a loss of the soil resource.

1.17 Section 6.2 'soil recovery and storage'. Depth of topsoil strip should be informed by the detailed ALC survey and monitored by the Soil Specialist during excavation works.

1.18 Section 6.6: topsoil and subsoil resources should not be mixed.

1.19 Section 7 'Soil restoration methods'. It should be emphasized that the criteria for land being restored to agricultural use will be informed through the pre-construction ALC and soil survey. Maps should be provided to illustrate the areas intended for restoration.

1.20 Section 8 ‘Monitoring’. Soils should be monitored for up to 5 years following restoration to ensure the correct ALC criteria has been reached (on land restored to agricultural use) and the habitats created are in a suitable condition.

Appendices

1.21 Appendix B: To avoid risk of soil damage and compaction, bulldozers (as currently proposed in the OSMP) should not normally be employed for soil stripping or replacement for soils being restored. Defra’s Good Practice Guide for Handling Soils provides detailed advice on the choice of machinery and method of their use for handling soils at various phases. We would advise the adoption of “Loose-handling” methods (as described by Sheets 1-4 of the Guide), to minimise damage to soil structure and to facilitate good restoration. Reference should be made to Sheet 15 where low ground pressure bulldozers are to be used during topsoil replacement.

1.22 Appendix F ‘Placement of soil layers’. Soil depths should be informed by the pre-construction ALC survey and checked by the Site soil Scientist.

1.23 The main objective for the reinstatement of agricultural land is to restore the land to its original (pre-development) agricultural quality, as determined by ALC grade and soil characteristics obtained during the pre-construction survey. This is primarily achieved by ensuring that the full soil profile is reinstated in the correct sequence of horizons to the right depths, and in a state where good soil profile drainage and plant root development are achieved; and by ensuring that the reinstatement works cause minimum damage to soil structure.

1.24 Prior to topsoil placement, subsoil decompaction will be required. The use of a LGP bulldozer fitted with winged subsoiler tines is recommended. For the decompaction to be effective, the moisture content of the soil must be below the lower plastic limit, so that the soil is dry enough to shatter and for fissures to be created.

1.25 Where land is returned to agricultural use, the quality of the soil reinstatement will need to be verified through monitoring and aftercare. The aftercare should commence after soil characteristics required to achieve the reinstatement standard have been achieved. For the land in agricultural use before construction this means that the land is brought as close as practically possible to the physical state it was before construction. An Aftercare and Monitoring section should be included in the SRPs.

1.26 A soil survey should be carried out to record the ‘after’ statement of physical characteristics of the reinstated soils. This will allow the post-construction/reinstatement condition of the soils and land to be judged against/compared with their pre-construction condition, as determined through the detailed pre-construction soil surveys

1.27 Aftercare: Depending on the land-use, agricultural activities, site-specific conditions, and site-specific construction activities, the aftercare may include treatments such as: cultivation (e.g. subsoiling), installation of underdrainage, seeding, liming, and/or fertilising.

1.28 The Defra 2009 guidance suggests aftercare between 1 and 5 years post construction, with the aftercare deemed complete when the reinstatement standard has been achieved. The period of aftercare should be stated in the site specific SRPs.

1.29 Appendix H ‘Soil stockpile/Windrow Inspection checklist’. The soil storage works should be inspected to certify that the soil stockpiles are correctly labelled with the footprint, location, volume and nature clearly recorded.

1.30 Ensure consistency between Appendix I and Section 2 ‘Roles and Responsibilities’

1.31 Section 1.2.2 and 1.2.3 mention imported topsoil and subsoil and the associated BS standards, however a soil deficit and need to import soil is not discussed elsewhere in the Outline SMP. In fact, a potential soil surplus is mentioned in Section 4.1.4. A soil balance needs to be determined for each element of works and specified in the detailed SMP and SRPs. If a soil deficit is identified, the criteria for imported soils needs to be specified.